Reclaiming Knowledge

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Reclaiming Knowledge

Social Theory, Curriculum and Education Policy

Johan Muller

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Johan Muller
Cape Town
May 2000

Introduction

> They went off together leisurely with the Sheik saying, 'One of the Sayings of the Prophet that has been handed down to us is: "The corruption of scholars is through heedlessness, and the corruption of priests is through injustice, and the corruption of the Sufis is through hypocrisy"'. 'How delightful are his words!' muttered Aladdin with joy. The Sheik said in a voice that was slightly raised in the calm of the night, 'So be not one of the associates of devils'. Spurred on by feverish yearning, Aladdin asked, 'Who are the associates of devils?' 'A prince without learning, a scholar without virtue, a Sufi without trust in God, and the corruption of the world lies in their corruption'.
>
> (Naguib Mahfouz, 1995, p. 161)

A venerable headmaster once tried to explain to me what it was that students were unable to do when their learning had been interrupted, as it so often is in schools in the new South Africa. Searching for an apt phrase, he said, 'They are unable to split hairs'. That struck me as vivid and right. Splitting hairs, making a distinction where before one was not made, is the basis of knowledge. Teaching our youth how these distinctions have been made and how to make them lies at the heart of education. Distinctions come in two forms, systematized and unsystematized. Durkheim established early in the twentieth century that divisions and distinctions of ideas become knowledge only once they have become systematized or connected to each other, i.e. once they become formed into *schemes of classification* (Joas, 1993, p. 81, fn. 1). This book, like all sociologies of knowledge, is centrally concerned with schemes of classification.

Important branches of epistemology, philosophy of science and cognitive psychology have made schemes of classification their chosen domain for many decades. More recently, the classical disciplines of knowledge have run into a series of difficulties, which have produced a crisis for both knowledge and the disciplines studying it. The literatures naming these difficulties are technical and complex, but the problem, or paradox, can be simply if abstractly described. Systematicity is necessary for distinctions to become knowledge. This is because non-systematic 'knowledge' – practical knowledge and local wisdom of all sorts – refers to the effects and uses of knowledge but does not provide the basis for reflection upon its bases, and

therefore upon the possibility of alternative bases: 'the wise person observes himself, applies his wisdom to himself, and does not attempt to account for the perspectives of others or other possibilities of perspective' (Luhmann, 1998, p. 37) (this is explored in Chapters 5 and 8). Distinctions become knowledge when they become self-referential, when they attempt to deal with inconsistencies (ibid.); in other words, when they become reflexive.1 And when they become self-referential and reflexive then the distinctions and their connections become open to destabilization because they become repeatable, transcribable and therefore revisable by the competent community at large. Reflexivity is thus both the condition for knowledge and the means for its motility and destabilization. This raises special challenges for a responsible and socially aware scientific practice.

As the twentieth century has worn on, science and society at large have become increasingly aware of the instability of science, probably in no small measure as a result of the massive increase in the production of new knowledge and the new technologies of its production and dissemination. This has led to a new prominence of science in all facets of our lives. The 'Y2K spectre' was just one recent reminder of our intimate beholdeness to science and technology and the risky unpredictability of such beholdeness. This brings up a second sense of 'reflexiveness', one which points far more directly to contingency, risk and ambivalence on the one hand and to enhanced individual possibilities and freedom on the other. As one of its proponents declares, 'The theory of reflexive modernisation…asks what sorts of institutions are possible in an age of chronic contingency, of chronic ambivalence' (Lash, 1999, pp. 137–8). At the end of this introduction, I will claim that the challenge for contemporary sociology of knowledge is to find a way of holding on simultaneously to both senses of reflexivity.

In the traditional sociology of knowledge,[2] knowledge and society were considered to be external to one another, with society acting upon knowledge from outside, bringing interests or values or purposes to bear on it, acting upon knowledge as science might act upon nature, bending it to a superior will. With a better awareness of the reflexivity of knowledge, in both senses, this is harder to sustain. The *intrinsic* sociality of knowledge, the thoroughly social nature of schemes of classification, not just their vulnerability to outside influence, is what must now be accounted for. It is at just this point – on the proper implications of the intrinsic social nature of knowledge – that views sharply diverge. This can be seen across the entire spectrum of disciplines dealing with knowledge, from philosophy and epistemology through the sociology of science and technology to the applied disciplines of innovation and policy studies. This volume engages directly with this body of work, sometimes called the science or culture wars. My specific aim is to shed light on the way that knowledge is conceived of in several influential positions that deal with education generally, the curriculum and with education policy.

These essays are *of* South Africa, they represent engagements that have a certain historical rootedness that I have not tried to hide and that I sometimes

even foreground, as, for example, in Chapters 6, 7 and 8. But they are not essays *about* South Africa, except in a restricted sense.

It is worth saying briefly what that restricted sense might be. These essays span the 1990s, the 'liberation years' in South Africa, the period of passage from apartheid to democracy, from a universally abhorred polity and education system ('Bantu education') to a modern enlightened government and its accompanying educational policies. The lack of bloodshed, the predominant civility of the process of transition, has rightly been hailed as a success story. The hero of the piece, as befits a mass movement that successfully became the ruling political party, is not Nelson Mandela, however much the man himself is revered; it is the spirit of the collective, the idea of mass *struggle.*

The term 'struggle', common in the language of neo-Marxism before the demise of Eastern bloc socialism, carried a special connotation in South Africa. Unlike capitalism, apartheid was not a social order that had prevailed over time. Some Marxist analyses notwithstanding, apartheid and all associated inequalities were popularly seen as a temporary and eliminable perversion of the will, to be vanquished by mass opposition and superior moral resoluteness (see also the first part of Chapter 7). At crucial moments of transition, in 1990 with the first steps towards liberalization and the release of political prisoners and later in 1994 with the first democratic election, it seemed that virtuous struggle could indeed stop evil men in their tracks and reverse history. It was hard for academics to exempt themselves from this swelling triumphal wave. This feeling of an exception or a rupture in history was buttressed in many invisible ways by the stream of academics who began to visit in numbers early on in the 1990s. For these academics, reluctantly beginning to accept that they no longer had a clear progressive cause to support after the end of the Cold War, South Africa could well have seemed the virtuous exception to a bleak post-modern future. Other academics encountered at international conferences at the time were not quite as optimistic. Their not-quite-suppressed scepticism was noticeable, but easy to dismiss as the old world ennui and sour grapes of societies that had long ago exhausted their historical imagination.

It was not at all clear then how this South African exceptionalism was stultifying our understanding of broader historical trends at work in the continent and beyond (see Mamdani, 1998) and the way that contemporary debates would place us. We would have been astounded then to learn that mainstream post-modernism would place us among the last naïve modernists:

> To believe as did Augustine, Hegel, Marx (and perhaps I should add, to make his position absolutely clear, Martin Luther King and Nelson Mandela) that they spoke for all humanity in their quest for freedom is, for Lyotard, the grand mother of an illusion.
>
> (Smith, 1998, p. 19)

Other aspects of the political triumphalism of the time, though equally single-minded, were more familiar and predictable: if the perversions of political will could be overturned and replaced, then all forms of perceived minority interest could and should as well. This was taken to apply not only to government and the private sector but also to all forms of 'non-democratic' social life – to expert knowledge and science, to bureaucracy and to national policy making. All of these were 'oppressive', and must now be rendered 'democratic'.

It will surely not be surprising that the knowledge-based activities of the new state – policy formulation and national curriculum design being the two to the fore in this book – have been politically shaped from the outset, or that the political leaning towards democracy has made us amenable to a democratic knowledge politics. But it may well seem ironic in retrospect that the political form of South Africa's belated accession to political modernity has made us so vulnerable to some of the more radical forms of post-modern voluntarism. The essays in this book are, in this sense, against a certain cultural current that is influential not only in South Africa but, for perhaps different political reasons, also influential in most other parts of the world.

A principal target of this thought has been the rational–irrational asymmetry, supposedly fashioned by Levy-Bruhl (a gross oversimplification), that is said to be a staple of cultural imperialism, colonialism, the dominance of science and of 'traditional' pedagogy alike. The form of thinking that resulted in apartheid and Bantu education would seem to be an obvious, if extreme, variant. No wonder then that South African educators were attracted to that brand of sociology of knowledge that set out to dethrone the supposed asymmetry of thought which favoured rationality in favour of a postulate of symmetry which declared the radical equality between all forms of thought. Where the asymmetry was seen as a product of modern epistemology, then epistemology itself would have to go. Henceforth, not logical but only sociological distinctions could be drawn between thought forms. In extreme versions of this view, all construals of intelligence, rationality or academic success are considered sociopolitical constructions and therefore opposable. The political slogan of the militant youth, 'pass one pass all', that arose in the People's Education movement of the 1980s rests on such a view. It is not uncommon now to find student activists at university challenging their poor grades on the basis that the grade reflects not their ability but a disadvantaging power dispensation. While there is a certain analytical sense in which this might be so, it should also be clear that it hardly offers a sound basis upon which to reconstruct an education system on the ruins of Bantu education.

Spare a thought in passing for the quandary of the erstwhile revolutionaries who came to power on a surge of triumphalism fuelled by impossibly high expectations. Where in the world has a democratizing regime achieved dramatic educational success? Yet, not only popular expectations but also the moral zeal of the reformers themselves must have helped to impel them

to a position where betterment was achievable through struggle, which in the new dispensation meant by the will of the people as expressed by the new-in-power. The possibilitarianism of this view must have seemed fatally alluring. For better or for worse, I have labelled this view constructivism, admittedly a term open to differing interpretations (see Chapter 4, note 2).

It is a recurring theme of this book that constructivism as a broad antiepistemological movement has taken a perfectly reasonable set of theses about the social constitution of knowledge and has radicalized it into a set of sceptical claims about the constructedness of reality itself, in which reality becomes merely an artefact of our knowledge about it (Chapters 4 and 9). This radicalization has, I will try to show, had a series of pernicious effects upon the formation of policy, the practice of education and the conduct of government. The essays in this book constitute a set of retracing steps along the path of the sociology of knowledge and curriculum. In so doing, I am trying to pick up a thread that somehow got dropped as the new sociology of education ran out of theoretical steam in the mid 1980s, to be overtaken by the superficially more exciting family of social constructivisms, cultural studies and post-modern approaches to texts and representation that have helped to drive the sociology of education into its current blind alley.

This is not meant to be a purely critical exercise because the way through impasses is not to flatten all obstacles in the foreground. Rather, this represents an attempt at retrieval of the sort practised variously by Lash (1998), for example (who uses the term 'hermeneutics of retrieval'), but also of the sort practised, in widely different ways, by Wexler (1996), Young (1998) and Ladwig (1996). My particular version is to attempt to do justice to, but avoid the blandishments of, both the 'old deferentialism' and the 'new cynicism' (Haack, 1998, p. 5), the logic of identity and the logic of difference, Lash's first and second modernity, or the modernities of convergence and dispersal. My method is to stage debates between representative placeholders for these positions: mode one and mode two knowledge production (Chapter 3); the sacred and profane (Chapter 5); performance and competence pedagogies (Chapter 6); critics and reconstructors (Chapter 7); parachutists and truffle hunters (Chapter 8); realist and constructivist research methodologies (Chapter 9). My strategy in each case is to resist the pendulum swinging too far in the direction of the second term, towards an 'excess of difference' which loses the essential relationality between the two. Excess consists in the explosion of the boundary, in the loss of the limit, resulting in a spurious ideology of boundlessness (Chapters 4 and 5). A favourite symptom of mine of this syndrome is a Peter Stuyvesant advertisement at Schipol airport outside Amsterdam just before the customs and passport office: it shows a woman in a black coat with dark glasses and a cigarette, standing in front of the Bleeker Street subway in New York. The legend reads, 'There are no borders'.

There are countless examples of similar 'borderless think' in contemporary sociology of knowledge and curriculum. One privileged place for such thinking is in the literature on globalization, where the apostles of

cosmopolitanism trade sally with their localist counterparts around the proper definition of 'development'(Chapter 2). The term 'glocalism' is sometimes used to suggest that the two dynamics are connected. Yes, but how? Nations these days clearly all face outwards and model themselves on world culture, but often without the wherewithal to adopt it wholesale; the effect is an internal decoupling and the promotion of new or revivified locals (Meyer et al., 1997). At the same time, local actors promote local causes with the help of non-governmental organizations (NGOs), perhaps the primary carriers of world culture, and often miss the extent to which they exhibit cosmopolitanism, the way in which the local is itself cosmopolitan.

I began this introduction by asserting the centrality of the notion of *reflexivity* to considerations of knowledge. I distinguished between two key orthogonal senses of the term. The first sense denotes the controlled reflection of science in the interests of social responsibility; this is the reflexivity of Marx and, especially, Durkheim and Weber (and Mannheim, see Whitty, 1997). It is the best face of the first modernity and the socially responsible realists. The second sense denotes enhanced personal freedom on the one hand and increased ambiguity, contingency and awareness of risk on the other (Chapter 2). The challenge for a reflexive sociology of knowledge is thus in its most compressed form: how to practise the socially responsible reflexivity of the first modernity in a time more propitious to the second, in the face of inescapable motility, contingency and uncertainty, at a time when knowledge has never been so all-pervasive or so untrustworthy.

I want to say that we now find ourselves in a stagnant impasse, through which we, for ethical and political reasons as well as for theoretical ones, must forge a way. What once seemed liberatory has now become ideology and dogma, an emergent new orthodoxy that it is our collective task to dismantle. Robbe-Grillet in the context of avant-garde literary theory arrives at a similar conclusion:

> Ideology, always masked, changes its face with ease. It is a hydra-mirror whose severed head quickly re-appears, presenting the adversary who thought himself victorious the image of his own face.

He goes on to share responsibility for this state of affairs:

> I myself have done much to promote these reassuring idiocies, and have now decided to refute them because I feel they've had their day.
>
> (Robbe-Grillet, 1984, p. 6)

This sums up my stance in this book.

Chapter 1 provides a general introduction to the notion of knowledge as a chain of interpretations or translations. The key idea conveyed is that classificatory schemes are not static but that they constantly move and change.

Some of the principles regulating this movement are explored with regard to the world of schooling and the principal domains where it happens.

Chapters 2 and 3 ask whether there are special requirements for thought and knowledge in a globalizing economic world. Do the formats and privileged institutions of knowledge production, i.e. the universities, change and, if so, what will this mean for learning?

Chapter 4 takes up the idea of knowledge as a chain of redescriptions developed in Chapter 1 and expands it in the light of the discussions in Chapters 2 and 3.

Chapter 5 asks whether knowledge can exist without boundaries: can distinctions be made where boundaries do not exist? Can distinctions survive intact across boundaries?

If we answer yes to these questions, what kind of pedagogy would we get? Chapter 6 considers this question and further asks whether we can stipulate conditions for its success?

Chapters 7, 8 and 9 focus on that body of knowledge called policy. How do the parameters of classificatory schemes facilitate and constrain policy thinking? How do certain ways of doing policy come to recommend themselves to us? How, in an era of uncertainty and challenge, do we develop a responsible knowledge practice?

The spectre of the 'trustworthiness of knowledge looms darkly over everything we do' (Barnes, 1999, p. 382). This is so for both the subject and the medium of my argument. The English language I use is shot through with a tenacious commitment to an active agency and a passive world of natural objects which makes it particularly difficult to rearrange the terms of discussion. When a student dithers, we are wont to say, 'make up your mind'. When something goes wrong, we hope that someone is 'sorting things out'. All these strong senses of action polarize the world and we humans who 'make sense' of it. This polarization, called the 'modernist settlement' by Latour (1999), lies at the base of all the disputes discussed here and disposes the 'fabricationalism' of constructivism that I confront in this book. For Latour, we must find a way of circumventing the modernist settlement or it will continue to trap us in this metaphysical morass.

My aim in this book is more modest. I mean to be analytical, a little less philosophical and somewhat more historical. Above all, I try to take a sociological position on the question of knowledge, of how it plays an increasingly important role in our lives and what educators are trying to do about it. It is my contention that there have been wrong turnings. We must redirect our sociological steps while we still have a discipline with which to do it.

To return to the question of responsibility for a final time. What to do about knowledge that is not fatally voluntaristic or, conversely, fashionably pessimistic, while retaining a sense of possibility; this is a task that we can, with Mahfouz's Sheik and young Aladdin, perhaps only take up properly on the other side of the modernist settlement, beyond the wars, after we have

solved the problem of the divide. Then, as Latour (1999, p. 297) says, we may 'be able to answer the most difficult of all questions: Are you ready, and at the price of what sacrifice, to live the good life together?'

First, though, there are accounts to settle.

Notes

1 When it is said that knowledge is reflexive in this particular sense, it means that knowledge to be knowledge must operate in an institutionalized context, which in the case of science means, for example, peer review, publication and the like, where the method of gaining the results and the results themselves can be repeated or disputed within a community of scholars. It does not mean that individual scholars become more thoughtful.

2 I speak rather loosely here. In the progenitors, such as Marx, Freud, Durkheim, Weber and Mannheim, this is rarely the case; I mean the secondary industry that grew up in their wake.

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1 The First and Last Interpreters

with Nick Taylor

Introduction

Curricular knowledge is usually seen in one of two ways. The first is as the official or codified knowledge that is packaged in the school syllabus and taught to children. Young (1976) calls this the 'curriculum as fact'. Alternatively, it can be seen as the passage of knowledge within the school system and as that process by which some, though never all, social knowledge becomes validated as school knowledge. Young calls this the 'curriculum as process' (see also Goodson, 1994, especially Chapter 8).

This chapter will deal with the curriculum as a process from the viewpoint of contemporary social and cultural theory, although its sociological focus should also be clear. In some ways, this means going beyond Young's definition and looking at how curricular knowledge circulates not only within the spheres of the school system but also between the school system and other domains of society. Adopting such an approach means taking into account various forms of social understandings, examining how they become authorized or deauthorized, how they circulate and how these circulatory patterns can be understood by looking at the nature of cultural meanings in the first place and by looking at the institutional dynamics of the different domains of society in the second.

The general model of circulatory domains developed here is not a comprehensive model of the curricular process. As the reader will see below, it is schematic rather than exhaustive. The aim is to see whether and to what extent a cogent account of curriculum as cultural meaning can be given. Nor is there a claim making any substantial comment on the burgeoning education literature which is using the broad field of cultural theory as its frame of reference. A comprehensive critical review of this literature is not the present aim.[1] A final disclaimer concerns the use of examples. Some readers may well find the rather ahistorical approach adopted here disconcerting (Goodson, 1988). Certainly, a closely argued historical analysis in terms of the model is both possible and desirable. However, the aim here is to construct the broad contours of argument and, in this instance, examples are used to shed light on the model and not vice versa.

It remains to be said by way of introduction that a general discourse about curriculum in society was conspicuously absent in academic circles in South Africa at the start of the 1990s, and to a large extent remains the case at their end. Part of the problem is that the people best placed to comment on the curriculum – teachers and curriculum planners among them – are locked into urgent practical tasks with very little time left for sober reflection and analysis. So far, there has been so much that needed to be done that such people have rarely bracketed their practice long enough to take a critical bird's eye view of the process. Yet it is only from such a perspective that common as well as idiosyncratic features of the process come into view. I will try to substantiate this below.

Knowledge and Society

Knowledge construction and reconstruction snakes ceaselessly through the body of society. It does not proceed or progress seamlessly nor is it an aggregate of incremental steps. Even so, each main arena of society has its own specific dynamics. Society at large is the level at which we regard the world as consisting of citizens and their daily needs. It is where citizens participate in the world both as personal and expressive beings and as political and economic players. Within this inclusive ambit, one can distinguish the general domain of *everyday life* as well as different specialized domains of social practice. The three specialized domains that deal centrally with the curriculum are the *academic* domain, the educational *bureaucracy* and the *school* itself.[2] There is a fourth, the formal political domain or, generally speaking, the state. The state has powerful accumulation and legitimization imperatives to satisfy (Weiler, 1993), and curriculum policy and process is indelibly marked by efforts to secure these. In many ways, the state is the composite articulation of the ruling principle governing all other domains. Although this is formally so, however, it does not on its own help us to understand the internal dynamics of the other domains. Most commentaries on the politics of the curriculum, in South Africa as elsewhere, have discussed the political domain of the state fairly comprehensively (see Christie and Collins, 1984; Molteno, 1987). While its influence is unquestionably vital, it will be taken largely as given and the focus here will be on the other mechanisms of legislation that shape the curriculum.

Any analysis that speaks of a process of knowledge codification is bound to be vulnerable to charges of reproductionism. This is partly unavoidable. As the formal education system is the social mechanism *par excellence* for the reproduction of dominant culture and as this chapter aims primarily at describing some of the mechanisms governing the circulation of knowledge in society at large, the conservatizing force of curriculum has to receive its due (Bourdieu, 1976). Understanding this is a necessary step in the planning of any effective curriculum project, be it politically progressive, reformist or reactionary.

Each social domain to be discussed below – the academic, the bureaucratic, the school and everyday life – is characterized by its own particular institutional locations, organized by particular special interests, resulting in specific forms of knowledge. Knowledge is a signifying process which permeates society. It may be more accurate to say though that this signifying process is itself made up of a series of microprocesses, even multiples of microprocesses, which make up each domain. Each process, macro or micro, observes certain common principles of dynamism. First, there is a proliferation of interpretations of a given phenomenon or event, followed by a process of authorization of a limited number of these interpretations. Through a process of mediation, which is essentially interpretative, the authorized interpretations are then transferred to the next microprocess. This is often in a textual form in modern societies, but not necessarily so. The everyday canons of British working-class culture remain primarily oral, whereas those of the middle class are largely written (Hoggart, 1957). Increasingly, society is saturated in a '"lustrous bath" of hyperrealistic and glamorised images' (Weitman, 1998, p. 74) through the phenomenal expansion of technology and the media. Nevertheless, whether oral, written or visual, transferral entails a process of redescription, which in turn relies upon a transaction of authority and power. When a transferral is from one domain to another, these transactions are usually of some significance.

Description, redescription and authorization occur within the framework of two fundamental legislative signifying mechanisms: condensation and displacement.[3] Condensation is the centripetal dynamic of social meaning, the lifeline of social cohesion in which different interpretations are blended to form a single (univocal or plurivocal) meaning. Displacement, on the other hand, is the centrifugal dynamic of social meaning, a mechanism of divide and rule, with differing interpretations either suppressed or held in a kind of suspension, disarmed and rendered ineffective. Although one of the two mechanisms may predominate at any one time, neither can occur in isolation from the other.

In fact, clusters of meaning are constantly combining, dissolving and recombining into different configurations through restless processes of condensation and displacement. The power of any social group resides in part in its control over these processes. The embodiment in the curriculum of the values and practices of any particular group is the result of a process of struggle, usually symbolic, although it is always also related to the broader field of power in society. This position of mastery is more or less precarious and must be defended by continuous effort. Thus, every description, redescription and authorization represents an agonistic site of where rival groups battle for symbolic control, for control of the 'pedagogic device' (Bernstein, 1996).

The power of the signitive or symbolic process is part of the conveyer belt of the meanings of a society and cannot be wished away. On the other hand, because of the ineluctability of power in redescription, redescription

runs the perpetual risk of replacing a self-definition with an external foreign one. This can be alienating, or worse. As Rorty (1989, p. 90) says, 'Redescription often humiliates'. The redescription that prevails, therefore, does so all too often at the expense of earlier redescriptions which are often deeply moored in the existential reality of social actors. If the power of the redescription is magnified by structure and domination, redescription not only humiliates but can also silence. When this happens, then necessary authority and power overbalance into surplus power, which in turn means that the redescription condenses exclusively around one set of interests. The pedagogical problem is therefore how to construe the context of mediation of meaning in such a way that surplus power is minimized. This is the problem that all contemporary critical pedagogies seek to address (for example, see Freire, 1979).

Before drawing some conclusions as to how these competing tendencies in the struggle for meaning and knowledge may be reconciled, some of the dimensions of both the necessary and surplus exercise of authority at the respective sites of redescription in the curriculum cycle will briefly be outlined.

The Domain of Everyday Life

It is in the everyday world that experience is integrated and focused into the continuing identities and traditions to which a person is attached. This occurs through a set of organizing principles which make sense of experience and direct action. These vary from informal conventions to highly coded and objectified laws. The institutional sites where these occur are in the home, the high street and in the range of public venues and occasions, from weddings to the shopping mall, where people make life choices that depend on knowledge of one sort or the other. Media play an increasingly important relay role.

In principle, every person is an interpreter and provides an 'eyewitness' account of lived experience. Most of the time, we do not delay in according meaning to what we encounter, but do it directly and, for at least some of the time, unreflectively. These individual descriptions coagulate into more common and shared understandings via public forums such as the media, public politics or public interest lobbies, where they begin to merge with a process of tacit authorization. Successive 'editing and recodings' (Wexler, 1982) begin to move such interpretations towards authorization and canonization, i.e. towards a social norm that is or feels binding on thought and action. However, the canonization of an interpretation is neither a matter of simple accretion nor of progressive refinement. The stamp of social and moral authority is needed if interpretations are to be significantly shared. Legislation is a move to closure, towards the elimination of contending interpretations in favour of one approved version, whether this is by a process of condensation or displacement. In this sense, far from being merely the

survival of the good and the true, the emergent or existing canon is very much an invented tradition (Anderson, 1983; Hobsbawm and Ranger, 1984).

But in the everyday world of modern society, everyday meanings are seldom total or hegemonic. Many of them are guided by serendipity where they are not simply driven by habit. Buying a car or choosing a school for the children is rarely guided by rational, or even traditionally cultural, criteria only; these decisions are often influenced by the generalized experience of friends and family, and it is in this fluid and unsystematic way that the habitus of a social group or class is built up, and reproduced, in everyday life (Bourdieu, 1977). These decisional closures are still redescriptions, however informal they may be, and there is some limit to the distance they may stray from the lived experience of ordinary persons.

These experiences are sedimented into local folklore, shaped by common sense and a healthy dose of scepticism – the 'crude thinking' of proverbial and idiomatic speech (Benjamin, 1969).[4] Although the moral and social authorities provide the authoritative account, their right to canonize is dependent on the degree to which their interpretation chimes with popular memory and common sense. In other words, the legitimacy of their authority reflects the extent to which their constituents recognize and empathize with these descriptions and redescriptions. There is no one-to-one concord here, and there are real limits to redescription. 'Anything' does not go. It is also worth pointing out that 'crude' taste or knowledge is defined by contrast to 'erudite' or 'refined' knowledge or taste. The generic questions remain, however: how is this knowledge, 'vulgar' or 'high', authorized and what are the limits to this process of authorization? This is where any sociological study of knowledge and curriculum properly starts.

In summary, the process of establishing knowledge for practice (or guidelines for action) in the everyday world is, by and large, an informal and ever-shifting interpretive process, punctuated by formal moments of high tradition and ritual. For more formal codifications, for firmer definitions of knowledge, other specialized domains come into play.

The Academic Domain

A central problematic of the curriculum concerns the relation between popular and erudite knowledge. It is brought into focus with the following question: how can or should the common-sense knowledge of experience and local culture, indeed of the everyday world, relate to the codified knowledge deemed worthy of inclusion and certification in the formal curriculum? One approach poses the issue in the following terms: it asserts that the growth of capitalism has led to a split between mental and manual labour and to the rise of the professional intellectual classes who exercise inordinate power in the production of knowledge and the credentialling of a wide range of skill domains (Sohn-Rethel, 1978; Gouldner, 1979; Abercrombie and Urry, 1983; Muller and Cloete, 1987). In the evocative

terms of Gramsci (1971), this split between mental and manual activity has the effect of extracting passion from scientific knowledge and reason from everyday knowledge.

This is not the only way that one might account for the differentiation between domains in modern society, but most accounts will agree that the result has been, until very recently (see Chapter 4), the dramatic schism between ordinary and formal knowledge. This is a central hub of the arguments in this book, and I shall return to it, repeatedly, in different ways because it constitutes, in my view, the central plane of distinction upon which modern schooling is founded. Seen from this perspective, the central curricular problem, which is also a central issue for social theory and political praxis, comes down to the question: what is the appropriate or proper relationship between reason and science on the one hand and the fields of passion and politics, practical activity and everyday life on the other?

During the final years of the previous century, academics have come to play an increasingly central part in this knowledge–production process. Indeed, as the mental–manual split has hardened, the mental workers – the new informational middle class (Luke, 1989) – have increasingly professionalized themselves and knowledge has become even more packaged and commodified than before. The commodification and professionalization of knowledge could mean too that the knowledge of intellectuals increasingly reflects their own interests. Numerous accounts demonstrate how these recodings of professionalism are linked to the professional or 'class interests' of academics (Conrad and Szelenyi, 1979; Silva and Slaughter, 1980) or of subgroups of them (Goodson and Dowbiggin, 1993). This has inevitably perhaps obscured the constitutive processes of knowledge production. The new social studies of science have, over the last three decades, been concerned to reveal the all-too-human steps of scientific discovery (see, for example, Pickering, 1992). Critical theorists of the curriculum, such as Wexler (1982), have likewise urged us to shed light on the processes of knowledge and curriculum production in order to understand how this opacity is produced, how the reification and commodification of the text is achieved through a shutting out of the awareness of collective labour and effort as the source of what we are and what we know. And this is what influential critical pedagogies propose teachers should do in the classroom (Giroux, 1988a).

The traditional institutional sites of the production and circulation of academic knowledge are laboratories, libraries, studies, lectures, seminars and consultations, academic journals, books, conferences and theses. Knowledge specialization is a two-edged sword and comes at a price; that of an ever-growing distance from everyday understandings and popular culture. The elaborated and highly technical nature of the discourses excludes all but the initiated – those who have served a relatively long academic apprenticeship – from participation in these debates. This non-communicating chasm is produced by the reciprocal processes of partial severance from the everyday world, the consequent monopoly of the inducted

few over knowledge legislation, and by professionalization by the new knowledge élite. These processes together produce a sharp disjuncture between the everyday and academic domains. As a consequence of this hiatus, the school curriculum is effectively controlled and directed by the latter.

The central legislators of the academic domain are an exclusive group: the collegiate of recognized authorities who control the sites of recoding – examiners, editors, referees, peer review boards and degree committees. Of course, the process of authorization does not entail a simple stamp of legitimation by an authority figure or group. In general, the ascendance of a single description, or paradigmatic mode of description, results from labours of proof and protracted debate. Nevertheless, in all of this, ordinary people are by and large not part of the contestation. Ought or could they be? There is more than one way to answer this question, as the chapters below will show.

Over the last two decades, a host of studies has emerged detailing the existence of a disjuncture between school mathematics and out-of-school or street mathematical practices. In Mozambique, Gerdes (1985) attributes this to colonial oppression; in Palestine, Fasheh (1988) blames the same phenomenon on Israeli imperialism; in Europe, 'class differences' are invoked (Melin-Olsen 1987; Walkerdine, 1988); whereas Lave (1986) uses 'ideology' to explain the existence of the same disjuncture among middle-class Americans. Illuminating as these analyses are, they rarely come to grips with the universal nature of the phenomenon, across a range of geographical, class, culture and mathematical task situations. The present analysis points to an explanation rooted in those processes of knowledge production common to all these countries: the recontextualizing of school knowledge from the academic domain and the power residing in the redescriptive process.

Curricula in highly abstract subjects such as mathematics therefore tend to mirror the theoretical concerns of the professors rather than providing more practical knowledge said to be relevant to everyday concerns or to the economy. Textbook writers are usually more concerned with academic niceties than providing texts oriented to worldly concerns. Gestures towards making school mathematics 'relevant' to the world of work and other daily activities is fashionable nowadays although it is often simply a contrivance, however well meant (Dowling, 1991). The social fissure has proved remarkably impervious to curricular amelioration for reasons explored at greater length in Chapter 4. Considering the disjuncture between esoteric and everyday knowledge solely in terms of the interests of its purveyors also has its limits, and a different explanation for the difference is explored in Chapter 5.

Whatever the reason then, the academic domain is dislocated from the domains that surround it. Academic legislators exercise what many see as surplus canonical authority in both directions: the form of generation of academic discourse renders curricular knowledge opaque to many of its users

and curriculum writers are able only to replicate the structure of knowledge, albeit redescribed into 'school knowledge', that they themselves were inducted into.

The rationalizations attendant on modernity may have produced order within each domain, but the resultant autonomy of the various domains has meant fragmentation between these sites of cultural production (Bauman, 1987). In the absence of an overarching form of normative cohesion, the market comes to act as a major mechanism of social integration. That is to say, social demand has emerged as the directive principle common to all the domains. This has contributed in no small measure to the emergence of a view of the late modern world as one in which the relativism of knowledge is a fundamental given. The world, according to this view, consists of an unlimited number of models of order, each generated by relatively autonomous sets of practices. Such models are not amenable to arbitration and ordering by means of a 'truth principle'; validation is only possible by means of criteria developed within this or that particular tradition.

This issue is explored more fully in Chapter 9. For present purposes, it is important to grasp that the autonomy of the academic domain is the result of a series of struggles against contending forces and principles of authorization and that this autonomy has had a paradoxical result. First, there is pluralization of claims to knowledge from within the academy itself as academic participants battle for the supersedence of this or that paradigm, this or that new branch of knowledge; and second, the turn to pragmatic relativism by ordinary citizens in the everyday world because of the perceived irrelevance of so much academic knowledge and with increasing cynicism about either its guiding power or its potential for doing good after world wars, ecological disasters and the aftermath of colonialism. Small wonder then that the boundary between the academy and the everyday world is finally beginning to erode and become more permeable, a trend with its emerging consequences directly addressed in Chapter 3.

The Domain of State Curriculum Planning: the Bureaucracy

In the introduction to this chapter, the claim was made that in order to understand how the curriculum is formed one must distinguish between formal political authority and the administrative functions located mainly in the education bureaucracy. The former is effected through the formal political domain by legislation in the literal legal sense. The administrative regulation of knowledge, on the other hand, is effected through the bureaucracy of education departments and associated agencies, and it is in this domain of the interpretative cycle that knowledge is packaged in its explicit school curricular form. Nevertheless, the two modes of state legislation are usually (but not always) quite closely aligned.

It goes without saying that the interpreters and legislators within the

bureaucratic domain must represent the dominant principles of society, as reflected most obviously in the policies of the dominant political party of the government, and the prevailing relations of power that exist between the various political parties and interest groups that are party to power. These groups and parties are located in the formal political domain, and one must distinguish between legislation between the state and the bureaucratic domain and legislation within the bureaucratic domain itself.

If the state is relatively insulated from society, then interpretation and legislation within the bureaucracy are tight integrated processes, often performed by the same people within a relatively short space of time and generally characterized by debates of technical detail rather than fundamental issue (Archer, 1979). This was decidedly the case during the regime of apartheid education (see Kallaway and Siebörger, 1990). Under these circumstances, alternative interpretations either are not deemed worthy of consideration or are explicitly rejected.

Under such conditions of insulation, the bureaucracy can be said to be undemocratic in that it generally excludes from even token participation all the major interest groups in society, be they teachers, civil rights groups or education interest groups. The senior bureaucrats obtain their status mainly by different combinations of loyal service to the state, merit and graft. Autonomy is acquired through a mixture of bureaucratic procedures, specialist inside knowledge about the workings of the system and trade-offs. Even the government may have only indirect access; reform-minded ministers are sometimes unable to implement change immediately or directly, which is not always a bad thing.

The schism between syllabus and textbook producers and the teachers is usually wide. Although individual teachers may be consulted during the drawing up of the syllabus and although some teachers are involved in textbook writing, in both instances their involvement occurs as subject experts, not as teachers and seldom as representatives of the organized teaching profession. The handing over of the finished products – syllabuses and textbooks – to the teachers for implementation is based on a view of knowledge that underlies all dominant forms of canonization. Syllabus plus textbook equals curriculum. The curriculum is presumed to be transparent: teachers (and in some instances pupils) should only have to read it for all to be clear. The fact that in service training usually receives little official support reveals a second transparency assumption of this model of curriculum development: once the knowledge has been extracted from the text, the means of translating this into classroom practice is all too often presumed to be automatic.

This model places teachers second from the bottom in a strict hierarchy. They generally do not participate in the expert work of curriculum construction because they do not to have the right skills or competence. The two transparency assumptions also predispose a third assumption: because the onus is on the teacher to extract the new content and

methodology from the text, failure to do this is assumed to be his or her fault.

Finally, the objectification of knowledge as curriculum, and of curriculum as text, is fundamental to the commodification of knowledge. All of this lends itself to easier marketization. The drift of packaged curricular knowledge more and more into the market-place in late modern societies is the seemingly inevitable result.

Deinsulating the state from society will not on its own cure these ills. Greater numbers of the public, and especially teachers, may well have a greater say in the establishment of curriculum texts, but these will still be 'handed over' to the direct implementers, who will still be at greater or lesser arms length from the new redescription, a problem that can only get worse as knowledge obsolescence increases apace. And, of course, deinsulation opens the door not only to the agents of civil society but also to the agents of the market.

The Domain of the School

The school domain is where the curriculum intersects with agents from the everyday world, namely the learners. Sites that make available pedagogical transmission of the overt curriculum occur throughout the world of work and leisure, indeed increasingly so (see Young, 1998, Chapter 12), but our concern is with the classroom, traditionally the most important of these sites. Although the sites through which the explicit cognitive and affective goals of the official curriculum are formulated are clearly identifiable, the hidden curriculum – 'the unstated norms, values, and beliefs that are transmitted to students through the underlying structure of meaning' (Giroux, 1988a, p. 23) – permeates the lives of learners.

The hidden curriculum structures the forms and outcomes of the processes of redescription and authorization of curricular knowledge in the classroom. This is true whether the particular classroom is situated within the formal system or whether it is part of an emerging alternative. In all cases, the hidden curriculum shapes and predisposes the process of learning and teaching towards dominant forms and contents. It would be surprising were this not so.

The kinds of meanings formulated at the classroom level have almost as much to do with who speaks, in which order and with what authority as they have to do with the topic of conversation, a phenomenon well documented by the new sociology of education in the 1970s and 1980s. Such descriptions and redescriptions are regulated primarily by the teacher or, more accurately, by the format of classroom talk that the teacher supervises (Muller, 1989). Teacher monologue closes out the possibility of alternative meanings, while questions tend to open up meaning in different directions, depending on the type of questions asked. The conferral of authority by the teacher on rhetorical questions or student answers to teacher questions predisposes particular interpretations (Taylor, 1990).

The hidden curriculum of the classroom exists within a school ethos, which in turn forms part of a system held in place by the bureaucracy. But the lines of communication between the classroom and the departmental head office are long and tenuous. What is to prevent the poorly trained teacher from straying from the intentions of the curriculum, or the politicized teacher from subverting these to her or his own political agenda? On the face of it, very little.

What mechanisms ensure that meaning is not deformed during this recontextualization? What mechanisms align the bureaucratic and school domains to ensure that the syllabuses and textbooks, the blueprints of curriculum implementation, are adhered to by the teachers? Apart from a host of indirect monitoring measures, such as school reputation in the workplace and at university, two specific devices serve to align the bureaucratic and school domains. First, public certification or examination procedures anchor the interpretations offered by the students. Although only the final exit point from the school is directly certified by the education department in a matriculation system such as the one in South Africa, all internal examinations, down to the smallest unit of learning, are generally oriented towards the exit examination. Both the teacher and the school are judged according to the performance of the students at this final hurdle, and it is this device more than any other that predisposes the teacher to speak *in loco administratus* rather than in the name of the community, his or her conscience or perception of the truth, civic usefulness or any other principle. In other words, a direct alignment device operates between the school and the educational bureaucracy, an issue of consequence noted in various ways by most writers on the curriculum.

The second mechanism that aligns the bureaucracy and the schools in South Africa is the system of school visits or inspections. Direct school visits by members of the bureaucracy such as subject advisors and circuit inspectors assess the maintenance of norms and canons in the administrative, curricular and hidden curricular spheres. With new teacher assessment procedures whereby promotion and tenure conditions are tied to success rates, co-ordination between these domains is drawn in even more tightly.

The above account depicts the school as a highly controlled instructional site where the official ideology is reproduced. This provides no explanation for the manifest deviations and inefficiencies that are so familiar. During the apartheid years, schools in South Africa became political battlegrounds, but it was state policy rather than the education system itself that was by and large challenged. The crisis in Black education magnified by student resistance was not one in which the school itself was seriously contested. Rather, the malfunctions within the instructional domain led to a variety of compensatory responses on the part of the scholars themselves (for example, see Muller, 1989). The dissatisfaction of teachers was mostly refocused onto salaries and service conditions. In the post-apartheid era, things have hardly changed. Developing a critical politics of pedagogy in South Africa will require a much

closer analysis of the contradictions, spaces and tensions that characterize schooling (Giroux, 1988a), as well as the factors that comparative research suggests contribute to globally effective learning (Green, 1993).

Conclusion

It has been argued that there are primarily three specialist domains that maintain the curriculum cycle through the exercise of redescriptions and authorizations of knowledge. Asymmetric relations exist between the three domains and the everyday domain in South Africa, as elsewhere. These result from the exercise of surplus authority by these domains, at the expense of each other but largely at the expense of the everyday world. Yet could it be otherwise?

The overriding curriculum question that has emerged is: how do we ensure that the deforming potential of redescription is minimized, given the proliferation of worlds of meaning and hence the number of redescriptions in late modern society? An edifying answer is rendered doubly difficult by the drift away from foundations and transcendent meaning into a fragmented world of localized meanings (Giroux, 1988b) into a world increasingly ruled by the market.

The principle aim of this chapter has been to sketch the intersecting fields of social meaning production in society in such a way as to understand the conditions for the emergence of alternative possibilities. It is precisely because knowledge is always being negotiated and renegotiated that the possibility for a different curriculum is always present. This chapter has begun to explore some of the consequences of this basic premise of knowledge as cultural meaning and social practice.

As the decade of the 1990s wore on, a great many things changed in the South African political and intellectual landscape. Apartheid education passed into the dustbin of history; globalization and its imperatives submitted schooling everywhere to its logic; the vogue for emancipation and emancipatory pedagogy waned; the excesses of a post-modern approach to education have become more apparent; above all, the nature of knowledge has come under revision. The implications of these and other defining features of the end of the 1990s and the global era for the sociology of knowledge and curriculum will be examined in greater detail in the chapters that follow. Chapter 2 will examine the startling new prominence accorded to knowledge in the global economy. Chapter 3 will explore what kind of education might be entailed.

However, the key premise of this chapter remains central to an understanding of knowledge and curriculum: namely, the importance of viewing the stock of knowledge of a society both holistically as an interlinked circuit and microlocally as a chain of redescriptions, where the methodological precept at each site of knowledge transaction simply is to follow the path of redescription. How to sharpen the conceptual focus of this framing is the topic of Chapter 4.

Notes

1 For example, see Pinar (1998, 1999).

2 Domains in this chapter are closely related to what Bourdieu (1990) calls fields, zones of cultural production that are structurally homologous, i.e. they operate according to common dynamics. As with Bourdieu's fields, domains are intended to represent sites where cultural, institutional and power dynamics interpenetrate. Like fields, domains are in tension or conflict about definitions of what constitutes legitimate practice. They are mechanisms of inclusion and exclusion:

> One of the major issues at stake in the struggles that occur in the literary or artistic field is the definition of the limits of the field, that is, of legitimate participation in the struggles. Saying of this or that tendency in writing that 'it just isn't poetry' or 'literature' means refusing it a legitimate existence, excluding it from the game, excommunicating it. This symbolic exclusion is merely the reverse of the effort to impose a definition of legitimate practice.
>
> (Bourdieu, 1990, p. 143)

3 In his original formulation of these terms, in the context of the interpretation of dreams, Freud emphasized two aspects of condensation. First, elements of the dream's content are overdetermined or represented in the dream-thoughts many times over:

> A dream is constructed by the whole mass of dream~thoughts being submitted to a sort of manipulative process in which those elements which have the most numerous and strongest supporters acquire the right of entry into the dream-content.
>
> (Freud, 1976, p. 389)

Second, the central force in every dream is the symbolizing activity of the imagination. Overdetermination is thus achieved by means of symbols or metaphors and it is this symbolic nature of the dream content that renders it both laconic and enigmatic.

The major factor responsible for the last characteristic of dream symbolism is displacement. Dreams are generally differently centred from the dream-thoughts. Displacement is the process that prevents disturbing memories from entering the dream content. The dream work strips those elements that have high psychical value of their intensity. At the same time, by means of overdetermination, it creates new values from associated elements of low psychical intensity, which then find their way into the dream content.

In his earlier application of condensation and displacement to the political sphere, Laclau (1977) tends towards a separation and periodization of the processes. The first of these predominates during times of systematic instability, when the reproduction of the canon is threatened by an exacerbation of its contradictory elements:

> As the function of all ideology is to constitute individuals as subjects, this ideological crisis is necessarily translated into an 'identity crisis' of the social agents. Each one of the sectors in struggle will try and reconstitute a new ideological unity using a 'system of narration' as a vehicle which disarticulates the ideological discourses of the opposing forces.
>
> (Laclau, 1977, p. 103).

Under such circumstances, the new system of narration must deny all interpellations but one, develop the logical implications of the latter and at the same

time transform the ideological domain. Condensation is a process of fostering maximum unity.

During times of relative social stability, on the other hand, crises are dealt with predominantly by means of displacement. This involves the dispersal of interest groups and interpretations in order to emphasize multiplicity and difference, preventing the build up of a counterposition, thus maintaining the *status quo*.

4 The term 'crude thinking' was first used by Brecht and was taken up by Benjamin, who described it as follows:

> There are many people whose idea of a dialectician is a lover of subtleties … Crude thoughts on the contrary should be part and parcel of dialectical thinking, because they are nothing but the referral of theory to practice … a thought must be crude to come into its own in action.
>
> (Benjamin, 1969, p. 15)

For Benjamin, the proverbs and idioms of everyday language are examples of crude knowledge and it is the implicit pedagogy of such street talk – such as jive and gangsta rap – that some writers have begun to explore (McLaren, 1995).

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2 Globalization, Innovation and Knowledge

Introduction: After Providentialism

('… what would happen if radioactivity itched?')
(Ulrich Beck, 1992, p. 120)

We live in a world where we no longer agree with Dickens's Mr Micawber that everything will turn out well in the end. We no longer have an unquestioning faith in God, or tradition, or science, or politicians or policy planners. Too many plans have run awry, too many technologies have produced unexpected and often disastrous effects on citizens, local communities and the environment. We live in a time where information about everything is being exponentially generated, much of which we know we will never hear about, all of which we have learnt to doubt to a greater or lesser extent. We all know, to differing degrees, that many of the events which rule our lives are determined in places far from our control, increasingly beyond our national borders. Even though we may hedge our bets with elaborate insurance policies, dietary precautions and routines of personal hygiene, all we can know for certain is that tomorrow we will discover a new threat or risk that we never dreamed we were vulnerable to. The knock-on effects of world events are literally unimaginable: a famine in, say, Mozambique at least partly caused, say, by overly austere structural adjustment conditionalities attached to foreign loans causes forced migration resulting in hawker congestion and ethnic tensions in the streets of Johannesburg and, who knows, perhaps lies behind the minibus taxi wars. And acid rain falls on us all. This is the global condition.

At the heart of this condition is the increasingly central role that technology now plays in every facet of life, a technology that is changing at an ever increasing pace, a fact which itself creates obligations for societies that want to 'keep up' or 'catch up' or otherwise 'fall behind', to use the current jargon. We should not think of technology as a 'thing', say the economists, as either hardware or software, but rather as 'the use of knowledge, means, processes, and organisations to produce goods and services' (Dahlman and Nelson, 1993, p. 6). And, as many of the key technologies we are talking about here

are precisely technologies for the dissemination of 'knowledge, means and processes', technology knows few boundaries, of firms, markets or countries. Technology is not only of the global condition, it is the condition of globality.

Technology, whether medium or high technology 'appropriate' or 'sustainable', has increasingly come to be seen as central to all forms of development, especially economic development. This view has attained the status of an orthodoxy. As Dahlman and Nelson (1993, p. 1) say with disarming directness: 'Technology and technical change are one of the main driving forces behind the structure of production, the opportunities for trade, the increase in international competitiveness, and the growth of national income', all devoutly to be desired to be sure. The condition for effective development is the knowledgeable deployment of that technology: the condition of 'knowledgeable deployment' is education. Perhaps more tightly even than in the heyday of Bekker's 'human capital' hypotheses of the 1960s that so scandalized the antiutilitarians of the left and the right, education (or knowledge) is, in the contemporary economic narrative, tied more tightly than ever into technology, productivity and development; one may add – to unplanned risk and uncertainty as well.

South Africa is implementing reconstruction and development in a climate partly defined by the conspicuous failures of the 'planned societies' of the Eastern bloc, but in the wake too of the retreat of the more astringent forms of free marketeering that produced anarchy and hardship way beyond the economic euphemism of 'market failure' (see Soros, 1998). In the era after the Cold War, with the 'cooling of the casino', few writers of repute would set state and market up as ideological opposites in the way they might have before, preferring to 'inquire into the conditions under which state action and market functioning combine to advance growth and development' (Rueschemeyer and Putterman, 1992, p. 259). This is not, as some might think, because ideology has now given way to hard-headed pragmatism, but rather because the nature of states and markets are changing under conditions of globality and that these changes are driving them willy-nilly into a relation of interdependence.

From what has been said so far, it should not be surprising that the penumbra of uncertainty, doubt and scepticism of the modern period extends to the activities of policy makers as well, to 'the dangerous and false security of a "society from the drawing board"' (Beck, 1992, p. 119). Even as development planners design consensual schedules that draw creatively on the latest literature on technology transfer, innovation, skilling, science and technology and economic growth, so counterdiscourses are growing apace, based on local needs, local identities and local control and on a strong antipathy to central plans of all kinds. A broad cross-section of world society, organizing sectors of the 'Fourth World' described by Castells (1997), feeling the cold wind of globality and often feeling distinctly left out of the circuits of distribution are asserting themselves against what they perceive as technocratic and centralist visions of development. This too is a global

phenomenon even as it is 'antiglobalization', so to speak. In order to be effective, these initiatives will have to be more than reactions against the depredations of globality, they will have to deal directly with it. So far, the most sympathetic commentators of their plight are not exactly optimistic (Castells, 1997).

Globalizing tendencies do not merely homogenize, create uniformity and universalize; they are not just about Seinfeld, Coca Cola and the latest Microsoft software. Insofar as they distribute knowledge and technology, previously the province only of the rich and powerful, they also provide opportunities for local appropriation. Globalization, or 'glocalisation' (Bauman, 1998), is simultaneously about the global and the local. Not being at the exclusive mercy of either is a definition of survival in these risky times. And education is somehow at the centre of most scenarios of survival.

Global Competitiveness and the 'New Competition'

As the boundaries and barriers of the preglobal world become increasingly permeable, giving enormously expanded access to technology and world markets, and as international competitiveness picks up and the increasing pace of change become the order of the day, a further feature of contemporary industrial production comes to the fore. Many writers currently suggest that we seem to be moving into a new phase of industrialization altogether, sometimes called 'neo-industrialisation' (Hirst and Zeitlin, 1991). The configuration is difficult to get to grips with; first, because there are at least three major paradigms or theories which describe the configuration in different ways, and, second, because some writers seem to be describing an actual historical shift (the 'post-Fordists' particularly) whereas others seem to be advocating the configuration as a normatively desirable one, to be actively pursued especially by those countries in the process of developing.

The nub of the matter, it seems, is the increasing dysfunctionality of a certain kind of production regime, based on mass-produced, high-volume, standardized products, depending for competitiveness on keeping production costs as low as possible (primarily labour costs), on economies of scale, thus making the goods price competitive on national and international markets. This form of production, sometimes called 'Fordist production' (after Henry Ford and his production line), based on precepts of classical economics, takes its line from factor accumulation and technology, leaving little room for either government policy or business strategy to improve upon production allocations (Doeringer and Streeten, 1990). Because cheap labour was to be had in the Third World, production plants were frequently sited there during the era of high Fordism.

The rate of change, the rate of information increase and the growing climate of global competitiveness have together turned Fordist production into something of a dinosaur, no longer able to adapt swiftly enough to changing market demands and being too rigid to make adaptable use of rapidly

changing technological innovations. Enter a new form of production, often called 'flexible specialization' but also known as 'flexible mass production' or 'diversified quality production' or just plain 'post-Fordist production', having something in common with pre-Fordist craft production, low-volume production of customized quality – competitive goods with a competitive edge added by rapid adaptability to innovation, highly planned and speedy delivery and marketing, an economy not of scale but of scope, of agglomeration and of collaboration. Unlike craft production, 'post-Fordist production' is not restricted to low-volume production but is able to 'massify' production cycles or 'batches' by embedding them in larger batches. Craft productive enterprises can therefore expand their markets through massification; and mass productive firms can correspondingly move upscale by customizing their products and improving their quality. The 'new' form of production is hence one which, in a variety of different ways, tries to combine economies of scale and scope.

There are two points about the generic form of the new production worth stressing. The first is that it depends upon *continuous innovation*, which can mean either the 'high' end of innovation involving the acquisition and deployment of embodied and disembodied (production process) technologies, either by research and development (R & D) or by technology transfer; or it can mean 'learning-by-doing innovation' by skilled workers constantly adapting existing technology through incremental innovation steps (or of course both). The second point is that the emerging new production regime can no longer get by with only docile, low-wage semiskilled labour. It increasingly must also depend upon *skilled, adaptable, independent and responsible workers*, who are a source of innovation in their own right. For any economy, or firm, therefore contemplating global competitiveness and successful participation in the 'new competition', the watchwords that have become key are *innovation* and *high skills*.

Although most analysts agree on the basic configuration needed for the 'new competition', relative emphasis and hence policy priorities differ depending on the paradigm (see Wilkinson, 1997). For the *technoeconomic paradigm* (TEP) writers such as, for example, Freeman, Soete and Nelson (called 'post-Fordists' by Hirst and Zeitlin, 1991), policy should focus primarily on national science and technology policy. For them, 'diseconomies of competition' occur mainly in these areas. The example of Hungary, for instance, tells them that although having a reasonable absorptive capacity actual absorption has been low because of too much inward looking and a poor incentive regime for both technological development and trade exports. The lesson from Argentina is that political instability inhibits firms from making the necessary long-term investments in R & D (Dahlman and Nelson, 1993). While not neglecting education and the institutional environment, this paradigm stresses outward-directed technological catch up rather than the internal conditions for endogenous development. At the worst, these writers lean towards a technological determinism notable mainly for what it

does not talk about. As we shall see in the next section, they lean also towards a particular notion of 'innovation' and consequently a specialist conception of skill and knowledge.

The *flexispec-diversified quality production* writers such as Sabel, Piore and Streeck, on the other hand, concentrate almost entirely on the institutional conditions necessary for cultivating highly innovative behaviour under a particular understanding of global conditions. This paradigm understands innovative activity to require specific business or state strategies that overcome the 'diseconomies of global competition', which are here understood as being connected with information, knowledge and free riding. These are market inefficiencies that have to be overcome by strategy, not competition or demand management. Hence, because efficient manufacturing will require co-operation between management and labour and intra- and interfirm relations of trust and co-operation in order to make investments effective, 'The core of a flexible specialisation policy is thus to create and sustain those institutional patterns that lead firms to co-operate one with another as well as compete' (Hirst and Zeitlin, 1991, p. 45).

It may seem that flexispec is a bridge too far for poorly endowed developing countries, but this is not necessarily so. Developing countries are less encumbered by the rigidities of vast technical investments which are costly to reverse and they can 'borrow' technology at a fraction of the cost of 'inventing' it (Amsden, 1990, p. 15). There is no reason at all why the work practices and relationships among flexispec firms cannot also be applied to developing countries and low-technology production in the informal sector as well as the formal sector (Doeringer and Streeten, 1990, pp. 1252–3).

The main division within the flexispec paradigm is between those, such as Piore and Sabel, who, drawing their inspiration from the decentralized co-operative business districts of the 'Third Italy', emphasize decentralized, voluntaristic (business driven) policies with a minimal role for the state; and those such as Streeck and Amsden who, drawing their inspiration from Germany and Asia, favour state-sponsored strategies and policies to compel firms to develop relations of co-operation against their ingrained classically conditioned impulses to compete at every point.

Flexispec generally favours supply-side policies that focus on the implementational end of production and hence emphasize the innovative capacities of the productive workers, clearly using a different definition of 'innovation' from that of TEP. For this reason too, flexispec places great emphasis on cultivating this capacity by training in 'broad and high skills'. This is the origin of the educational advocacy of non-specialist generic skills.

Finally, the *regulationist school* (for example Lipietz and Boyer) adopt a macroeconomic neo-Keynesian approach to 'world production', with an analytically derived view of the protagonists that favours a political rather than a policy view. The state is seen as crucial, and the nature of that state will be the outcome of a struggle between class forces. The working class must therefore assert itself for power in the state and ensure that low-wage

policies are not agreed to between the government and the business sector. This is an antagonistic view of labour–business relations compared with the co-operative one envisaged in the flexispec paradigm. Unlike that paradigm too, this approach is demand driven and the state is to stimulate local consumption as a path to growth. As the Third World is seen here as largely outmanoeuvred by international class forces, this approach favours massive aid and debt relief for the Third World.

These three paradigms of the 'new production' are all useful in that they highlight various dimensions and links in the competitiveness chain and clarify the different development paths that could emerge from different combinations of these dimensions. They clarify too the different human resource implications of the various innovation activities of the competitive paths:

- *technological invention* requires advanced science knowledge and substantial advanced research skills;
- *technological 'borrowing' and adaptation* requires intermediate science knowledge, some research development experience and some work experience*;*
- *technological improvement* requires quality secondary education (with science, mathematics and technology) as well as grounded work experience.

Significantly, not one of these approaches deals with either the substantive nature of that all-important secondary education, nor in depth with the consequent implications for the notion of skills and knowledge that education and training must deal with.

Innovation in Question

> Although the expert diagnostician, taxonomist and cotton-classer can indicate their clues and formulate their maxims, they know many more things than they can tell, knowing them only in practice, as instrumental particulars, and not explicitly, as objects. The knowledge of such particulars is therefore ineffable, and a pondering of a judgement in terms of such particulars is an ineffable process of thought. This applies equally to connoisseurship as the art of knowing and to skills as the art of doing, wherefore both can be taught only by aid of practised example and never solely by precept.
>
> (Michael Polanyi, 1958, p. 88)

The nature and practice of innovation is poorly understood in much of the development literature and those disagreeing have, by and large, not clarified the nature of their disagreements. The terms of debate have something in common with the differences between orthodox philosophy and history of

science and social studies of science and their respective views of scientific change (a difference approached from a different angle from that in Chapter 9). For the former, scientific advance is the product of rational forethought, of design planning, of the application of a highly trained intelligence to a rational puzzle. For the latter, on the other hand, scientific breakthrough is produced as an extension of ordinary 'scientific practice', which is itself a messy, arbitrary, trial and error business and which is driven at least as much by serendipity, animus or interest as it is by the epistemic imperative or by truth seeking. Here, as in studies of technology and innovation transfer, we can see the social studies research programme attempting implicitly or explicitly to answer a question that cannot easily be posed in the 'philosophy of science' programme: why is the same innovation or technology successful in one context and not in another one which is often identically resourced? (Amsden, 1992, p. 58). The answer to this question is central to an understanding of the differential economic performance of nations.

It may be useful as a start to borrow from the scholars of scientific change the distinction between a *knowledge-driven* theory of innovation and a *social practice-driven* one. For the first, innovation is driven by an increase in knowledge. In this scenario, advanced research as well as R & D are essential and, indeed, public and private spending on research is one direct index of international competitiveness in common use (see World Economic Forum/ IMD International, 1993). The question here for developing economies is how best to transfer the knowledge. Landes (1992) provides the conventional answer, which is to enter into networks with 'the strong and knowing', which in turn usually means via multinational companies or by 'joint venture' entrepreneurial networking. But this begs the question of why not all late-developing economies 'borrow' from the 'strong and knowing' with equivalent effect. For the social practice-driven theory, on the other hand, advances in innovation and technology come about at least as much as an extension of skilful manipulation of technology, of the art of doing. Some firms or economies then have greater stores of tacit knowledge to draw from. Furthermore, the tacit knowledge accrued by the long practice of craft and instrumental practice, of 'doing the job', in itself can come to suggest new ways of doing things. For instance, a technically simple streamlining of a production process may have major productivity consequences. The discussion by Watanabe (1993) of the effects of worker-built chutes, loaders and stoppers in high-technology Japanese firms such as Mazda is a case in point.

Nevertheless, we have to ask how useful it is to polarize the issue into alternative exclusive choices. From one point of view, the debate certainly is, as Boyer (1993, p. 101) has put it, about '… the inner characteristics of innovation. Is it the result of a rational *ex ante* assessment or the unintended and joint result of economic activity itself?' The either–or stand-off is only partly softened by historical example. Polanyi (1958), for instance, notes how, in the early 1920s in England, the scientific study of cotton-spinning

innovation was occupied for at least a decade in finding out what the skilled spinners already tacitly knew. Foray (1993) notes too how, historically, Japanese firms have come to develop 'technopulled' innovation, whereas US firms, relying on a well-developed scientific and R & D infrastructure, have tended to develop 'epistemically pushed' innovation and consequently, as the Japanese disapprovingly observe, the US firms too frequently indulge in overspecification, or 'overspec' (Watanabe, 1993, p. 363).

Nevertheless, prudent economists will insist that there are crucial returns to investment in all three areas – basic research, R&D and learning-by-doing innovation – suggesting that we need another way of considering the issue. Such a way is provided by a recent research programme which poses the difference between 'episteme' and 'techne' rather as one between 'product' and process' (see Foray, 1993, p. 10 *passim*). This approach does not polarize 'knowledge' and 'doing' so much as distinguish between two necessary and complementary components of all knowledgeable activity; the coded innovative knowledge 'product' or result of the activity on the one hand and the tacitly embedded unarticulated knowledge which is the 'process' condition for its productive realization on the other.

The crux of this distinction entails that basic research, R & D and learning-by-doing innovative activities all have both a 'product' and a 'process' dimension. Approaches that valorize 'product' only tend to lose sight of the tacit knowledge of the researchers, which is at least as productive a resource as the product, and to underestimate the tacit knowledge of the workers needed to put the product 'to use' in the production cycle. Not only does that knowledge have to be in place, and sufficiently adaptable, for the 'product' to become productive but it has also to be 'willing' to adapt; as Streeck puts it, 'the reason why one cannot teach an old dog new tricks is not that the dog is old, but that he wants to remain the kind of dog he has grown to be' (quoted by Elam, 1993, p. 30). Equally, approaches that valorize learning-by-doing downplay the codified and hence transmittable dimensions of knowledge in both generic (research) and non-generic (production) activity. The message in much of the recent literature is clear: 'product' and 'process' as well as their fruitful interaction all are essential for productive innovation.

There are a number of implications of this conclusion that are worth reiterating.

- Knowledge as tacit competence is as crucial to the quest for successful innovation as is knowledge as 'result' (which would include research results such as experimental algorithms, patents, trade marks and other forms of intellectual property). The latter is inert (often expensively so) without the former, and the former can only become productive by means of some measure of 'articulation' with inarticulate skilled innovativeness via explicitly designed institutional arrangements. The Japanese Quality Circles are an example of such an arrangement.

- All forms of practice have a tacit dimension, including, and perhaps especially, experimental and applied science. It is increasingly recognized that it is the training in research and problem-solving skills that has long-term market value, rather than rapidly obsolescent content knowledge. This holds true for all kinds of training. As Pavitt (1993, p. 37) says, 'economists and other social scientists will benefit enormously in both the accuracy and impact of their analyses if they discard their conceptualisations of science and technology as activities producing easily transmissible and applicable "information", and recognize them instead as search processes and skills embodied in individuals and institutions'. It is this point that gets fudged when industrialists doggedly insist that employees should have 'job relevant' skills.
- This perspective switches the focus of attention away from either research centrism and a preoccupation with amounts spent on pure and applied research or practice centrism and a preoccupation with incentive regimes for fostering shop-floor creativity. It places the focus squarely on the institutional forms most congenial to stimulating productive interaction (learning by interacting) across the many interfaces that criss-cross the productive cycle. These include: the basic research/R & D and application interface (for example science parks); the intellectual property–production technology interface; the firm–environment interface; the firm–firm interface; and the user–producer interface.
- Finally, firms need R & D operations not so much to produce 'product' innovations as to keep the general climate and level of organizational learning – the firm's 'social absorption capability' (Dahlman and Nelson, 1993) – up to speed, competitively speaking.

We may say, therefore, that knowledge to facilitate the diffusion and deployment of generic technologies, as well as knowledge for originality and diversity, are becoming the primary productive resource for firms seeking a globally competitive niche. Small wonder then that economists are unanimous in saying that 'education and training policies must now move to centre stage in the promotion of world development' (Freeman and Soete, 1993, p. 398).

Learning for Innovation

> I think therefore I produce
>
> (Manuel Castells, 1997, p. 359)

Moving towards an 'informational economy' (Castells, 1993) means that traditional competitive factors, such as cheap labour and raw materials, although clearly still important, lose their pre-eminence. To remain competitive, enterprises must continually strive to move 'up the value chain'.

Skilled human resource endowments then become the key competitive resource. Such resources are not simply found, they have to be deliberately developed.

The extent of globalization is certainly debatable, and although there are some who like to think that South Africa has a choice as to whether we can enter these deep waters or not it is hard to disagree with the *Trade Monitor*'s view that 'cliche or no cliche, South Africa lives in a global village and even its poorest and most unsophisticated citizens buy and enjoy products which originate either wholly or partly in other countries' (*Trade Monitor*, 1993). More technically, this means that 'the internationalisation of trade, business and technology is here to stay' (Nelson and Wright, 1992, p. 1961).

The internationalization of these three factors restructures the environment of economic intercourse. It divides competing economies into those that have made the needed investments into education, training and research and that are therefore in a position to capitalize on the new global dispensation and those that haven't and that therefore aren't. The latter group, who are on the 'slow train' described by Emmerij (1991, p. 43), are falling further and further behind the 'convergence club' (Nelson and Wright, 1992) and may never catch up. Poised in the middle are a group of economies that might go either way. South Africa belongs to this group.

What are the bare essentials needed to join 'the club'? More to the point, where should human investments be made? About some of the factors there is no doubt: a broadly based schooling is universally accepted as a *sine qua non*. This is more specifically usually taken to mean *high-quality secondary education*, although this is hardly a standard. US secondary education, for example, is not equivalent to that of Germany, France or the UK, either in length or quality. Nevertheless, secondary school enrolment remains an international index of competitiveness (World Economic Forum/IMD International, 1993). On this index, South Africa, in its class of fifteen late-developing countries (LDCs), ties for third place with Hungary, just behind Korea and Taiwan and just ahead of Chile, Hong Kong and Singapore. Clearly, quality is not part of this calculation.

For some commentators, such as Alice Amsden, a quality secondary education is by and large sufficient. In her view of late industrial 'catch up', this lays the basis for learning by doing, the strategy she feels LDCs should best plump for. This assumes too that most LDCs will opt for mid-technology rather than high-technology development. But this position tends to play down certain other saliences of the product–process nexus discussed above, especially the need to keep up with technological innovation elsewhere even where the strategy is not one of high-end innovation.

I do not mean to imply that South Africa should suddenly pursue a 'high road' R & D-led innovation path, but rather that 'a strong cadre of university trained engineers and scientists' (Nelson and Wright, 1992, p. 1961) is essential to keep national technological absorptive capacity viable. Going-it-alone 'technonationalism' policies no longer succeed in the global economy.

It is the *intermediate level* of education, training and skill – that obtained in the last 2 years of the secondary school career – that is the Achilles' heel of South African education as it is for many other LDCs. There has been a great deal of attention paid to the bottom-end basic education and there has, for reasons traceable to our British higher education heritage, been something of a preoccupation with idiosyncratic low-participation excellence at the top end. The 'middle' educational experience has hardly been debated at all, yet much of the current research shows that it is the key to national innovation.

What does this mean for the education and training system? The problem is certainly 'not that of devising the one best model of skill development for all labour market environments, but rather to identify the constraints and possibilities offered by the labour market structures prevailing in a given sector in a particular country' (Marsden, 1993, p. 373). We can eliminate the Japanese model of an intensive highly competitive broad general education curriculum, with on-the-job training of all skill specialisms, simply because the quality of schooling in South Africa is so poor (Green and Steedman, 1993; Joffe, 1993) and the basis for broad and diverse further skilling will just not be adequate. This means that in order to cater for subsequent training, whether in special institutions or in on-the-job training, post-compulsory education will have to offer some or other versions of both theoretical and practical vocationally oriented options within the mainstream of a consolidated single exit certificate. There is a strong argument for making these options available as part of an expanded version of the present matriculation (school leaving) examination. As King (1993) points out, we should not underestimate the popular cachet attached to the known certificate: 'It seems entirely possible that *versioning* the present matric (in the manner of versions of the French baccalaureate) would exploit the hard currency attached to the notion of matriculation whilst taking into account the strong pressures to "technicise", "commercialise", "scientise" and "vocationalise" this form of certification' (King, 1993, p. 200).

Retaining popular symbols of excellence is related to a final point. There is no high-quality education system in the world which does not 'place great emphasis on educational achievement, engendering high educational aspirations amongst individual learners' (Green and Steedman, 1993, p. 14). Communities must come to believe that hard work, not only merit or luck, ensures success and that education has a high value in itself. As King (1993, p. 205) says, this means that we may have to shift our goal from 'high participation' to 'high performance'. This ethos will clearly take a long time to build on the rubble of our thoroughly discredited system, but only when such an ethos takes hold will we be able, without political repercussions, to build the 'talent highways' that are so necessary for the education system as a whole to develop quality and high performance (King, 1993) and for the innovation economy to be adequately served.

All of this assumes a strong state that looks after all its citizens and promotes their welfare. It is just this kind of state that is placed in question by globalization.

Conclusion: Whither the State?

> What if, as a result of developmental changes, the modern state can no longer serve as the framework for the accomplishment of commonly accepted ends? What happens if, in the effort to promote more equity, justice and material benefit, contradictions set in that have an opposite effect? What happens if, in a state in which development rationale and theories of development provide both the logic and the text on which the relations of rulers and ruled are based, it no longer can square the circle between theory and practice?
>
> (David Apter, 1987, p. 307)

The global economy drives the search for greater productivity in the direction of innovation-led growth, as we have seen. Innovation supervises rapidly diversifying commodity production but it does not necessarily create jobs. This trade-off between competitiveness and employment is clearly evident in the new South Africa and elsewhere. As the Brazilian President said of Brazil in 1964 with bitter irony, 'Brazil is developing but the people are not' (quoted by Hoogvelt, 1987, p. 71). Growth and mass well-being are no longer in tandem in the 'new competitive' economy.

Apter, Castells and Reich describe, in different ways, the dynamics and effects of this situation on society. Reich (1991) discerns a growing rift in the workforce between the new information class of 'symbolic analysts' who thrive on the circuits that innovation requires and the service and production classes who by and large do not. Castells (1997) distinguishes in similar vein between 'self-programmable labour' and 'generic labour'. The latter are falling in income and opportunities way behind the former because they do not possess 'reprogramming capability': they merely possess skills with built-in obsolescence. The symbolic analysts, says Reich, will be naturally drawn to the allures of globalization and 'laissez-faire cosmopolitanism' while the service and production classes will favour a return to a 'zero-sum (economic) nationalism' of the kind that the discourse of globalization disallows (Reich, 1991, p. 311).

Apter's analysis of polarization is more drastic and chilling. His starting point is to question the self-sustaining ideal of all development writing, one 'based on a notion of an expanding and generalized middle class, a party of stability and civility at the political centre of society, a productive and functional class providing the means for a mediating social policy within the context of the … social democratic state' (Apter, 1987, p. 298). This self-sustaining ideal of the generalized middle class is today increasingly a chimera. Where Cold War developmental tendencies may in the past have fed the 'generalized middle', the developmental tendencies of the innovation economy are producing a 'functional polarization' in society between two broad groups of people: the 'functionally significant' class who are in gainful employment and who contribute to the innovation economy on the one

hand and the growing 'functionally superfluous' class who have low skills, scant chance of competing in the innovation economy and whose contribution to the social product is consequently negative on the other hand.

When people are functionally superfluous for any length of time, they become marginalized, then displaced and then dispossessed. They slide right out of society's embrace because they cannot be accounted for in terms of the mythology of the development narrative. The disillusionment produced – in the promises of well-being, in the blandishments of the state, in the narrative of equity and in democracy – is not to be underestimated. The last has particular consequences. Continuing democracy depends upon losers believing that at some future time they may yet be able to win if only they keep playing the game. Disillusionment with democracy means giving up that belief. This has serious consequences for the stakeholder model of policy negotiation, which depends on the conversion of desires, needs and demands into interests which can be negotiated (Apter, 1992, p. 161). If significant constituencies lose their belief in this process then they position themselves outside the formal polity and they resist all attempts to bring them into the institutionalized circuits of compromise. At this point, crime and violence as the only recourse become the inevitable result. Since the contradiction between innovation and marginalization is unmediatable, violence and terror become the logical political tools of the marginalized: 'one can say that the spread of terrorism is a function of development itself, and in global terms' (Apter, 1987, p. 37). Violence (or, for Castells, crime) is the price we pay for innovation, progress and rationality – the price we pay for development.

There is an optimistic and a pessimistic response to this scenario. As for the former:

> The liberal and social democratic response has been various, but mostly it has been to emphasise the need to retrain and educate, modernise, and innovate, hoping to expand opportunities. Increased social benefits to the marginalised plus investment, a kind of revisionist Keynesianism will presumably bring about necessary increases in productivity to stimulate growth and re-employment.
>
> (Apter, 1987, p. 318)

Part of the hope of this view is to be able to lure the marginalized back into stakeholder politics by asking them to participate in society while the innovation economy gears itself up to produce fruits for all. But this is to assume that the marginalized have chosen 'exit' rather than 'voice', and that this choice can be reversed. If we follow Apter, then we must conclude that the marginalized have been booted down the 'exit' option. Nothing short of major social transformation can boot them up again.

Reich (1991, p. 301) is only marginally more upbeat: 'To improve the economic position of the bottom four-fifths will require that the fortunate fifth share its wealth and invest in the wealth-creating capacities of other

Americans'. For this to happen, however, the 'fortunate fifth' will have to see themselves as sharing a common fate with the four-fifths ('if they don't eat we don't sleep'), which they are not necessarily disposed to do, seeing themselves in cosmopolitan rather than national or local terms (see Chapter 7). Common destiny is fuelled by cultural homogeneity, and powerfully undermined by cultural and social heterogeneity. In that case, Reich grimly recommends 'a positive economic nationalism', which means increased public spending on social investments, especially education. But with that, we are back to the desperate hope of Apter's social democratic 'noble lie', one shared too by every reconstruction programme so far proposed in South Africa.

Radical pessimism about the propensity of the state and the state-supervised formal economy to secure well-being for all leads in one of three directions. The first is in the direction of antistatist social movement politics with a bent for 'inversionary' tactics, including violence. This is the 'civil society' politics of the global village. The second is towards alternative development strategies, towards inclusive democratic policy deliberation, NGO-driven development and the fervent hope of a redeeming non-formal sector. This is the path promoted with missionary zeal by the global aid sector. The third is to fundamentalist revolt on the one hand or an institutionalized global political economy of crime on the other.

We may conclude, therefore, that the new international division of labour, between generic labour and reprogrammable labour, delivers an economically driven but educationally produced schism among citizens that could not have been foreseen by the well-meaning advocates of mass education. So far, the mainstream political and policy response has been frankly unconvincing. It has been to argue for multiple re-entry to education for the (hopefully temporarily) excluded, lifelong learning. But here is the question that is always begged – to *what kind* of education? What kind of skills and knowledge are they excluded from? What knowledge is of most worth for the millennial citizen?

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3 What Knowledge is of Most Worth for the Millennial Citizen?

Introduction

What knowledge is of most worth for the millennial citizen? The question is frequently asked, but the answers are far from unequivocal. What is most striking about them is that they invariably fall into one of two mutually exclusive categories. The first category provides answers to the question in terms of *cultural* knowledge and skills (the various multiculturalisms and feminisms; for example Arnot, 1997), *political* knowledge (human rights education, as in the Australian studies curriculum; for example Moore et al., 1991) or *moral* knowledge and skills (the inculcation and practice of autonomy; for example Appiah, 1997). The second category, growing increasingly vociferous, provides an answer in terms of skills and knowledge for *economic* productivity. The business pages of virtually every daily newspaper extol the virtues of flexibility, innovativeness and adaptability, cognitive skills supposedly for a rapidly changing world of work. Adherents of the first category, in other words, would educate for cultural and political participation; adherents of the second, for economic participation. Both clearly salient to changes in the global world, the two citizenships are rarely, if ever, discussed together within a common framework.

Antiutilitarianism in educational circles runs deep. It is anchored in the strategies of academic freedom and autonomy that higher education institutions everywhere have deployed since the nineteenth century against undue influence by church, state or economy. As Carr (1993) has argued, the liberal antiutilitarian consensus prevailed in the UK with the passing of the 1944 Act, which also had the unfortunate effect of downgrading the status of technical and scientific education for the middle decades of the century. The tide was only turned with Callaghan in the 1970s.

All of that has now been brushed aside by the advent of the global economy and the rise of the neo-liberal consensus, which demands not only a new relevance from educational provision but also a new accountability on the part of educators to globalization's new public good – innovation. What are the skills required to produce economic innovation? What skills are relevant to competitive advantage? The insistent refrain is that these must be the focus of education.

The response of educators, with important exceptions some of whom will be discussed shortly, has been to rehearse antiutilitarian arguments and to produce negative and pessimistic diagnoses of education's new beholdeness to the market and the economy. We have been warned of the dangers of impending instrumentalization, commodification and marketization of knowledge. One thoroughly pessimistic account is produced by Wexler (1990). Wexler begins by reminding us of Marshall's three forms of citizenship – civic, political and social–economic – and the two conditions upon which these forms depend – rationality and solidarity. National solidarity has been fragmented by the new identity social movements, and rationality has been deconstructed by post-modernism. Because these two conditions for citizenship no longer exist, citizenship itself, at least in Marshall's sense as a progressive cluster of rights, must disappear. Taking its place is a new reflexive self-regulating identity regime for the new informational class and a 'splattered' media-regulated identity regime for the remaining four-fifths of society. There is a great deal more to Wexler's dense and enigmatic account than I can do justice to here. The repressive consequences of 'universalized reflexivity' has recently been explored further by Zizek (1999), and the possibilities of subordinate identity construction for the new Fourth World by Castells (1997) among others. Wexler (1996) himself has subsequently analysed emergent prefigurative forms of identity recentring and resacralization, but the swingeing diagnosis of globalized society as one that systematically dispossesses the bulk of its citizenry remains compelling.

Why is it then considered so unseemly to ask: what will the educated graduate *do* with what school or higher education has made available? Is it possible that some of the pessimism is a by-product of the implicit distinction between productive knowledge and critical–reflexive knowledge? Are these knowledges not related or relatable in some way?

A small number of sociologists of education have taken another view of the relation of the economy to education. Finegold and Soscice (1988) reopened the debate on the left by charging that education and training in the UK had fallen increasingly out of step with the needs of an advanced or 'high-skill' economy. The 'old' curriculum, what Young (1999) calls the 'curriculum of the past', was and largely is a 'low-skill' one, by which is meant that a small minority attains high skills and a large majority fairly mediocre ones. A 'unified high-skill' educational transformation, it was claimed, could change all that and could lead the economy and its society towards winning nationhood. A number of educators embraced this new vision rather uncritically, and still do. But it soon became apparent that the conceptual resources for rethinking the changes that the global economy heralded were not present in the initial 'high-skill' vision. For these, one has to turn to scientific literatures often not familiar to educators: the sociology of economic innovation, for example; the sociology and social studies of science and technology; and interdisciplinary analyses of the changing social organization of knowledge production.

This last feature – the changing social organization of knowledge – has proved to be central for rethinking the changes to society wrought by globalization, and a narrative is slowly beginning to emerge about the *changing social nature, production and dissemination of knowledge*. I will examine one influential version of this narrative in greater detail. But first, the outlines of the 'knowledge argument'.

The Knowledge Argument

The globalization literature may differ on many points, but it is unequivocal in this respect: we are entering a new form of society in which the social organization of knowledge and the social organization of learning are dramatically changing. Whether we are examining the economy, the polity or the realm of society and culture, knowledge as a form of symbolic capital increasingly becomes *the* central form of productive capital.

- In the economy: knowledge in the form of data, plans, blueprints, patents, programmes and theories becomes *immediately* productive in the sense that it decreasingly requires labour and machines as intermediaries before it produces value.[1]
- In politics and civil society: knowledge of all sorts is increasingly sought by groups, communities as well as individuals as they conduct themselves and pursue their interests in the bewildering complexity of modern civic existence. Recent examples would include contests around the desirability of mineral extraction, land rights claims, abortion, the environment, and so on.
- In private life: knowledge becomes the tool with which individuals negotiate the complexities of everyday life: from taxation (tax counsellors), to unfair labour practices (shop stewards and human resource personnel); from relationships (marriage counsellors) and diet (nutritional knowledge) to health and consumption (consumer information agencies); as Melucci (1996, p. 1) evocatively puts it, 'to feed ourselves we consume symbols, to love and reproduce we resort to the advice of experts, to desire and dream we use the language provided by the media'.

Successful existence in modern society can be characterized, with Giddens (1990, pp. 88–92), as depending simultaneously on trust in proliferating expert systems on the one hand and on a deepening *reflexivity* at both an individual and an institutional level on the other, as citizens increasingly monitor, question, demand justification and accountability from, and otherwise try to cope with, a world of increasing uncertainty and risk (Beck, 1992). Some writers encapsulate this increasing salience and reach of knowledge in modern life with the term *knowledge society*.[2]

To say that knowledge becomes more salient in modern society is not to deny that knowledge and its possession has always conferred power in every kind of society known to us. But in no other society has the sheer volume and, even more importantly, the *pace* of its production and obsolescence been so dramatic. So, it is not merely a question of access to knowledge that becomes important to all citizens in late modern society, but access to and command of the *marginal additions* to knowledge that becomes key (Stehr, 1994, p. 98). It is at this point that the work of knowledge producers and reconfigurers becomes central to the life of all citizens, in wealth-creating activities or not, in modern society.

I have so far made a *demand-side* case for the increasing salience of knowledge in modern society by showing how knowledge becomes a vital tool for persons and groups who wish to prosper in economic, political and even personal life in the globalizing world. But there is a *supply-side* case to be made as well. The apartheid-produced inequities may have masked but cannot entirely disguise the trend that South Africa has followed along with many, if not all, modern industrial states; namely, the increasing massification of higher education and the increased production of competent knowledge producers. We may justifiably conclude that the combination of supply and demand factors, push and pull, has ensured the increasing centrality of knowledge in various dimensions of social life.

There are a number of implications that should briefly be mentioned. The first is that the traditional employers of knowledge workers and of knowledge – higher education institutions, statutory research bodies, private and public sector institutions – are quite unable to absorb the volume of qualified graduates pouring onto the labour market. Increasingly, competent postgraduates will find employment in research and development units, in research institutes and centres, in NGOs or in episodic consultancy and self-employment. These will also now contribute to knowledge production via research-based activities that have been, by and large, the preserve of the higher education institutions and the statutory councils, at least since the professionalization of the universities in the latter part of the nineteenth and the beginning of the twentieth century.

A second implication is that civic, political and economic life is increasingly organized around the dynamics of knowledge-generating units. These units are increasingly dispersed in time and space rather than around spatially fixed institutional locales – the firm, the shop floor, the university, the laboratory (Castells, 1989) – mainly because of the dramatic advent of *information technologies*. These allow different functions in disparate places to become co-ordinated to common tasks. The information network becomes the place, increasingly, where knowledge work is pursued by the new 'class' of workers, an elaboration of the white-collar administrative stratum that Reich (1991) calls the new class of 'symbolic analysts'. As we shall see in a moment, this means that academic work becomes increasingly transinstitutional; and transinstitutionality increasingly becomes one central feature of the knowledge work that graduates of the future will prosecute.

This is not some brave new world. Much of the deployment of information technology and the delocalization of knowledge work is driven primarily by the imperatives of wealth creation rather than by the desire for a better quality of life or an attempt to optimize 'societal learning' (Castells, 1989). Furthermore, in most countries, delocalization and uncontrolled networking leads to burgeoning fragmentation, which is why the co-ordination and stimulation of a national innovation system is regarded today as such a pressing issue.[3] But, more importantly, human issues are often left behind in the stampede to celebrate the supposed liberatory virtues of technology-carried knowledge activities. As Stallabrass (1995, p. 10) says:

> … aside from commercial interests, there is also an unholy alliance of postmodern disintegration theorists and wide-eyed New Agers, producing a ludicrous mosaic of the world immersed in a great, shifting sea of data, each person jacking in and finding exactly what they want, in their own personalised order and format.

What this burgeoning of technology-carried knowledge work will do for communities, solidarity and citizenship is not yet clear. There is much talk of 'virtual community'. But real local communities don't go away: they just become more or less tied into the knowledge and power networks; as Castells (1989, p. 349) says, 'people live in places, power rules through flows'.

A final general point. It is common cause that there is savage unevenness in South Africa as elsewhere regarding access to and participation in the 'global knowledge structure' (Vorster and Nel, 1995). This is starkly registered in the differential performance patterns of higher education institutions in terms of research productivity as measured by international citation indices; see, for example, ARHS (1995). It is certain that this will change in time. But because knowledge and power are so closely intertwined, power–knowledge flows under the present global economic situation will remain asymmetrical. This is not so much cause for pessimism as it is a challenge to legal regulation. For although technology lends itself to global flows, it is increasingly recognized that innovation systems, and education systems, are resolutely national phenomena, with national cultural characteristics and distinct national inflections (Green, 1999). This point remains of premier importance.

Having considered in rather general terms the increasing salience of knowledge, this chapter now goes on to examine two different ways in which 'new knowledge production' can be grasped and its changing conditions of social production mapped.

Two Modes of Knowledge Production

There is a global increase, registered in South Africa too, in what might be called 'problem-solving' or 'strategic' as opposed to 'disciplinary' research.

Of course, certain kinds of problem-solving, or applied, research have been a feature of research systems ever since the time of the ancient universities. However, with the increased production of graduates and the increased salience of knowledge, coupled with a growing public demand for relevance and accountability, an influential if controversial analysis (Gibbons et al., 1994) has identified a new mode of knowledge production characterized by a form of *social organization* that is somewhat different from traditional types of pure or applied research. This can be captured in the following (see Gibbons, et al., 1994; Ziman, 1994; Gibbons, 1998).

- Unlike disciplinary research, in which the research problem originates with the problematics of the discipline, the problem for problem-solving research arises in a *context of application*. This means that knowledge is not produced elsewhere (say in a laboratory) and then applied to a worldly problem; the knowledge is now increasingly produced through addressing the problem directly.
- Unlike disciplinary research, either pure or applied, 'problem-solving' research is *transdisciplinary*. It is pursued by a team of researchers, often located in different departments of an institution, often located in different institutions, sometimes located in different cities or even countries. In other words, context-of-application research frequently cuts across discipline boundaries as it searches for solutions.
- Such research is thus frequently *transinstitutional*, and many research groups that form research communities are increasingly trans-institutional.
- Such research is often *financed* from more than one source, increasingly not only from traditional statutory councils but also from a variety of donor, civic or corporate clients often in tandem.
- Such research is organized and regulated by *management structures* that are often less hierarchical and far more *collaborative* than the traditional academic research team and that are designed to take a wider more hybrid social accountability – to donors, to local communities, to diverse disciplinary communities, to local government, to corporate concerns – into account.
- Unlike disciplinary research with its peer group-assessed internal criteria of scientific excellence and unlike conventional applied research with its single corporate client and unproblematic criteria of utility, the *quality* of such research is increasingly being assessed against hybrid contextually relevant criteria. *Evaluation* thus becomes a new field of research and application, as well as a new kind of problem for national research systems, knowledge clients and donor agencies alike.

For better or for worse, this 'new' form of research has come to be called 'mode 2', in contrast to disciplinary research, which is called 'mode 1'. The mode 1–mode 2 distinction has, unsurprisingly, caused something of a stir.

The thesis itself has been derided as overstated and in any case unoriginal, being little more than a fashionable restatement of the Starnberg group's 'finalization' hypothesis of the 1970s (Weingart, 1997), which ventured that as sciences matured their potential for relevant application increased. The characteristic of transdisciplinarity, its central feature, has been called vague and far from clear (Rip, 1997). And some wonder whether the phenomenon, probably more prevalent in some branches of science such as biotechnology than in others such as physics, shouldn't rather more modestly simply be called 'strategic research', a pragmatic label that preserves some of the sense of local autonomy of the scientific endeavour in its 'compromise between serendipity and targeting' (Johnstone, 1990, p. 223).

Undeterred, the Gibbons group make large claims for mode 2. Peter Scott, a member of the original Gibbons team, summarizes some of the most important implications, as he sees them, of the mode 2 thesis for higher education in the following way (see Scott, 1995, 1997).

- Universities will lose their monopoly position as the pre-eminent provider both of new knowledge (research) and of skills and certificates as they are increasingly drawn into the market-place, where they must compete with other public and private agencies for customers and their livelihood.
- Local knowledge will come to occupy an increasingly important place in accredited learning courses, and as a resource in research, as academics and the public alike come to disregard the distinction between academic and local knowledge (some of the implications of this disregard are explored further in Chapters 4 and 5).
- The stress will increasingly come to fall on 'transferable skills' and 'generic competences' as the mobility of knowledge workers becomes a prerequisite for the job (see Chapter 6).
- Courses will increasingly become modularized to provide the greatest flexibility to busy recurrent customers.
- Forms of research will proliferate.

Scott, it should be clear, sees education in general and higher education in particular increasingly moving *from* a mode 1 world *to* a mode 2 world (see also Kraak, 1998, pp. 9–10). I will take issue with this interpretation in later sections of the chapter.

Of course, we should immediately admit that the mode 2 thesis is something of a fairy story. It overhomogenizes the evolution of a phenomenon that probably happened much earlier and it overdichotomizes it, presenting it as two discrete ideal types that probably never exist in their pure form in the real world. Nevertheless, I will claim that the distinction provides a few useful levers for educators grappling with changes in knowledge, in learning and in curriculum policy and planning, its overgeneralizations notwithstanding (Shin, 1999). The first is that it produces

a background rationale for evident changes in knowledge and learning that lifts the issue out of an insular perspective that would account for described and desired changes in terms internal to learning theory or to policy planning only. The slew of education policy scholarship that directs reproaches at government for 'marketization' as if this were some ideological blind spot that could be reversed if only the politicians concerned would see the error of their ways is not so much a waste of time as a woeful display of ignorance about the wide array of factors at work not only in the global economy but also in the global science system and their massive impact on knowledge and learning. The second advantage is that it suggests an implicit relationship between two regimes of knowledge production, as we saw briefly with Scott above, that will have important implications for curricular formats, as we will see. It allows us to pose the question quite directly: what is the historical relationship between traditional disciplinary formats and the emerging new constellation of interdisciplinary research and teaching programmes? Is mode 2 really set to replace mode 1? I will first examine the two main contending possibilities here, and will then go on to discuss some of the implications for thinking about knowledge, skills and learning.

The *replacement thesis* presumes that we are moving from one era to another, from elitist and unitary to democratic and plural forms of knowledge production, in short *from* mode 1 *to* mode 2. In that mode 1 is seen as politically and epistemologically conservative, the replacement thesis accrues normative as well as analytical force: mode 1 was bad and mode 2 is good. Scott's optimism indicated above is rooted here.

The *adjunct or supplementary thesis* makes the following rather different assumptions. First, that mode 2 has, in some though not all forms, been with us for a long time but that in late modernity it has become much more visible. Second, that mode 1 could not disappear because mode 2 competence depends upon a prior disciplinary competence.

Since it is the adjunct thesis that I hope to defend here, some implications of the thesis can be usefully listed.

- Mode 1 is orthodox, disciplinary knowledge production and learning. This is not going to disappear. It will, however, be affected by the degree and form of emergence of mode 2. This will necessarily differ across institutions and across organizations and units within institutions. But, whatever else happens, the importance of mode 1 undergraduate training should never be in question. Where it is, for example in the wholesale introduction of interdisciplinary undergraduate programmes at some institutions, then large questions about learning are raised.
- As mode 2 knowledge production depends upon a sound mode 1 disciplinary base, the general policy priority is clear: as an indispensable first step, strengthen and consolidate mode 1 undergraduate courses in the institutions. Mode 2 development will then follow. Mode 2 does not have to be created since it is market pulled: it has to be facilitated, or

encouraged to develop, and it has to be regulated. For Gibbons et al. (1994), this is the test of policy success.[4] If an institution is pushed towards mode 2 by an aggressive funding policy before it has adequate mode 1 capacity, especially among the staff, then it is unlikely that the result can be beneficial. Having said that, there may well be various routes to consolidate mode 1. For example, one route may be to continue to emphasize mode 1 learning in postgraduate courses, and thereby to tout for mode 2 business on the basis of demonstrated mode 1 excellence. An alternative route may well be to open the institution to mode 2 (market remunerative) business, such as flexible short courses (for example), and with the revenue generated finance a mode 1 consolidation operation. This last approach will depend upon at least some mode 1 capacity, whether existing in the institution or contracted in from outside.

- Contrary to belief in some quarters, mode 2 is not more democratically run nor more democratically accessible than mode 1. There may be greater access into the knowledge networks via the new information technology, but this does not ensure epistemological access into the highly specialized activities of mode 2 research teams. A condition for equal participation in mode 2 research is still going to be competent prior induction into a mode of inquiry, and this for the foreseeable future is likely to remain something of an élite eventuality.
- The most effective examples of mode 2 are research projects which configure disciplinary specialists within an organizational format that produces a knowledge outcome that could not have been produced by any one disciplinary input. The classic example of the Gibbons team is the Human Genome Project. The conditions of success include the form of the partnership, the regulatory environment, the financing arrangement and the evaluation regime. In other words, the conditions of success of mode 2 concern the conditions under which previously autonomous or disjunct but highly specialized disciplinary operations can be productively reconfigured. It should not mean that all higher education courses should now become interdisciplinary, or practical or skills based. This would be trying to produce the social form of transdisciplinarity within a single course or single individual. And this would of course lose the singular contribution of mode 2, which is productive partnership across previously insulated specialisms.

A key question is how academics will respond to the challenge of mode 2. Even when academics are deeply engaged in mode 2, the evidence is that they continue to value their standing and participation in professional societies and the values and norms of their academic disciplines and that they continue to extol the virtues of peer review. That is to say, they continue to value a mode 1 intellectual climate and will continue to pursue mode 1 research activity, although this will increasingly depend upon the continued flow of funding to basic research (see Fuller, in Barnett and Fuller, 1998). In the

most successful higher education units or departments, this should not be surprising as real status and reward attends their positions. This might not be the case for all academics in all institutions. Nevertheless, with the prospect of escalating postgraduate production, it is likely that competition for academic posts will intensify and that this will continue to nourish the sense of the value of the deep roots of traditional academic culture (for a more pessimistic view, see Luke, 1998).

A second possible response is that academics in, especially, professional faculties, with medium rather than outstanding disciplinary research track records, will embrace the seductive immediacy of mode 2 as well as its financial accompaniments, which in the present completely unregulated environment can well be considerable; the South African media refer here to the 'consultancy gravy train'. Such mode 2 involvement can have positive as well as negative spin-offs for the discipline. The positive includes a sense of topicality and practicality that can rejuvenate a tired faculty and attract good students. The negative has to do with the way that academics respond to the time lost in consultancy. They may for convenience simply teach their mode 2 involvements instead of what the curriculum requires. This would not be good for undergraduate grounding, as I have already observed. Or they may employ graduate tutors to do their teaching for them. These tutors may be mode 1 proficient, or they may not. Either way, the teaching outcomes are likely to be uneven. Probably, good faculties or departments will make it their business to balance their teaching and research commitments properly, although this can only be done by hiring support staff that assist with networking, data basing, software updating, writing research proposals and so on. The best research departments already employ such highly specialized people.

In some departments, distinct tensions will develop between teaching and research. When that happens, there is no doubt that the former will suffer. For instance, in departments with high mode 2 involvement, we will find dramatically diminished teacher–student interaction. This is always cause for concern, but for labour-intensive research supervision it could be disastrous. Remuneration for teaching will probably have to be severed from that for research, no matter how cherished the traditional desire for teaching–research unity may be (for example, see Barnett in Barnett and Fuller, 1998). The new global vogue for distance postgraduate offerings obscures rather than obviates this problem.

Learning in Mode 1 and Mode 2

In this section, I will first discuss Gibbons's view of the relationship between mode 1 and mode 2 and the implications for learning and knowledge, and then briefly show how the matter is dealt with in the learning skills literature and the curriculum policy literature.

How does Gibbons himself view the issue of historical accession? Does

he favour a replacement or an adjunct view? The case made is equivocal, sometimes contradictory, but I must conclude that he espouses the former but leans toward the latter. When he first addresses the issue, Gibbons seems clear: 'Mode 2 is not supplanting but rather is supplementing Mode 1' and 'Indeed, it is an outgrowth of it' (Gibbons, 1998, p. 33; see also p. 54). Not long after, though, he speculates about 'the extent to which Mode 2 becomes dominant' (ibid.), and from there it is a short step to advocating the teaching of mode 2 skills directly not supplementarily.

What are mode 2 skills? Gibbons, like the management writers, is at times content to speak in general terms about the skills of 'flexibility' and 'reconfiguring' (in Chapter 5, I will develop this idea in terms of the skill of higher order recontextualizing or 'verticality'), but on its own this does not take us far. When he poses the question of what abilities transdisciplinarity will require, he arrives at the skills of computer simulation, modelling and the ability to work with complex models.

How should undergraduates learn these? Through *problem-based*, as distinguished from *discipline-based*, learning. Using medicine as his example, Gibbons reports that 'some' medical schools teach students 'repertoires of problem solving' (Gibbons, op. cit., p. 40) in place of the disciplines.

> The belief is that by using a problem-based approach students will gradually pick up much (*sic*) of the knowledge that they would have acquired by going the other way around, i.e. beginning with anatomy and going on to the fundamental sciences and on from there to symptoms.
>
> (Ibid.)

This clearly leans towards supplantation not supplementarity; medical schools can hardly mount both kinds of curriculum. Gibbons goes on to muse about the slow diffusion of the new model and of medical reluctance to adopt it. The implication is that it is mode 1 prejudice and academic conservatism that holds back the medics. There are at least two assumptions here that can be questioned. Perhaps it is the case, or rather perhaps medics believe it to be the case, that solving problems requires a prior grounding in some discipline before students can be expected to display a higher-order reconfiguring skill. Perhaps students do need a thorough grounding in anatomy and the basic sciences first. Differently put, perhaps they have to learn the skills of reconfiguring and modelling within the framework of an ordered explanatory system. 'Once they have achieved these precious insights, they are in a position to continue their own education indefinitely' (Gardner et al., 1996, p. 50).

The second assumption is related to the first; namely, that generic skills can be learnt directly *as* generic skills in a context of application. A recent review of the literature on generic (sometimes called 'polycontextual') skills shows that this is a vain assumption (Breier, 1998). We learn higher-order

modelling skills in specific discourses first. Genericity consists in generalizing the skill to analogous situations. There is no generic learning context in which every student can learn the generic skill.

As Linda Darling-Hammond, referring to school-based education, remarks:

> Active learning aimed at genuine understanding begins with disciplines, not with whimsical activities detached from core subject matter concepts…
>
> (Darling-Hammond, 1997, p. 107)

The argument against disciplinarity that attends the replacement view thus holds a potential danger: the learning platform of students may be compromised and, at worst, undermined. And if this is the case in the best of systems, how much more so is it not the case in educational systems with shaky foundations such as is found in many developing countries, and in South Africa?

The case made by Gibbons for universities in the developing world exhibits this same troubling implication. Gibbons rails against the 'ideology of pure science' (Gibbons, op. cit., p. 53) (meaning adherence to mode 1) that seems to hold sway in such institutions. 'Why not move to mode 2' is his rhetorical question. But it may well be that it is less blinkered ideology than rational calculation if good mode 2 indeed depends on a good mode 1 base. Further on in the chapter in his book, in concert with William Saint of the World Bank, Gibbons castigates the development agencies for funding mode 1 rather than mode 2 higher education in developing countries. This time it is not ideology but 'vested interests' that drives the aberration. But is it not at least as likely that the same institutions that do not do mode 1 research well will be unable to do mode 2 well, and for the same reason; namely, that they do not have the basic platform, and support structure, to do it with? What these universities need, it seems to me, is precisely the resources and support to do, and teach, mode 1 properly. That even in developing situations it is the 'better universities' (the ones with mode 1 competence) that manage to do mode 2 (Gibbons, 1998, p. 53) underscores the point. To celebrate the virtues of local and lay knowledge in this context, as Scott (1997) does, seems irresponsible to me.

In the end, the pervasive unstated assumption in Gibbons's and Scott's advocacy of mode 2 is that, somewhere and somehow, mode 1 will continue. This is perhaps a safe bet in the developed countries, but not quite so safe in South Africa and other late-developing countries (LDCs) where universities are part of the state-run system. If a funding and incentive regime were to take Gibbons and Scott to heart and incentivize a wholesale move to mode 2, the meagre mode 1 base on which it all rests could easily collapse.

My argument so far, then, has been that to adopt a radically disjunctive replacement thesis for mode 2, a celebratory post-modern view, would lead

us at best into conundrums and perhaps outright contradictions. Consider the distinction described by Young (1999) between what he calls a 'curriculum of the past' and a 'curriculum of the future'. The former, like mode 1, is inward looking, transmission oriented, disciplinary and makes a strong distinction between everyday and school knowledge. The latter, like Mode 2, comes with emancipatory promise, is outward looking, innovative and problem oriented (Young, op. cit., p. 10). Young immediately goes on to concede that there are features of the past curriculum that may still be valuable for the future: 'Some sense of "learning for its own sake" is essential; always having to search for the uses of knowledge can be a constraint on learning as it can be on research' (Young, op. cit., p. 11). Young concludes from this that polarizations that pitch models in opposition to one another (*from* one *to* another) have weaknesses that a more relational approach might avoid. He goes on to speculate that the optimal relationship between academic and vocational learning might be sequential rather than the unified model that a mode 2 replacement-type view and the more ardent post-Fordists have been recommending.

Chapter 6 discusses further the ambiguous upshot of dichotomous from–to curricular reform thinking in South Africa in terms of Bernstein's distinction between competence and performance pedagogic models. Central to the former model, as mirrored in what Taylor and Vinjevold (1999) call the 'radical wing of the progressive consensus', is an aversion to all learning that smacks of rote memorization, regarded as producing 'surface' learning and understanding only. Active learning and 'deep' understanding is the watchword, and group work is *de rigueur*. Yet, in the best new research, it is clear that things cannot be divided up so neatly between memorization and understanding. This is shown starkly by the 'paradox of the Chinese (or Asian) learner' (Biggs, 1991; Marton et al., 1993). Hong Kong students, it seems, concentrate on memorization, yet typically do well in assessments designed to tap deep understanding. The false sequentiality of the replacement thesis is clearly displayed here. In other words, procedures of learning and forms of understanding cannot be so easily dichotomized, demonized and written off as the most enthusiastic of the radical progressives would believe.

Indeed, as Entwhistle (1998) shows, there are pathologies attached to holistic 'comprehension learning' (namely, 'globetrotting' – the tendency to ignore details and to generalize beyond the data) just as there are to serialist 'operation learning' (namely, 'improvidence' – the tendency to stick to a predetermined order at the expense of seeking connections).

Entwhistle concludes that we need a far greater grasp of how learning of various kinds, through rehearsal and elaboration, builds up over time stable nodes of organized, compressed ordering principles that are potentially recallable by memory, but that also act as reconfiguring or recontextualizing agents. He calls such nodes 'knowledge objects': '…a knowledge object is much more than a mental image of a diagram. It can pull into awareness

currently unfocused knowledge, almost in the way that hypertext in computing uses certain emphasized words to indicate the existence of additional information' (Entwhistle, op. cit., p. 96). The earlier mnemonic systems were clearly primitive knowledge objects. In Chapter 5, I examine the case of a non-literate worker who, through memory, has built up a simple knowledge object that allows him to design and construct carts and wagons to specification. What his unusual skill will teach us is how dangerous it can be to neglect traditional skills of conceptualization, however learnt, in favour of problem-solving skilling, no matter how 'relevant'.

Conclusion

We clearly need far greater insight into the ways and workings of learning and thinking than we have available to us at present. Globalization has merely sharpened the point. It has also hopefully become apparent through the course of this chapter that useful as distinctions such as mode 1 and mode 2 are in directing our understanding of the changes visited upon us by globalization we will have to be much more careful in relating modes of knowledge organization to each other than we have been so far. This chapter has tried to sustain the argument that although we may be able to make useful distinctions between different modes – mode 1/mode 2; curriculum of the past/curriculum of the future; memorization/understanding – a redemptivist style of crusading that portrays the world as en route from one to the other will simply crudify the picture and will certainly not aid our understanding of what knowledge and skills our millennial citizen will find most worthwhile. In Chapter 4, the relationship between everyday knowledge and formal disciplinary or curricular knowledge is reconsidered in the light of the theoretical framework developed in Chapter 1.

Notes

1 'What is specific to the informational mode of development is that here knowledge intervenes upon knowledge itself to generate higher productivity' (Castells, 1989; see also Stehr, 1994, p. 102).

2 'I conceive of a knowledge society as a society in which science and technology have extensively heightened the capacities of society to act upon itself, its institutions and its relations to the natural environment' (Stehr, 1994, p. 105).

   It is precisely the unintended consequences of such technical hubris that creates the constellation above – and, paradoxically, the thrust for new knowledge.

3 'Universities in many countries are not adequately tied into a system of innovation and innovation training. This does not only apply to sciences and engineering, for innovation is just as much an issue in social sciences, business practices, the law and the arts. Innovation attitudes will also have to extend to social relations' (Carnoy, 1993, pp. 90–1; see also Etzkowitz and Leydesdorff, 1995).

4 'The secret of adaptability is for at least some academics and administrators within a university to become part of Mode 2, to move inside the research networks and into the changing markets of goods and services existing outside the university. The test of institutions, and of governments, is whether they develop policies and structures which allow, and indeed encourage, this to happen' (Gibbons et al., 1994, p. 152).

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4 Schooling and Everyday Life

with Nick Taylor

Introduction: Insulation and Hybridity

A central debate in cultural studies and the sociology of knowledge can be characterized in terms of the distinction between *insulation* versus *hybridity*. Insulation stresses the interdictory and impermeable quality of cultural boundaries, of textual classification and of disciplinary autonomy. It highlights the integral differences between systems of knowledge and the differences between the forms and standards of judgement proper to them. It stresses the virtues of purity and the dangers of transgression. Hybridity, by contrast, stresses the essential identity and continuity of forms and kinds of knowledge, the permeability of classificatory boundaries and the promiscuity of cultural meanings and domains. In contemporary progressive curriculum theory, learning to 'crossover' cultural boundaries is, or should be, the aim of all pedagogy (for example, see Giroux, 1991). Questions of judgement and of classificatory integrity take second place to the goal of 'border crossing'.

In the cultural debates of the last 20 years or so, insulation has come to equal insularity and to be associated with conservatism and reaction, while hybridity, which has come to equal liberation, is associated with opposition to cultural imperialism and to the stultifying effects of tradition. A shift in the terms of cultural debate does not necessarily signify a power shift in the cultural field at large, although it may. The claim made here is simply that the framework of debate has shifted, that a certain temper or moral mood has taken root, putting the hybridizers on the offensive and the insulators, willy-nilly, on the defensive. Albeit with differences of inflection, this is as true for South Africa as it is for Europe, the Americas and, probably, most of the Third World. It is this temper which pervades the intellectual debates around curriculum theory.

None of this is surprising. Hybridizers are, after all, more active than insulators, trying to come to terms with what Jameson (1984) has called the 'cultural dominant' of late modernity, a world of fluid and plural meanings, of de-absolutization of cultural authority and of the permeation and dissolution of previously hard cultural boundaries. Powerfully driven by the explosion of the means of communication and transportation, the vastly accelerated production and circulation of people, artefacts and especially

information has produced a crisis of communication and interpretation whereby the habitus (the preconscious cultural interpretive grid) of many people no longer happily coincides with their habitat (the world of meanings they must deal with everyday) as it did for the premoderns. Consequently, 'the post-modernity debate has to a great extent been motivated by attempts to grasp the phenomenon of increasing intersemiosis produced by modernity' (Hieskala, 1993, p. 596).[1] As intersemiosis and interpretation come increasingly to the fore as central global problematics, so the relational and articulational dimensions of the cultural tapestry loom larger, and so too does the plausibility of border crossing, seepage and hybridity. The ubiquitous contemporary terms 'networking' and 'connectivity' carry much of this freight.

Chapter 1 began to develop a generic account of the production and circulation of meanings through the curriculum by means of a semiotic theory of descriptions and redescriptions. These terms indicate two of the principal mechanisms by which knowledge circulates through society: all knowledge is a description by social actors, and its disarticulation from one discursive terrain and rearticulation in another is accomplished through redescription. This account shares with others in the mainstream of the oppositional temper the project of delineating the limits of insulation and of hard boundaries, of showing how, despite vested interests, meaning 'crosses over'. In this chapter, the stick is bent the other way a little. That means an exploration of the limits to 'crossing over' and hybridity, but by holding on to the centrality of interpretation, articulation and intersemiosis. In other words, the possibilities and limits of hybridity are examined for a globalizing world, where the nature of knowledge is said to be changing (Chapters 2 and 3). The implications for curriculum theory will also be examined. This is admittedly a broad and rather abstract level at which to pitch the debate, but it does allow the question of borders and boundaries to be directly broached.

The border in question here is the one between common-sense knowledge and codified curricular knowledge, between ordinary everyday knowledge and codes, texts and canons, the mastery of which is assessed and certified at school. Within this focus, the hybrid project consists in 'bridging school knowledge or public knowledge and the students' own cultural knowledge, and thus encourag(ing) students to analyse this interaction, and then use the knowledge learned to take charge of their lives' (Sleeter and Grant, quoted by McLaren, 1991). It is the limits to this project or, more plainly put, the unintended consequences that ensue that will be the central point of this chapter.

In concluding this introduction, it is worth commenting in a preliminary way on the question of 'social constructivism' or constructivism**s** (Sismondo, 1993a).[2] In discussions of science, a distinction is made between 'internalist' and 'externalist' accounts of the advance of scientific knowledge, closely related to the 'philosophy of science' versus 'social studies of science' distinction discussed in Chapter 2. Internalist accounts attempt to justify

scientific progress by means of rational rules and protocols internal to science itself. Whether these are primarily rationalist (neo-Platonic or neo-Kantian views on the rational generativity of theory) or primarily empiricist (realist or positivist views on the role and rules of observation and method), they stress the 'in principle' regularity of scientific work in the pursuit of justified true belief. Those rejecting such an internalist account generally point to external social factors that impinge upon, and influence, the direction of scientific results. Most, if not all, of the 'externalists' have taken the linguistic turn[3] admirably captured by Woolgar (1988) when he announced that the social constructivist programme wishes to 'reverse the arrow' (Woolgar, op. cit., p. 50) from [object→representation] to [representation→object]. That is to say, representations construct what we come to take as the objects of science, not vice versa.

Everything turns on what is meant by representation. It can be taken in a neo-idealistic way to mean 'frameworks of thought', 'discourses', 'ideologies' or theories, but it need not.[4] It can be taken to mean a 'system of inscriptions', a set of prescribed social practices, negotiations and translations that collectively produce the knowledge in question.

There are a number of points of agreement across the constructivist continuum. Many writers see a *de facto* convergence around 'mild' (Sismondo, 1993a) or 'moderate' constructivism (Yearly, 1988). The main differences are twofold. If one inclines to the 'discursive' or relativist pole of the continuum, one is deprived of the resource to call any representation a *misrepresentation*. Feminist scholars may, for example, want to be able to say, to take Sismondo's (1993b) example, that the nineteenth century view that pubescent girls should avoid strenuous exercise because it was harmful to their health is more than just a discursive device to create middle-class housewives. It is also bad science, and wrong. Strong constructivism disallows refutations of this sort: milder forms simply suspend or bracket judgement (Hacking, 1998). More seriously, the strong view tends to take the position that, because representations give rise to the world, the world can be changed simply by deciding to change our representations of it. Derrida (1976) has famously analysed the 'wishing-to-say' (Derrida, op. cit., p. 244) of Jean-Jacques Rousseau, who believed that French citizens could regain their primordial freedom simply by taking it, ignoring or at least underestimating the submerged reefs of hierarchy and differentiation already inscribed in the social landscape. The strategy of 'wishing-to-say' and, correlatively, of trying to 'wish away' a social reality (Berger and Luckmann, 1971), the result of trying to assert the priority of 'speech' over 'writing', is self-defeating (Cornell, 1992). It will be one of the contentions of this chapter that, by taking the idealistic view of representation, voluntarist curriculum and cultural theorizing is liable to Rousseau's 'wishing-to-say' contradiction, and liable also to the symbolic violence that is often inadvertently triggered as a consequence (see Chapter 8 for an example in the domain of 'democratic' research collaboration).

As far as the present discussion is concerned, one can afford a certain degree of agnosticism. Whether mathematics progresses nominalistically or realistically, the mathematics curriculum is most certainly a purely social object, constructed by determinable sets of people, both designers and practitioners, an 'institution' that is an orderly catalogue of redescriptions which are ordered quite differently, for quite different social reasons, from that of the pure mathematics endeavour. It is this 'purely social object' and the way it is taught and learnt that will be the main object of scrutiny in this chapter.

Fields, Recontextualization and Translation

As discussed in Chapter 1, a principal concern of this approach to curriculum is the relationship between three kinds of knowledge: the knowledge packaged in the school curriculum and taught to children; the knowledge contested in the academy and related institutions; and the common-sense wisdom and practical skills formulated and acted upon in the everyday pursuits of work, love and leisure.

Consider, for example, the case of a group of Brazilian street children, who make their living by selling coconuts in the informal markets of the capital city (Carraher et al., 1985, 1988). While based on an intuitive grasp of the decimal system, the children's methods for calculating the price of, say, seven coconuts at 35 cents each are highly idiosyncratic when compared with the algorithms taught at school which are based on a formal study of the place value of numbers. Both kinds of activity, in turn, are distinct from, but seem somehow related to, the kind of discourse conducted by academic mathematicians. Thus, the street and school calculations can, the observer feels, be shown to be at least homologous, even if different, embodiments of the distributive axiom of multiplication over addition, where for any three numbers a, b and c:

$$a \times (b + c) = (a \times b) + (a \times c)$$

$$\text{e.g. } 7 \times (30 + 5) = (7 \times 30) + (7 \times 5)$$

This example highlights the need for an analysis of three kinds of theoretical consideration. First, the struggle for knowledge is conducted within distinct social domains or *fields*. Studies of disciplinarity are premised on a distinction between disciplinary and non-disciplinary forms of knowledge (Messer-Davidow et al., 1993). The approach developed here entails finer-grained differentiation among fields. However, rather than focusing on intradomainal matters, the present chapter is concerned with transactions between domains. Boundary analysis looks at how knowledge relates across domains of social activity, rather than across disciplines, and

therefore involves a consideration of the *recontextualization* or *translation* of knowledge across the boundaries of these domains. All translations or recontextualizations produce deviation and discrepancy: …'transfers of **in**formation never occur except through subtle and multiple **trans-**formations' (Latour, 1999, p. 298). The discussion that follows will draw on the work of Bourdieu, Bernstein and Callon.

For Bourdieu (see especially Bourdieu, 1993a; Bourdieu and Wacquant, 1992), social life takes place in a set of relatively autonomous but interlocking spheres of 'play' called fields. Within each field, agents contend for the form of capital that constitutes the stake of that field. Apart from wealth, the capital of the economic field, Bourdieu distinguishes among social capital, denoting valued social relationships, cultural capital, denoting one or other form of legitimate credential or knowledge, and symbolic capital or prestige. The quantity of capital possessed by the actors determines their relative place and rank in the 'space of positions' (Bourdieu, 1993b) which constitutes the field. Bourdieu is evidently reliant here on an extended economic metaphor for his account of social action.

Social reality exists in minds at the same time as it exists in things. The objective notion of field is thus always complemented by the notion of *habitus*, which denotes the subjective system of dispositions, the practical sense of the game, the bodily schemata of perception and action that agents inhabit 'naturally' and that steers their strategic action. Each objectively structured *position* in the social field thus has its subjectively structured set of *dispositions* ontologically paired with it. Habitus is what gives social reality regularity and predictability because agents become habituated to their positional lot and act dispositionally in habitual ways, or 'naturally', from it. Habitus–field therefore together constitute a double-register patterning of social practice.

Of particular interest here is Bourdieu's emphasis on the role of the education system in distributing the capital which produces and reproduces social hierarchy. The move from the dynastic state, where privilege was dependent on birth and patronage, to the bureaucratic state of the twentieth century has not removed the role of family position in reproducing the social order. But familial location has become overlaid by the function of schooling in imparting not only educational credentials but also real skills and definable dispositions to them. Thus, the transmission of privilege is not automatic but open to failure; schooling associates probabilities of success with existing social positions without necessarily producing that success: '… reproduction operates statistically, which means that the class … perpetuates itself without all of its individual members reproducing themselves' (Bourdieu, 1993b, p. 29).

Just as habitus provides space for the possibility of individual choice and rational calculation outside the habituality of our dispositional inclinations, so education provides space for social mobility both up and down the social hierarchy. For Bourdieu, this is one of the 'costs' of the shift from a dynastic

to a bureaucratic order. But the 'gains' more than compensate: the mechanism of reproduction offered by schooling has a powerful legitimating effect. The properties certified by schools, being defined in terms of personal talent or merit rather than heritage, have the appearance of naturalness, reasonableness, morality and universality of both access and recognition.

Schooling is by no means the only institution to function in this way, but in Bourdieu's scheme the education system provides the pre-eminent machinery for the authorization of social hierarchies (Wacquant, 1993). At the symbolic level, these mechanisms are far more efficient than the brute force, ecclesiastical fiat or naked class power of earlier times because they work in a subterranean way. Domination operates through belief: external structures become internalized and the dominated become complicit in their own domination. This is the essence of symbolic violence: '… no power can be exercised in its brutality in an arbitrary manner, … it must dissimulate itself, cloak itself, justify itself for being what it is – it must make itself be recognized as legitimate by fostering the misrecognition of the arbitrary that founds it' (Bourdieu, 1993b, p. 25). It is in this sense that Bourdieu refers to 'legitimate symbolic violence.' Symbolic violence is that surplus symbolic power which affects our destinies all the more powerfully because it has slipped off the horizon of consciousness, and therefore cannot be opposed or otherwise dealt with.

Possession of an article of universally recognized cultural capital such as a school diploma confers symbolic power on the holder. Symbolic power is the ability and social standing to have one's inscriptions recognized: 'a power of consecration or revelation, a power to conceal or reveal things which are already there' (Bourdieu, 1990, p. 138).

Bernstein (1990) uses a related but not identical notion of field (or arena), dividing society up into the field of production (of knowledge: principally the academy), the field of the state and the field of reproduction or symbolic control, principally education. The last has many subfields, which regulate dominant and subordinate discursive relations by policing the legitimacy of, and access to, the resources of the codes operating in that subfield.

Codes are composed of categories which are regulated by principles of *classification*, which are ultimately linked to social relations of power. School mathematics is an example of such a code. The discursive system depends for Bernstein, as for Durkheim (see Chapter 5), on the strength of classification within and between categories. Strongly classified categories and codes are strongly *insulated* from other codes and categories, and each system of classification has its agents for maintaining insulation that shape, reproduce, repair or otherwise police the categorial boundaries. Strong classification, or differentiation, generates greater autonomy between fields; weak classification allows different fields to become integrated by common organizing principles. For example, a weakly classified or weekly insulated curricular discourse will tend towards an integrated curriculum with minimal disciplinary specializations, whereas a strongly classified curricular discourse

will tend towards strong subject boundaries, strong forms of assessment, curricular streaming and probably vocational specialization.

All societies have at least two basic classes of knowledge for Bernstein – mundane or everyday knowledge (horizontal discourse) and esoteric knowledge (vertical discourse). Esoteric knowledges are the domain of educational practice while mundane knowledge rarely is, although the constructivists hope to change this. Knowledge passes through the educational system via a series of reinterpretations which Bernstein calls *recontextualizations*. This means that a discourse (for example chemistry) is *delocated* from its substantive practice and context in the experimental laboratory and *relocated* into a new discourse (for example grade 7 science), according to different principles of selection, ordering and focusing. This relocation transforms the practice of the original discourse into a completely different practice. That is to say, 'real' chemists do not actually do the things that schoolchildren have to do to learn school science, but it is on the basis of the latter that chemistry 'competence' is constructed, evaluated and rewarded in the school system. This recontextualization is clearly a result of, and will in turn exercise, considerable symbolic power.

Callon (1995) has provided an interesting clarification of the ways in which alternative explanatory models of the knowledge production process help us to account for the dynamism of knowledge innovation and dissemination. The major advance that this clarification provides is to show that each model emphasizes one feature and ignores others; and that a more adequate explanation requires the inclusion of the strengths of each model. His first model is the traditional *rational* model of the scientists and philosophers that explains knowledge growth in terms of the steady accretion of robust explanatory statements and that was earlier in this chapter referred to as an 'internalist' account. The 'tragic beauty' (Callon, 1995, p. 36) of this model is that it allows the spotlight to fall solely on the internal logic of the system of knowledge statements and does not provide a framework for understanding why and how particular ideas become knowledge at particular times and places.

All other models attempt to inject a social (or 'externalist') understanding into the transactions of knowledge. Callon's model two is a *competition* model, which using an economic metaphor explains knowledge as an outcome of a competition for scarce resources. While this model allows us to see that knowledge is always the outcome of contestation among groups of agents, it has nothing to say about the internal features of that knowledge, either its content or its form. This is Bourdieu's approach, and Callon shows that, although it does take us beyond the narrow focus on individual scientists that model one restricts us to, it can at best provide a snapshot of particular knowledge 'episodes', but cannot easily follow their passage over time.

Model three presents knowledge as the product of *sociocultural practice*, which I earlier called constructivist. This model sets out to emphasize the commonalities, or even identity, among various social practices and minimizes

the possible differences among them. These commonalities are of at least three kinds:

- between knowledge practices and other kinds of social practices;
- between different kinds of knowledge practices;
- between knowledge workers and other kinds of social actor.

For this model, all of these are more alike than they are different (as formalized in the 'symmetry principle' of the Strong Programme of the Edinburgh School of sociology of knowledge). In each case, the implication is that we should treat these as if they were the same, as if there was no epistemological or social difference between them. This model has two other features worth mentioning. The first, true to the focus on practices, stresses the importance of 'non-propositional elements', of tacit or non-codified skills in the production of knowledge. The second, like model two, stresses social context (the external) above the form and content of the knowledge itself.

There are a number of severe conceptual problems with considering all knowledge production under the rubric of 'social practices' (Turner, 1994), but these will not be pursued here. The fourth model, shared in different ways by Bernstein and Callon and by the approach described in Chapter 1, is a model of what Callon calls *extended translation*.

Callon invites us to think of any knowledge statement, the preferred focus of model one, as the contingent end point of an extended chain or network of inscriptions – graphic displays, tables, laboratory notes, various versions of reports and so on – together with technical devices and embodied skills. Actors (here called actants because they can be either human or non-human, such as enzymes for example) are attributed by inscriptions or technical devices which, when added into a translation network, lengthen it.

The fundamental property of translation is not, as it is for Bourdieu, to act as a bearer of power, but is to produce discrepancy or productive deviation. Translations proliferate because they produce discrepancies, additions and subtractions in the inscriptions themselves, which are the material marks of the effect of social context. The great advance that model four has over models two and three is, therefore, that the social context is analysed by its effect on the body of knowledge itself: the explanation for translational proliferation is sought not in the context but *in the inscriptions themselves*.

Callon's argument is that each model has something to offer, and the implication is that model four retains the best features of the other three. The point of this discussion of Callon is not to belabour the similarities between 'extended translation' and 'recontextualization', but rather to demonstrate, from another point of view, that neither an internalist account nor an agonistic model such as Bourdieu's nor a constructivist model such as that of the socioculturalists will, on its own, help us to understand curriculum as nested within the larger flux of knowledge in society. Rather, some kind of recontextualizing or translational model is required to lend precision to why certain knowledge forms have the purchase that they do.

To return to the central concern of the present chapter: how is one to regard the appropriate place of curricular mathematics knowledge? For Bernstein and for Callon, curricular knowledge is part of that large class of esoteric discourses, separated from everyday knowledge by two things: a boundary which we relax at our peril and a recontextualization or translational network that has in any case reconfigured the original mathematical practice. For the sociocultural constructivists, the boundary between the mathematics curriculum and everyday knowledge is artificially exclusionary, epistemologically unjustified and must be removed.

The aim here is not to find the right pigeonhole for mathematics curriculum, but it is crucial that we understand the limits to hybridization, the point at which the emancipatory strategy turns against the intentions that drive it and becomes self-hampering.

Learning What Counts

Since the beginning of recorded history, academic mathematics has provided among the most enduring philosophical problems. Since Euclid, it has enjoyed wide recognition as one of the most easily identified, fully realized, aesthetically pleasing and powerfully useful disciplines. Elaboration of the discourse occurs within the academic domain and is undertaken by initiates who display a highly particular inclination and have served a relatively long apprenticeship. It is considered an important aspect of study at the school level – where students struggle to master the curricular version of its rigorous language – and mathematical proficiency is an entrance requirement for many areas of post-school study. It is not surprising, therefore, that the relationships among academic discipline, school mathematics and everyday life are a contentious matter.

The distinctions drawn above among mathematical discourses of the street, the classroom and the academy provide the terrain for current debates in mathematics education. Current conservative orthodoxy (a particular version of model one) is based on the assumption that the formal mathematical knowledge of academic discourse represents the truth about the world which transcends time, place and culture. What is important at school, therefore, is to transmit a pure form of this knowledge. This, in turn, because it is based on an essential distilled truth, will be applicable to the calculating, measuring and reasoning tasks demanded in any real life situation.

The constructivist challenge to this view charges that a school curriculum dominated by academic mathematics privileges a sharply located kind of knowledge; that this kind of school mathematics is a tool of modernity, with all the worst phallo-, logo- and Eurocentric connotations of the term. As a result, children who do not share these perspectives – the working class, Black people and women – are excluded from the discourse; the Brazilian street children, for example, invent ingenious solutions to problems encountered in their daily lives, yet are unable to perform analogous tasks in

a school setting and therefore fail their mathematics. For constructivists, the solution to this problem is threefold: a political campaign exposing the imperialistic roots of the present mathematics curriculum (for example, see Fasheh, 1988); a pedagogical project aimed at incorporating examples from the life-world of learners from a variety of race, gender, class and cultural backgrounds into school mathematics (Gerdes, 1985); and recognition of prior learning. All three solutions are problematic.

In South Africa, one of the most glaring indices of the depth of the racial divide in the education system is the failure of Black children in mathematics and science programmes at all levels. Under the circumstances, it is understandable that the present curriculum has been identified by educationally concerned groups as an exclusionary mechanism and that they advocate a programme of radical redress. This overtly political thrust coincides with the pedagogical prescriptions of a range of groups, the problem-centred learning advocated by some university-based educationists (Olivier, 1993), and permutations on the constructivist theme propagated by dozens of teacher development programmes provided by non-government organizations (NGOs) (Volmink, 1993) to mention only two. In fact, the development of a new counterorthodoxy is rapidly emerging and the basis of the new national curriculum in South Africa, Curriculum 2005, being phased in from the lower grades as from 1997 is exemplarily constructivist. Chapter 6 discusses its pedagogical structure in greater depth.

Bernstein's model of recontextualization is useful in understanding the contest in South Africa between the old orthodoxy and the emerging new constructivist order. Bernstein observes that the nature of the relationship between two fields of recontextualization – the official recontextualizing field (ORF) and the pedagogic recontextualizing field (PRF) – is key in times of curriculum change. Dominance of the bureaucracy (ORF) through centralized processes of curriculum construction and systems of assessment and inspection during the apartheid years severely limited the participation of professional teacher organizations, NGOs, academics, business groups and the range of other actors which constitute the PRF. Access to the writing of syllabuses and textbooks was tightly controlled within the White education departments, and all interested actors outside the ruling party – labour, business, academics from the English-speaking campuses and teachers – were excluded from participation. For many opponents of apartheid, it was state dominance of the curriculum process which produced an exclusionary curriculum, and their emancipatory project was to storm the citadel of esoteric knowledge and break down the walls.

The emergence of a new order after 1994 has been accompanied by the rapid growth of the pedagogic recontextualizing field. In the struggle for a new mathematics curriculum, the PRF is dominated by a strong constructivist alliance, whose work is characterized by two features. First, while the present curriculum is primarily the product of recontextualization from the academic into the school field, constructivists concentrate their efforts on

recontextualizing everyday knowledge into the curriculum. The key assumption here is that esoteric mathematics can be bridged for all children, but especially for marginalized constituencies, by means of everyday examples. Second, the constructivist position has no theory of the boundary: it is as if there is no disjuncture between fields; as if, for example, the syntax of school mathematics could be perfectly aligned with that of ordinary everyday activities. In the terms developed here, constructivists are strong hybridizers whose pedagogy assumes a flattening of the everyday–school boundary.

Dowling (1993) is in sympathy with the political goals of the constructivists, but is opposed to their pedagogical programme, presenting a particularly strong case for what could go wrong in their practice. His analysis of mathematical textbooks in the UK leads him to conclude that the texts prescribed for 'lower-ability' students (the G series) and that incorporate numerous examples intended to model everyday situations succeed only in further excluding their readers from the esoteric discourse. 'Higher-ability' students, on the other hand, are inducted directly into esoteric mathematics (the Y series). Dowling's argument proceeds as follows.

The recontextualization of everyday material into the curriculum for diasadvantaged learners involves a twofold deformation. First, it does violence to its everyday setting in that the material in which the learner is supposed to recognize himself–herself parades as real life, but is recontextualized according to the curricular needs of the mathematics it purports to exemplify. The result is neither 'real' mathematics nor recognizably 'real life.' The debate in mathematics about the relationship between esoteric knowledge and that of other discourses – not only of the everyday, but also of more 'empirical' scientific disciplines such as physics – has a long and fruitful history. Dowling's strong position would seem to imply that school mathematics should incorporate no 'real world' examples. This is a debatable issue, but his larger point is to emphasize the disjuncture between school knowledge and everyday life. Dowling's second objection to the way in which the everyday is imported into 'lower-ability' mathematical texts is that it does violence to the student in inculcating a view of mathematics as a series of specialized solutions to particular problems rather than as a connected set of axioms and theorems. In substituting procedure for discourse, constructivism obscures the interconnected and generalized nature of school mathematics and precludes the induction of the student into the discipline of mathematics because the 'localizing strategy' of indigenous examples induces the student to mistake 'algorithmic' solutions for generalizable principles and, thus, to mistake the nature of mathematical practices. For 'higher-ability' students, by contrast, the discursive elaboration of generalizable principles is foregrounded. This induction involves a subjugation to the discipline: the discourse is in authority over their actions insofar as its methods are non-negotiable. However, the subjugation results in the production of a new subjectivity, alongside the localized individuality of the everyday subject,

like adding an extra room to a house. This is the subject who passes mathematics. The 'lower-ability' student is, paradoxically, left free to be a local individual but a failed mathematics learner. The constructivist approach, a 'wishing-to-say' pedagogy uncomfortably close to the pedagogical strategy of the ruling classes in seventeenth and eighteenth century Britain,[5] produces a result opposite to its explicit intent, visiting the exclusion on disadvantaged students that it was constructed to avoid.

Valerie Walkerdine (1988) shares Dowling's view on the contrived nature of a pedagogy which would unproblematically proceed by induction from 'real world' examples. However, she is less coy than Dowling about deriving implications for the classroom from her theoretical analysis. She shares the anger of the constructivists against the exclusivity of formal mathematics. Walkerdine sees too the need for a closer relationship between the everyday and school knowledge but unlike the constructivists, who would achieve such a tie by flattening the boundary and hybridizing the discourses, she theorizes the nature of the boundary. For her, the existence of exclusive domains of discursive activity is a sine qua non: the problem is how to travel from one to the other.

In terms of the theoretical framework being developed here, Walkerdine's project is to theorize the nature of recontextualization or translation: what happens when a set of signs which make sense in one discursive domain are transformed into a different set of meanings in another? How can this transformation be achieved so as to make the formal discourse accessible to a wider range of learners? And, most important, how can the signs of mathematics be stripped of their power to pathologize and regulate and be imbued with a liberatory charge? For Walkerdine, the starting point for answering these questions lies in recognizing that everyday practices and school tasks are separated by a sharp disjuncture. In the first, a metaphor, such as selling coconuts, calls up a specific set of practices within which certain things are doable and others are not. This is reasoning within a familiar context, adopting a subject position within a known discourse. An example to illustrate this point is afforded by the Brazilian street children alluded to earlier: the cost of seven coconuts may be calculated by doubling 35 cents three times and adding another 35 cents. The kind of abstract reasoning entailed in a school situation, on the other hand, involves conscious reflection on the linguistic structure of the discourse itself (Walkerdine, 1982), a reflection on the internal relations of combination (for example cost = thirty-five cents times seven). This, in turn, requires ignoring the metaphoric content which might detract from focusing on the logical relations entailed in the statement by directing attention to the specific local practice to which the statement refers.

The next step is to distinguish between those relations of signification in the everyday world of the learner which provide fruitful points of articulation with the discourse of school mathematics and those which may be misleading. For example, the formation of a mathematical sign such as 'more' does not

merely involve the representation of an object, operation or relation by a symbol, but occurs within a specific signifying practice. The opposite of 'more' in home-based eating practices is more likely to be 'no more' rather than 'less'; in school-based mathematical practices, on the other hand, 'less' is the opposite of 'more'. In ignoring the distinction between the everyday and school fields, the assumption is made that any everyday metaphor is suitable for effecting egress into the metonymic relations of mathematics, thus opening the possibility for confusion.

The pedagogical task, therefore, is to identify areas where out-of-school practices might usefully dovetail with school mathematics and to structure the school discourse so as to work systematically through the process of transfer. The shift from one practice to another involves the prising apart of one set of relations of signification and rearticulating or translating them to produce new meanings. This in turn is achieved through the construction of complex signifying chains, '… which facilitate the move into new relations of signification which operate with written symbols in which the referential content of the discourse is suppressed' (Walkerdine, 1988, p. 128).

One example of a discourse containing such a signifying chain which Walkerdine (1988) quotes is set in the home. A mother and her 4-year-old daughter are discussing how many friends the latter will have to play and how many glasses of juice and biscuits will be required. First, the daughter names the seven children she wants to invite. Second, the mother helps her to raise one finger to correspond with each name. In the first step, the names are signifiers of the children, but in the second step they drop to the level of signifieds in relation to the new signifiers, the fingers. In the third step, the fingers in turn become the signifieds for the next level of signifiers, the spoken numbers which are counted off the fingers. And, finally, the spoken numerals are represented as written symbols, which are the signifiers most appropriate for arithmetical manipulation. This process is represented schematically in Figure 4.1.

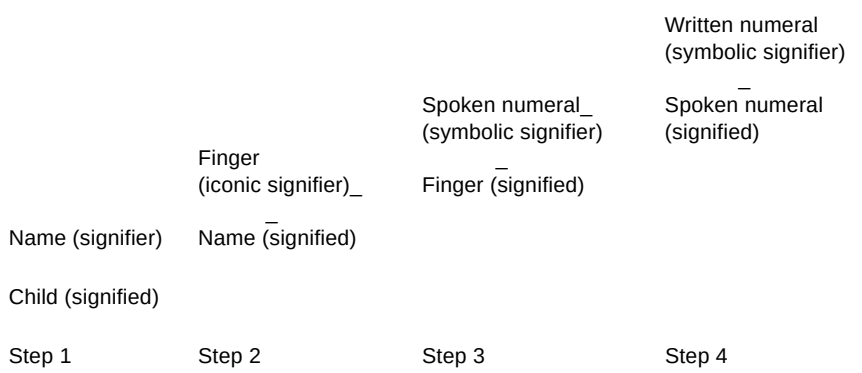

Figure 4.1 The construction of mathematical knowledge as a signifying chain

Constructing such signifying chains is a far cry from the approach advocated by the constructivist groundswell: that any and all everyday experiences are suitable metaphors for mathematical relations.

There is a widespread perception of mathematics as a central mechanism in sorting and regulating the population, where its success is attributed to the conception of mathematical knowledge as absolute. The response of the constructivists to this analysis is to break down the distinction between school knowledge and everyday life; to attempt to infuse that form of the discipline taught at school with a variety of meanings which resonate with the thematic experiences of flesh and blood subjects. Dowling presents a convincing argument that this approach merely displaces and exacerbates the symbolic violence perpetrated by mathematics education. By insisting that school mathematics be concerned with localizing 'real world' problems, the discipline and its generalizing power is squeezed off the curriculum. By these means, the boundary bashers unwittingly connive at the marginalization of their pupils.

A prudent boundary crossing would seem to promise more fruitful possibilities. This is based on the recognition that not all everyday objects are suitable resources for the metonymic relations of the discipline. The same signifier is attached to different signs in the respective fields of everyday life, the school curriculum and the academic discipline. Recontextualization, or translation, consists in prising apart relations of signification in one domain and rearticulating them in another, a practice without guarantees because, as Callon (1995) shows, translations always produce discrepancies.

Conclusion

This chapter started off with a concern that children, often from disadvantaged groups, fail, or are failed by, a curriculum and pedagogy that alienates large numbers of children from the educational process. The action of this 'surplus' power is symbolic violence. The overall project pursued here is to explore curricular and pedagogical ways for 'forcing symbolic violence into retreat' (Bourdieu and Coleman, 1991, p. 386). The particular variant of such thinking described in this chapter suggests that various constructivist approaches to mathematics, specifically designed to empower disadvantaged groups, seem to fare no better than the curriculum that they are designed to replace. In fact, they could well fare worse. This has led to a reflection on the matter of boundaries and the complexities of redescription and translation between domains.

The strategy of the constructivists is to reason that exclusion occurs because of an unwarranted disparity between curricular content and the sensuous content of the everyday lives of the children who must learn this foreign and hostile knowledge. This disparity constitutes an unnecessary barrier to the learners; it is a barrier arbitrarily constructed by agents of the *status quo* and it must therefore be removed in the interests of empowerment and

emancipation. This strategy is extrapolated from a strong social constructivist epistemology which can be read to say that because barriers of this sort are socially or discursively constructed they can just as easily be dismantled by the same means. Following Bourdieu, Bernstein and Callon, the view presented here is that the multiple accretions of power lodged in social classificatory boundaries, although dislodgeable, cannot be effectively dealt with by means of a 'wishing-to-say' strategy or by means of voluntarist theorizing. All that this achieves is the postulation of a condition of 'false equality' between domains or participants (see Chapter 8). If people are indeed to act upon this condition, one of 'playing fields' levelled by fiat, then they will stub their toe especially severely on the reefs of social hierarchy which are not displaced but merely removed from view by the 'wishing-to-say' strategy. And when that happens, people may either continue to blame the *status quo*, or, imagining that the liberatory forces have given it their best shot, they may begin to blame themselves for non-inclusion. This would be copybook symbolic violence.

The argument here is that the position of the constructivists is a genre of radical politics that should give all progressives pause. The dual strategy recommended is, in the words of Gloria Anzaldua, 'one that knows the border and crosses the line' (quoted by McLaren, 1994, p. 219), not one that crosses the line by acting as though the border were not there. To repeat: to cross the line without knowing it is to be at the mercy of the power inscribed in the line. The question is *how* to cross, and that means paying detailed attention to the politics of redescription and translation and to the means required for a successful crossing. The main pedagogical implication is that there is a definite limit to the usefulness of everyday knowledge in inducting learners into school mathematics. This is not to say that the line is fair, merely that the battle cannot be won by trying to erase it discursively. If the best way to cross the border turns out to be by taking the correct documents, the warrantable social or cultural capital, no matter how socially contested these may be, then the progressive strategy consists in finding out how to empower people by ensuring that they have the wherewithal to cross the border safely. That means that there is no everyday short cut to competence in the discipline of school mathematics. A curriculum premised on such a short cut can only turn out to be a new impediment.

The issue of the border, or boundary, is explored further in the next chapter. The focus shifts from the border itself and its crossing to the similarities and differences in internal structure of the domains that the border insulates. An argument against the monism of the constructivists is developed through a discussion of two exemplary dualists, Durkheim and Bernstein.

Notes

1 Also Honneth (1992, p. 27) '… it is primarily changes within the communicative infrastructure of the social lifeworld to which post-modern social theories with a sensitiveness for the times react'.

2 While by no means identical, the terms 'constructivism', 'constructionism' and 'constructionalism' will be taken as broadly equivalent. I consider this to be uncontentious. As Lynch (1998, p. 14) comments, '… I have conflated constructivism with a panoply of avant-garde radical intellectual movements: relativism, radical feminism, cultural studies, deconstructionism, post-modernism and so forth. I am not alone in this, as such conflation is itself a feature of the field. Persons affiliated with these various movements…freely overstep and disregard epistemic boundaries, and even celebrate the transgression of such boundaries'.

3 '… truth and knowledge can only be judged by the standards of the inquirers of our own day. Nothing counts as justification except by reference to what we already accept… There is no way to get outside our beliefs and our language so as to find some other test than coherence' (Rorty, 1979, p. 178).

4 'To acknowledge a constructivist dimension in our relation to the objective world is not *ipso facto* to endorse a sociocultural idealism' (McCarthy, 1989, p. 207, fn. 26). See also Sismondo (1993a).

5 '… the lower orders were taught specific, contextualised "facts" mechanically – the capacity to generalise across contexts was not provided or encouraged. Decontextualised knowledge was for others…' (Goodson, 1992, p. 5).

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5 Intimations of Boundlessness

Dérèglement[1]

Boundaries are the condition of intelligibility of ourselves and of our world. This Kantian precept snakes its way through much of the social theory of the early twentieth century, only to come up short against a trend of social thought evident everywhere as the century ended. It sometimes even seems as if the notion of boundary has become the quintessence of totalitarianism. To live a life beyond bounds and without boundaries is the dominant ethical ideal (Jardine, 1999); to enquire into facts and meanings that exceed epistemological boundaries is the primary research ideal (Lather, 1991); to teach children to cross boundaries wherever they may find them is the ideal of pedagogy (Giroux and McLaren, 1994); to treat the world as a continuous network of interlinked intensities and flows beyond all divides and divisions is all there is and should be (Deleuze, 1995).

There is something disconcerting about this turn of events. Not that it is some completely novel view from nowhere. A version of it has been central to progressive, evolutionary or revolutionary views since at least the Enlightenment, where change, whether driven by aesthetics, science or politics, was considered to be a bounds-transcending event series. What marks the more recent constellation from the standard progressivism or romanticism of modernity, though, is a certain extremism – as if modernity were taken to a logical, but mad, conclusion. It would seem as if, as in forms of paranoia, a certain organizing centre is missing from an otherwise rational edifice.

Georg Simmel expresses a version of the earlier orthodoxy with representative elegance. Boundaries, or forms, are the precondition for meaningfulness. Without them, the immensity of the world would swamp life and render it a marsh of senselessness and uncertainty. 'The boundary, above and below, is our means for finding direction in the infinite space of our worlds' (Simmel, 1971, p. 353). This does not mean that life is defined only by forms and boundaries; life is also self-defining and, to that degree, boundary transcending. Consequently, life and form, existence and boundary, are 'partners of a dialectic…' (Tester, 1993, p. 11): boundaries and forms create the conditions for meaningfulness and sense; life transcends those

forms and boundaries in order to extend that sense. In other words, boundaries are the condition both for the constitution of sense and for the transcendence of boundaries. A slew of contemporary sociological theorizing, perhaps most explicit in Giddens's successive versions of structuration theory, comes to mind here. A central nostrum of modernity also comes into view: that there can be no progress or innovation, let alone violation, without boundaries; conversely, there can be no boundaries without their transgression. As Durkheim was wont to say, the episodic violation of a rule 'serves to re-affirm the sanctity and authority of the rule' (quoted in Wrong, 1994, p. 57). Form and life are both logically and sociologically co-dependent. This much is standard to Freud as well as to most of the sociological greats, and is captured with gaunt economy in Borges's aphorism 'oppression is the mother of invention'. This is standard too in attempts in the sociology of science to understand the social construction of truth: '…all distrust presupposes a system of takings-for-granted which make *this instance* of distrust possible. Distrust is something which takes place on the *margins* of trusting systems' (Shapin, 1994, p. 19).

Everything hangs on the maintenance of a certain balance, a certain symmetrical dance between fluidity and fixity. Here lies the rub. For a great many contemporary writers, this dialectic has become radically destabilized, and forms that were once merely constructively constraining have become reified and life constricting. Simmel's two great examples were, of course, money and theory, both of which assert the precedence of form over life. The reified forms become prisons, naturalized cages that might once have been the product of creative genius but now stifle it. In the current cultural temper, they are depicted as the radical other of genius, of freedom, of the life of the spirit, of the autonomous citizen of the globalized world.

In this generic story, 'great divides' abound: between the subject and the object; between culture and nature; between the solitary person and the collective; between the state–market–bureaucracy and the people; all versions of the life-form dialectic now polarized and fixed into implacable opposition. The definitional activity of forms on the one hand and self-definition on the other are irreconciled and irreconcilable. Between ourselves as self-definers and that 'other' definer opens up a gulf of mistrust, in which civil social relations and civility as social cement in terms described by Shapin (1994) must whither. For the would-be explainer of social life, a certain principle of dynamism, modernity's dynamic principle of form transcendence, goes by the board. It might not have been a particularly elegant or even adequate principle, and it has certainly been shot full of holes by successive waves of the social theory avant-garde. But in one version or another, it formed the organizing basis of every sustaining theoretical grand narrative of modern social science.

No more. Social theory collectively simply does not credit the form transcendence account anymore, bar the odd stout soul. We seem trapped once more in one or other of Leibnitz's two labyrinths of reason, the labyrinth

of liberty or the labyrinth of necessity (Turner in Buci-Glucksman, 1994, p. 24). This is an aporia of the cruellest sort, for it forces social theory to either one or the other end of the 'great divide' or leaves it to scratch in the ruins for prefigurations of the next staging of an unforeseeable transcendence, for the messianic moment which can only come unannounced (Benjamin, 1969). The last is, perhaps, the honourable or gallant thing to do, but most writing flies with one or the other wing of the dichotomy. This takes the form of either a melancholic (or tragic) response to the sceptical turn or a joyous and celebratory one. Both of them deal with boundaries in an unmediated or dichotomizing way. In the idiom of this chapter, they either reaffirm the 'great divide' or collapse it.

Central to the joyous response is a taking of the perspective of life unconcerned with the shaping power of form: where boundaries are, freedom should be. This celebratory voluntarism, which deals with boundaries by various discursive strategies of ontological disavowal, epistemological trivialization or conflation, is self-defeating. What matters for the present argument is that this kind of social analysis takes as its central premise that boundaries are always and by definition imprisoning, and should therefore be crossed, transgressed, combated and otherwise wished away wherever they appear to manifest themselves. Or, as Tester (1993, p. 28) puts it, giving this trend one current appellation, 'Post-modernity can be interpreted as the intimation of boundlessness…'

This chapter is a meditation on the fate of boundaries under conditions of scepticism or incredulity, when intimations of boundlessness abound. The specific domain focus will be on the curious way in which 'new literacy studies' has come to define 'literacy'; and the empirical focus, albeit brief, will be on some practices of a 'non-literate' worker on a wine farm outside Cape Town. But, first, back to basics.

Sacred and Profane

Emilé Durkheim is the exemplary sociologist of the boundary. Taking as his focus 'primitive cultures', systems of classification in premodern society, Durkheim set out to construct a way of grasping the fundamentals of cultural classification – the why and the how of boundary instantiation. In *The Elementary Forms of the Religious Life*, he famously draws a distinction between two orders of existence which relate thought and practice in two fundamentally different ways. The first order is the everyday world of 'sensual representations', the world of matter and sense, where meaning arises directly out of bodily encounters with the world, with other people, with reality. It is a world of flux and of particulars, and it is driven by the most practical and direct wisdom: proverbs, prudence, street lore, on-the-job knowledge, the rhythmic language and wisdom of the domestic community (Lyotard, 1991, pp. 191–6). Schutz would characterize this as the world of the 'natural attitude', Geertz as common sense as a cultural system. For Durkheim, this was the profane world.

The second order is the religious world, one of prescriptions and interdicts that are not pragmatically modifiable but are 'fixed and crystallised', 'immutable' (Durkheim, 1915, p. 433). This sacred world is an order of verities not originating in bodily hexis and is therefore arbitrary, in Pierce's sense of the unmotivated: taboos, explains Durkheim, can be attached to any object. The religious world is thus a world of arbitrary conceptual relations, a symbolic order constructed by an accretion of 'collective representations' (Durkheim, op. cit., p. 434) that are a collective accomplishment, the 'work of the community', in contrast to the 'sensual representations' of the everyday world that are the work of continually changing experiential particulars.

Religion is then for Durkheim the ur-cognitive classificatory scheme of the sacred, the ur-form of ordering social representations in non-empirical formal ways. The force of the ordering comes from 'outside of the object in which it resides' (quoted in Thompson, 1994, p. 125), not from the object itself. It is the result of a process of 'examination and elaboration' (Thompson, op. cit., p. 126); it is the result of a cognitive process of idealization.

Durkheim means at least two things with this faculty of idealization. The first is clearly the purely cognitive or speculative sense of being able 'to connect things with each other, to establish internal relations between them, to classify them and to systematize them' (Durkheim, op. cit., p. 133). The second is that of forward projection towards an order and a world more desirable, more felicitous, more powerful – in a word, better – than the one we have in hand at any specific point in history.

Durkheim thus plays upon the double sense of ideal: ideal first as the facility to manipulate objects and relations in non-empirical virtual space – in thought, as he says; ideal second as the projection into and towards that which is more desirable. Both together allow us to break with empirical facticity and to imagine an ordering of objects that is 'logical' and 'hierarchical' (Durkheim, op. cit., p. 137). This is a key feature of virtual connections that allows, as Foucault (1981, p. 59) says in a related idiom when discussing disciplinarity, 'the possibility of formulating new propositions, ad infinitum', or as Hacking (1985, p. 156) says when discussing styles of reasoning to 'generate new classes of possibilities'.

The faculty of idealization is thus Durkheim's motor force for cultural change. With this, he is in a position to effect his startling reversal. Quite against the conventional progressivism of his Victorian contemporaries such as Frazer, Durkheim makes the argument, more strongly as the book progresses, that science, far from making a break with superstition and religion, is formally isomorphic with religious thought. Both of them are sacred modes of cognition. Indeed, 'the fundamental categories of … science, are of religious origin' (Durkheim, 1915, p. 418). Given his second sense of 'ideal', Durkheim is progressive enough to want some forward movement, so 'scientific thought is only a more perfect form of religious thought' (Thompson, 1994, p. 133). But on the formal level, they are equivalent.

Furthermore, science, like religion, arises from the collective and not from the individual; it is 'at the school of collective life that the individual has learnt to idealise' (Thompson, op. cit., p. 130). This too constitutes a relatively profound reversal from the 'great cultural–historical tradition which assigned truth to individual disengagement and error or distortion to membership in the polity' (Shapin, 1994, p. 40). Truth is produced in social communities, not by solitary souls in isolated creative ferment, science's persistent self-presentation of the truth-making process to the contrary.[2]

In other words, Durkheim's strong hypothesis might be stated as follows: the prototype of socially constructed social knowledge is the outcome of, and depends upon, a hard distinction between everyday, particular, sensory, individual 'profane' knowledge and esoteric, collective, generalizable, non-sensory 'sacred' knowledge. Religion and science are both forms of the sacred, of the esoteric and of the social.

The sacred is characterized by an 'extraordinary contagiousness of character' (Durkheim, op. cit., p. 318), a sort of spontaneous associational bent which must be curbed because the principle of meaningful organization of the everyday depends crucially on the 'intrinsic attributes' (Durkheim, op. cit., p. 323) of the objects found there, while that of the sacred depends on the idealized system of connections established by the communal canon. Allowing contagion-free play would open the pragmatism of the everyday to arbitrary investitures of meaning, emotion and moral sense. Or, to put it another way, common sense must be protected from the power and proclivity of esoteric knowledge to remake it in its own self-image. Apparent here is an early intimation of the concept of recontextualization and translation.

Does this not make religion or the esoteric life irrational? Not at all, says Durkheim. They are merely non-empirical, not irrational and certainly not unsystematic; these non-empirical connections are furthermore the engine of knowledge because they allow inquirers to break with the naturalizing logic of the everyday, allowing them 'to bind together things which sensation leaves apart from one another' (Durkheim, op. cit., p. 325).[3]

A position such as that of Durkheim is invariably in favour of disciplinary specialization. Not only is such specialization a defining instance of the division of labour, says Durkheim, but it cultivates social interdependence, which is a mark of advanced civility (see also Shapin, 1994). Durkheim's response to those who lament the fragmentation of knowledge and society is to assert that the generally educated man, the transdisciplinary epigone of globalization theorists of the learning society (see Chapter 3), is bound to be an antisocial egoist because his polymathy all too easily breeds a smug and false sense of self-sufficiency. Far better to cultivate a sense of mutual interdependence, to drive people who might not otherwise do so willingly, to act with co-operative civic-minded virtue.[4] New sociologists of work echo Durkheim's emphasis upon co-operation and interdependence in the global workplace (see Elam, 1993). So, too, the sociologists of science: 'The very power of science to hold knowledge as collective property *and* to focus doubt

on bits of currently accepted knowledge is founded upon a degree and a quality of trust which are arguably unparalleled elsewhere in our culture' (Shapin, 1994, p. 417).

Part of Durkheim's distinctiveness lies in what Ringer (1992, p. 299) calls his 'hostility to interpretation'. On the one hand, this means that his primary stress was upon the *differences* between profane and sacred logics. On the other hand, because interpretation as a problem is shifted to the background, the operation of 'crossing over', or the redescriptive process of idealization itself, is left unexamined. Durkheim routinely supposed that intellectual 'facts' were immediately and unproblematically intelligible. Does this mean then that such a position automatically leads to an undervaluation of interpretation and a proclivity to positivism?

Not necessarily. Shotter (1993) has, for instance, shown that what holds together a wide range of interpretivist writers – including Vico, Wittgenstein and Bakhtin – is a view remarkably close to that of Durkheim. According to Vico, the 'sensus communis' of everyday life is created by flows of activity, which in turn generate 'sensory topics' which emerge as spaces, or habitats, of shared meanings and feelings in already shared circumstances. Webs of metaphor connect the shared topoi to the sensus communis and back to the transactions of the everyday, ensuring practical continuity. These connections, importantly, are tacit. Everyday metaphors thus do not explain but 'show' participants a common quality of life that is neither rationally deductible nor reducible; 'As such, it [the *sensus communis*] cannot be "explained" … (either from within an academic discourse, or in any other way)' (Shotter, 1993, p. 470).

Shotter goes on to show how this view compels a distinction between common sense and esoteric discourse. First, the subject matter of common sense is determined by sensuous events and is thus wholly contingent on circumstance, whereas that of esoteric discourse is predetermined by the arbitrary systematics of the canon. Second, because of its systemic objectivization, the subject matter of esoteric discourse can, as Wittgenstein has said, be 'surveyed' in rational contemplation, that of common sense not. Why? Because it is only a set of ordered statements that enables us to see how, within the subject matter of the discourse, things, as Rorty says, 'hang together'. Indeed, it is this ability of 'surveying', of showing that we know how things 'hang together', that we must be able to display in order to display competence.[5] Thus, as Shotter says, paraphrasing Foucault, esoteric discourses 'form as systematic the objects of which they speak, *i.e.* form them as mental representations' (Shotter, 1993, p. 473).

The key point that Shotter is extracting from the interpretivists he surveys is that the topic of common sense is very rarely arbitrary because of its functional orientation to everyday problems, while the object of esoteric discourse, and its relation to other objects in the discourse, often is. Once again, 'arbitrary' in this context means non-iconic, or metonymical, rather than iconic or analogical. As we saw above, this is a key reversal that Durkheim

effects in his distinction between the sacred and the profane, a reversal not only of the conventionally accepted view of things, and of the view of nineteenth century anthropology, but a reversal too of all those who define modernity, along with Habermas, as the passage from mythos to logos.

Among the many implications here, I comment on only one. When the constructivists, discussed in Chapters 4 and 9, emphasize the unfoundability of all accounts of the world in order to establish the equal unfoundability and hence radical equality of all forms of knowledge and domains of meaning, they make an epistemological point that does the *reverse* of what they intend it to do.

As McCarthy (1989) shows, using Rorty as his example, such an epistemological claim is utterly alien to common-sense thinking. Ordinary people in the everyday sensuous world believe in that world as a precondition for acting in it. We routinely treat, and hold our co-participants accountable for so treating, the reality and the objectivity of the world as invariant to discrepant reports, as Pollner (1975) would say. Objectivity and the invariance of the world is an idealizing presupposition and precondition for all interaction and social practice in the everyday world. And scientists are not immune from this logic: 'It is, as we know, an important part of going to the doctor, flying on a plane and, indeed, maintaining social order generally. Not only is it not wise for science-studies analysts to invest their life savings in palladium futures: to do so would be to ignore a crucial part of the story' (Simon, 1999, p. 74).

Durkheim, then, true to his exemplary modernism, constructs a series of binaries separated by a discontinuous, if permeable, interdictory boundary. It is a binary grid which reverses a number of standard tropes of mainstream modernity:

Sacred	Profane
Future oriented	Tradition oriented
Collective	Individual
Ideal	Sensory
Speculative	Practical

Most dramatically, science is aligned with religion and against the everyday by defining its common roots in idealization, which is the condition for explicit and systematic classification, an operation that the pervasive allegoricity of the everyday is unable to perform.[6] More importantly perhaps, and undermining of the great divide schema that aligns form with nature and life with culture, Durkheim's genius is to show that form and truth reside with, and spring from, culture, while nature's place is with the naturalizing suppositions of the natural attitude. In so doing, he removes the production of truth from the domain of nature and the solitary man or woman and restores the sacred to collective life.

For all that, Durkheim's inversions are only partly helpful. In his desire

to characterize both religion and science as non-sensory, and the everyday world as solely sensory, he ends up characterizing two worlds of existence in exclusively epistemological terms. The problem here is that epistemological domains are not co-terminal with sociological ones. No one lives only in the sacred or only in the profane. The problem also runs deeper: neither the everyday world nor the world of science is epistemologically homogeneous. Indeed, argues Latour (1993), science has always comprised 'hybrid monsters', productively mixing science and society. At least part of the burden of the constructivist challenge to science studies has been to show that the practice of science always partakes of the profane as well, contains profanely structured practices and cannot therefore be adequately explained without reference to patterns of the profane, i.e. to sociological patterns: '(was the sacred always hybrid?)' Knorr-Cetina (1994, p. 18) asks in parenthesis. The orthodox Durkheimian answer is no, and it is this answer that every periodic wave of protesting realists (for an example, see Atkins, 1995) has given to the hybridical persuasiveness of the constructivists, those new young Hegelians as Fuller (1995) calls them.

In giving the answer in this strictly Durkheimian way, the new defenders, like the old and like Durkheim himself, render themselves unable to acknowledge, let alone investigate, the profane practices nesting within the social institutions of religion and science, nor, for that matter, the sacred practices in everyday life, and it is the latter which is of interest in the present chapter. But this is not to agree with the constructivist hybridizers. By conceding that the social institution of science has always been hybrid, or has always produced hybrids, is not to concede anything about the epistemological integrity of the sacred part of scientific practice. That being so, one is also not forced into a tactic of defensive pluralization which conceives of the domain of social action as radically plural and radically equal, as the 'new literacy' theorists are inclined to do (see below) in order to shore up the integrity of profane practice thereby losing any possible analytical edge to the concept of 'literacy' by losing all sense of the sacred.

Only certain kinds of scientific practice are sacred, not the entire form of life. Once this reasonable point is established, then one can proceed to ask how, wherever we may find them in whatever pure or hybrid form, are we to characterize the different forms of epistemological practice of sacred and profane? Or, 'on what basis are we going to establish the comparison of collectives?' as Latour (1993, p. 127) asks, but sadly doesn't answer. For a start in this direction, we must turn to another exemplary neo-Durkheimian, Basil Bernstein.

Vertical and Horizontal

Constructivism deals with the 'great divide', the asymmetry of discourses, by collapsing the distinction between the sacred and the profane. Specialized knowledge ensembles are to be treated as, in principle, the same as everyday

knowledge ensembles and are to be discussed in terms of their continuity with the latter. As we saw in Chapters 1 and 4, this is a direct result of treating them all as sociocultural practices. Hereafter, all discursive ensembles are to be treated as arbitrary because they are now solely products of cultural activity.[7]

Latour (1993) has pointed out one paradoxical effect of this one-way conflation. By construing everything in terms of social construction, the social (or cultural) becomes the prepredicative and therefore 'natural' real which all other things are henceforth judged in relation to: 'Constructivist where Nature is concerned, it is realistic about society' (Latour, op. cit., p. 94). This helps to explain why many constructivists, formally relativists, hold such strong, even dogmatic, views about the explanatory priority of social context (a point explored in greater detail in Chapter 9).

Such a paradoxical realism about society leads to a singular occlusion. If all cultural content is arbitrary, then the analytical task must always be to expose the basis for its arbitrariness, which necessarily lies in the social field from which that arbitrary content issues: 'It follows from this conceptualising that sociological analysis should be concerned more with the activity of the field, that is the procedures of its reproduction, than with any given content of the field, for any given content is arbitrary' (Bernstein, 1996, p. 169). The internal structure of the symbolic system is thereby prevented from having any structuring significance, and this, for Bernstein, is the great flaw in Bourdieu's analysis of culture discussed in Chapter 4; it is about the social field and its structures and activities and has nothing to say about symbolic systems themselves. To put that another way, Bourdieu, and other adherents of what Callon (1995) called the 'competition model', reduce all differences of cultural content to the play of power and interest. As a consequence, Bourdieu has little to contribute to the way that rules in knowledge forms and rules in social relations may be mutually implicated.

To start then, a way of talking about forms of knowledge is required. In a way reminiscent of Durkheim's sacred and profane, Bernstein first distinguishes between *horizontal discourse* – local, segmental, context dependent, tacit, multilayered – and *vertical discourse* – a coherent, explicit, systematically principled structure that is either hierarchically organized or takes the form of a series of specialized languages.[8]

The difference between the two is most clear when considering acquisition. Horizontal discourse is acquired in segments where there are only loosely organized rules of distribution. It is context dependent, and transfer across contexts can only occur on the basis of analogical extrapolation. Vertical discourse cannot be acquired segmentally, only via access to the explicitly assembled symbolic structure, which occurs via specific *principles of recontextualization* and access to which is regulated by explicit distributive rules (who can get what, when and how).

So far, Bernstein has extended Durkheim's schema by collapsing the distinction between forms of mastery. Both horizontal and vertical discursive mastery can occur only through the manipulation of duly constituted objects

of a discourse: the former is not 'practical' and the latter is 'formal'. Indeed, they are both 'formal', but their forms differ, as do the distributive rules which govern them.

Bernstein now springs a Durkheimian reversal by distinguishing, within vertical discourse, between *hierarchical* and *horizontal knowledge structures*. Horizontal discourse does not and cannot have knowledge structures because it has no recontextualizing principle regulating distribution in terms of time, space and actors because it is by definition common to all who belong to the *domus*. Hierarchical and horizontal knowledge structures, as modes of vertical discourse, both do. Hierarchical knowledge structure, the paradigm case being physics, is pyramidical in shape, and new knowledge is integrated into propositions that are as inclusive or general and as few in number as possible. [Set aside for the moment the now commonplace modification that 'knowledge is less cumulative than we thought' (Hacking, 1985, p. 148)]. Horizontal knowledge structure takes the form of an expanding series of non-translatable *specialized languages* with non-comparable principles of description. Growth of knowledge here occurs by the addition of specialized languages, only very rarely by their integration. Further, Bernstein distinguishes within horizontal knowledge structures between those with *strong* grammars of realization (such as economics) and those with *weak* grammars (such as sociology and anthropology). The last are acquired not by learning 'procedures of investigation and instruments of observation and understanding of the theory' (Bernstein, 1998, p. 18). They are learnt by acquiring a 'gaze', a particular mode or style of recognizing and realizing what counts as reality (ibid.).

Horizontal knowledge structures thus partake of the vertical in that they, like any knowledge structure in vertical discourse, are regulated by a more or less specific principle of recontextualization. That is to say, competent members can give an explicit account of the way in which they have arrived at a specific position; they can retrace their steps and show how they have made the recontextualized objects 'hang together'. This is essentially an elaboration of Durkheim's faculty of idealization, and it is a defining feature of all examples of vertical discourse (see Entwhistle, 1998). On the other hand, a horizontal knowledge structure partakes of the horizontal in that its specialized languages relate to each other in the manner of segments of horizontal discourse: 'both are serial, segmental, and have *potentially* volatile contents' (Bernstein, 1996, p. 178), i.e. they are strongly insulated from each other, non-translatable and non-comparable.

The main point that Bernstein wishes to make with this argument, against the reductionism of Bourdieu, is that only after we have understood the internal structuring of symbolic systems and the way in which that structuring creates rules of distribution which shape possibilities for positionality within that system can we come to a complete understanding of social positionality in relation to cultural formations. 'To privilege the particular features of the field and the habituses these select, sponsor, and legitimate, whilst excluding

the features of knowledge, reduces the power and possibilities of analysis' (Bernstein, op. cit., p. 180).

Bernstein has thus returned to Durkheim's binary schema, not simply to replicate it but rather to pay Durkheim the ultimate compliment, to take a leaf out of his performative book and 'do for science what Durkheim had done for religion', as Latour (1993, p. 54) describes the 'Edinburgh daredevils' (the proponents of the 'strong programme') as having done. That is to say, Bernstein has retheorized the sacred by delineating invisible alignments in Durkheim's binary table; he has attempted to show that the distinction between sacred and profane is not quite the same as that between written and oral and formal and practical mastery by showing the fundamental role of distributive rules in both as well as in the social relations which optimize the discourse.

Prometheus Unbound or What Does it Mean to be Literate?

In this part of the chapter, I shall examine new literacy studies (NLS) in terms of some lessons extracted from Durkheim and Bernstein. The intention here is not to present a comprehensive discussion of NLS. What follows hardly does justice to NLS and is intended simply to display a non-Durkheimian approach to 'great divides' and to examine some of its consequences from a neo-Durkheimian perspective.

NLS comprises a cluster of approaches to the concept and practice of literacy that has recently rejuvenated the way that literacy is considered, especially cross culturally.[9] A core precept of NLS, shared with much of contemporary ethnology, is that the 'great divide' between oral and literate cultures and between related binaries such as concrete and abstract thought is a self-serving one that should be collapsed forthwith. Formal reading and writing, or print literacy, should be seen as only one literacy among others; hence, literacies.

There are two typical ways in which this is taken forward in NLS. The first, following Heath (1983) and Street (1984, 1993), talks about a 'literacy event', or 'literacy practice', as everyday occasions where print literacy is used, referred to or conceptualized as part of a broader socioideological context of practice. In Street's view, this means that print literacy becomes part of a broader class of communicative practices (after Grillo, 1989). The second approach, following Gee (1990), likewise sees print literacy as a practice that belongs to a broader class of practices, this time 'secondary discourse'; 'secondary' because acquired in formal non-intimate contexts. By this definition, and true to NLS's founding precept, literacy is a practice such as 'oral literature'.

The first definition therefore defines print literacy as a communicative practice that involves written language in some or other way; the second defines it in terms of competency in a secondary discourse. Both of these

redefinitions collapse the 'great divide' by nesting print literacy within profane practice (Durkheim) or horizontal discourse (Bernstein), in much the same way as did that other anthropologist Bourdieu and with much the same result; namely, that the option of considering literacy as a structured symbolic practice *sui generis*, or as part of a broader category of symbolic practice different from profane everyday practices, is hereby surrendered. Of course, much can and has been said about the social, political and ideological embeddedness of print literacy. But, as we saw above in Bernstein's discussion of Bourdieu, once the boundary between the sacred and profane is collapsed, nothing further can be said about literacy as a discourse because any investigation of the formal properties of discourse, the formal properties of the content of symbolic systems, is precluded by the conflationist strategy adopted to the 'great divide' by NLS.

This strategy is formally the same as, though the mirror opposite of, that adopted by Lévi-Strauss, who addressed the 'great divide' between 'primitive' mentality and 'scientific' mentality by making his 'savages' look and think like 'scientists'. NLS, in an attempt to deal with the same problem, construes print literacy as primarily another kind of cultural accomplishment, and much of NLS scholarship endeavours to show that there is, after all, very little that can be accomplished by print literacy competency that cannot be quite satisfactorily accomplished by other equally meritorious cultural accomplishments (Prinsloo and Breier, 1996). One is ineluctably left with the question of 'who then needs it?' In similar vein, the sociologists of science who debunk the pretensions of science to transcendental truth see themselves not as refuting scientific truth claims but as unmasking their unwarranted metaphysical aspirations (Hacking, 1998). Whether or not the scientists appreciate this form of cognitive therapy is moot; there are certainly increasing signs that they don't, nor do they appreciate the subtle distinction between 'refuting' and 'unmasking' (for example, see Sokal and Bricmont, 1998). The consequences of such diminishment in the educational domain are different, and could be far reaching. If print literacy has no cultural advantage over other literacies, and if analyses show that alternative literacies more than compensate for its absence, then this form of analysis ends up providing an alibi for a lack of access to formal education. Latour (1993, p. 98) scathingly comments, 'Is there a better way to finish off those one wants to save from condemnation?' The final part of this chapter briefly examines an example of how the optic produced by NLS creates a particular disabling blindness by coding a certain practice by an illiterate worker as just another everyday cultural accomplishment.

Migiel Hendricks is a farmworker on a wine and fruit farm in the Breerivier Valley near Cape Town. He never went to school, although he did attend literacy classes for a while; he was under the impression that he needed to be literate to get his driver's licence, which is not the case in South Africa. He confesses, 'I really did not learn anything. Only that the girls had nice legs' (Gibson, 1994, p. 35).[10] Hendricks is a tractor driver on the wine

farm. He welds, lays out fertilizer and irrigation systems and is a general vehicle repairman.

Singularly, he also builds wagons from scratch, which includes designing and constructing the frame, surface and beam, all correctly positioned about the axle or axles. When asked how he made a particular wagon, he comments: 'I just looked at an old wagon standing there at the top. Then I measured it and made a plan in my head how exactly I wanted to make this one' (Gibson, op. cit., p. 36). Hendricks's modesty aside, his ability is not merely mimetic. He builds wagons from specifications given by the farmer, sometimes unlike any he has seen before.

> The boss said what kind of wagon he wanted. Then I went and sat down and thought about how I was going to build it. For this kind of wagon, with a shorter 'bak' [enclosed boot] it costs less and makes it lighter if you use only one axle. But the axle must be in the correct place or the wagon will also tip over. It depends on where you attach the jack, how long and heavy the jack is.
>
> (Gibson, op. cit., p. 37)

Hendricks goes on to explain, in graphic detail using a wheelbarrow and using his arm and wrist to display articulation, what is at stake in calculating this. 'You have to use your common sense,' he says.

Hendricks is clearly performing some kind of abstract calculation here of the sort which is precisely not commonsensical. It is a process of extrapolation that he describes as follows: 'I may not be able to read or write, but I use something I have learnt in one case and adapt it' (Gibson, op. cit., p. 38). This goes for the construction of plans and the estimation of materials: 'By the second wagon I almost always ordered the correct amount of material' (ibid.).

How would one go about understanding what Hendricks is doing here? If we follow a Heath–Street definition, we will probably not identify this as a literacy 'practice' or 'event': neither reading nor writing is involved and although Hendricks is able to reconstruct and communicate his mental steps to the interviewer it is clear from what he says that his wagon building is by and large a solitary activity. Gee (1990) may well identify it as an example of secondary discourse, although apart from a short course in welding we might be hard put to identify the context of acquisition of this undoubted skill, formal or otherwise. NLS has in fact very little to say about it at all.

Hendricks can, in his own words, make a plan in his head and he is able to extrapolate – 'pas dit aan' or 'pass on the metre'. Durkheim would identify it as an example of the faculty of idealization, a case of 'examination and elaboration'. He is clearly able to manipulate objects in virtual space, even if only analogically. Hendricks is able to redescribe the features of a wagon into the formal measurements, dimensions and quantities that make up a plan, and he is able to translate the plan into a wagon. He is deploying some

or other principle of transcontextualization here and, because of it, he can generate new forms and combinations; he can build a wagon that he has never seen before. Hendricks, in the terms developed in this chapter, displays elements of an underelaborated faculty of verticality. This takes the form of a germinal horizontal knowledge structure, admittedly with a highly simple grammar. It is, in other words, a rather sacred form of common sense, a style of reasoning evolved all by himself, but a style of reasoning for all that.

This style of cognition is surprisingly similar in form to the one that Entwhistle (1998) found among his Edinburgh undergraduates revising for their finals. Some of the most successful students did not try to memorize every fact seriatim, but constructed summary nodes or what Entwhistle calls 'knowledge objects'. Such a 'knowledge object' is more than merely a mental image: 'It can pull into awareness currently unfocused knowledge, almost in the way that hypertext in computing uses certain emphasized words to indicate the existence of additional information' (Entwhistle, 1998, p. 96). The understanding thus produced translates into a distinct 'feeling of confidence that an understanding can be reconstructed at will from sets of interlinked ideas and information' (ibid.). This 'pull down' competence, in a vastly different time and place, is, I suggest, what Migiel Hendricks exhibits when he builds his wagons. One student describes it in uncannily similar terms:

> I clear my mind and something comes … it was almost as though I could see it all fitting into an overall picture … it pulls in pictures and facts as it needs them and suddenly you know where you are going next. (Ibid.)

Is it far-fetched to say that Hendricks has acquired, and can realize, a related (meta)cognitive skill usually associated with advanced literacy? Is Hendricks's cognitive skill communicable? The neo-Durkheimian answer is not to look for whether it occurs in a communicative context or not, as Gee would, but to examine first the communicative entailments of different 'orders of discourse'. Hacking (1985, 1992) shows, for example, that our empirical knowledge, those 'observation sentences' which we know because they correspond to encounters with sensuous reality, are easily understood across contexts, cultures and even languages. They are relatively easily translatable. As long as one has been in that situation, one will know what the person is talking about. Not so the sentences within a style of reasoning. These are generated as intelligible and interesting only from within that style of reasoning; and to understand them – to be a communicative recipient – requires first sharing that style of reasoning, which in Bernstein's language means having been inducted into the relevant principle of recontextualization.

Communication thus figures differently whether we are within horizontal or vertical discourse. For the first, communication depends upon having had the same sort of experiences, having been exposed to similar sensuous

particulars as your co-communicator. For the second, communication depends upon sharing a style of reasoning, or 'discourse', which means in turn having accessed the same recontextualizing principle. No such principle is necessary for communication within horizontal discourse.

Hendricks's 'explanation', or reconstruction, of his operations is at least partly understandable to the interviewer, and my citing it here presumes some understanding by the reader. But how understandable would Hendricks be to his fellow workers on the farm? Could Hendricks explain to a non-initiate fellow worker how to build a wagon? This is at least a testable question, but the account given here would doubt that it could be easily done. Why? Because most of the non-literate workers on the farm are unpractised in the skill of recontextualization as they have not had exposure to a sustained process of induction into recontextualization – that is to say, literacy. For what, after all, can literacy be but the generic context for the induction into principles of recontextualization? And what reason might we have for not regarding this faculty of Hendricks as a kind of 'writing within speech' (Derrida, 1978, p. 197), a protoliteracy in all but name, and one, moreover, that can only be invisible to the old and the new literacy studies alike?[11]

Hendricks has evolved his protean capacity with, as far as we know, little more assistance than the farmer's encouragement. The really interesting question would be how he stumbled, uninducted as it were, into the realm of the sacred, into vertical discourse. One would have to identify the vertical or protovertical discourses that inhabit Hendricks's habitat and that have helped to construct the habitus of this singular puissant subject. There are literate people on the farm, to be sure, the farmer probably foremost among them. Then there is television, the church and the Bible, unsuccessful literacy classes and communal readings of the newspaper on Sunday. These do not exhaust the possibilities, nor even suggest anything plausible. Recall too that Hendricks lives in a rural enclave, within a neo-feudal set of relations between worker and farmer, where occupational mobility is low and career advancement limited and, anyway, not in terms of occupational categories that might have literacy requirements. NLS might conclude with some justification that Hendricks really does not need literacy, and I am quite sure this is the answer he himself would give were one to ask. But from a neo-Durkheimian perspective, the question is rather: 'how, and under what conditions, can vertical discourse be accessed outside formal contexts of transmission?' A thorough going answer may well contribute to a rethinking of the role of formal educational institutions given the cognitive demands and requisites of late modernity (see Young, 1999; and Chapter 3). And it would certainly also help to explicate how sacred practices lie nested, often unremarked, within the routines of the everyday. Above all, though, it would question whether we advance our understanding of knowledge practices in any way if we merely regard literacy as another mundane kind of social accomplishment, as NLS does.

Does this conclusion not also merely consign Hendricks to perpetual

illiteracy and recapitulate Latour's dereliction by another route? The neo-Durkheimian answer is no because idealization and vertical discourse are here distinguished from horizontal discourse and are valued as a distinct form of symbol system with a distinct social role. Social differentiation depends upon knowledge differentiation for Durkheimians, and systematic idealization is the only way to project benign possible futures. Without it, no concept of social change is possible, and no revolution [an idea borrowed by politics from science, after all (Latour, 1993, pp. 70ff.)]. How will this conclusion help Hendricks? It probably won't, but then, for Durkheimians, the task is to understand the conditions for social development, not that of individuals, in the first instance. The really interesting question then is to understand the role of vertical discourse in social change and the ways in which access to it is or is not, can or cannot, be advanced by education. Hendricks's story is a pinprick of light in this dark firmament, but it burns brightly for all that.

A case has been made here for the cardinal importance for innovation of a capacity for knowledge manipulation, an importance constructivist thinkers minimize with sometimes unfortunate consequences. In the following chapter, constructivist (or 'competence') pedagogies are contrasted with non-constructivist (or 'performance') pedagogies, and the implications of using one or other of these modes in their pure form is explored. In particular, the question is asked: 'what kind of citizen do these pedagogies fashion?' As we shall see, it is by no means clear which pedagogy is best served to produce the reflexive citizen of the new millennium.

Notes

1 'Abandonment to the absence of boundaries' (Blanchot, 1988, p. 3).
2 '… perhaps, to repeat a myth, Thales did singlehandedly open up the continent of mathematics. The typical case, however, is a large number of people approaching the same subject matter with related styles of argumentation. This must necessarily be the case. For a style of reason opens up a new field of discourse, with new positive propositions to assert or deny. Such a new field is a relatively large-scale social phenomenon. A body of discourse needs quite a lot of speakers' (Hacking, 1985, p. 149).
3 It is for this reason that Foucault's (1977, pp. XV–XX) laughter at Borges's Chinese encyclopaedia is so oddly misplaced. What Foucault takes to be an impossible or heterotopic order is merely a non-empirical invisible or arbitrary one – that is to say, a sacred one. It belongs to the common realm of the scientific rather than being opposed to it. Although Foucault's larger point is certainly profound, it is odd that he has to make the point in this way.
4 'This *culture generale*, formerly lavishly praised, now appears to us a loose and flabby discipline … We disapprove of those men whose unique care is to organise and develop all their faculties … as if each man were sufficient unto himself, and constituted an independent world. It seems to us that this state of detachment and indeterminism has something antisocial about it. The praiseworthy man of former times is only a dilettante to us … The categorical imperative of the moral conscience is assuming the following form: *Make yourself usefully fulfil a determinate function'* (Durkheim, 1964, pp. 42–3).

5 'The examination is nothing but the … official recognition of the transubstantiation of profane knowledge into sacred knowledge' (Marx, quoted in Bourdieu and Passeron, 1990, p. 141).
6 'If anything can mean anything else, as allegory tends to believe, then it is both enriched and impoverished' (Eagleton, 1998).
7 Li Puma (1993) illuminatingly distinguishes between a formal and a substantive notion of arbitrariness. A formal notion, shared by most anthropologists and by Durkheim, holds that social valuations of cultural forms are arbitrary; a substantive notion, held by Bourdieu, holds that cultural contents are historically arbitrary, and that any symbol could, in principle, have been replaced by any other.
8 It is possible to align this discussion with trends in contemporary psychology. Luria (1976), for example, distinguishes between situational and abstract thinking, in ways that resonate with Bernstein's horizontal and vertical discourse. Luria also goes on to associate the capacity for abstract thinking with literacy and the higher capacities of language. I have avoided making this connection here. It tends to essentialize the subject (Larochelle, 1994) by suggesting that we can speak of situational or abstract thinkers. The position taken here is that these are discourses which subjects access or are positioned in some or part of the time. A psychological framework is also difficult to use to discuss conditions under which sacred tendencies interrupt profane contexts and vice versa (see also Dowling, 1994).
9 The discussion draws on the helpful paper by Breier (1995).
10 This excerpt and all subsequent ones come from the excellent ethnography by Gibson (1994). Page numbering refers to the draft copy of the report.
11 Gibson (1994, p. 41) tentatively proposes this idea but does not elaborate the point.

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6 The Well-tempered Learner

Introduction: the Self-regulating Citizen and Curriculum Reform

Democratization and modernization have always, albeit problematically, gone hand in hand, at least if we understand democratization as the deepening of practices of autonomy and self-control 'the more societies are modernised, the more agents acquire the ability to reflect on the social conditions of their existence and to change them in that way' (Beck, 1994, p. 174). Indeed, one might take this as a hook on which to hang an analysis of policy – the various ways in which modern states contrive to rule by the creation of self-regulating subjects: 'In multiple social arenas, intervention strategies [were] constructed for individuals to think of themselves and personally to act as healthy, productive citizens and workers' (Popkewitz, 1995, p. 56). This relation of self-regulation to governmental regulation through the construction of creative self-regulating citizens is the emblematic policy aim of governmentality, the form of state steering most appropriate to late modern, or reflexively modern, society. This is the form of symbolic control pursued by the curriculum reforms and their social logic which I shall discuss below. To say this is not to make a critique of the reforms, nor to attach a label on them. Rather, it is to map out a path of enquiry, for the important thing is to analyse how the social logic works and by what modalities it will produce subjects of a particular sort.

The recently liberated reconstructive state in South Africa leads something of a charmed life in this regard. Prised loose from a universally hated polity and policy regime and set on the road towards collective autonomy, South Africa's new rulers have, for a short time at least, a grace period in which to institute a new polity, policy and policing conjugation. And they have set themselves to the task with a will. South African curriculum planners have borrowed eclectically from the Scottish, the US and the New Zealand cases. Particularly the last case, in which an outcomes-based approach is teamed up with a national qualifications framework, has been a conscious model for South African emulation.

The section that follows below will discuss in greater detail the way in which the South African curriculum planners hope to implement the

outcomes and qualifications reforms. In the section that then follows on, pedagogic models, which are the principle focus of the chapter, come into view, for although outcomes and qualifications taken together are a comprehensive reform initiative it is in their implications for pedagogy, for what teachers and learners will be presumed to be able to do, that the combined effect of these reforms is most dramatic.

The control of curriculum and curriculum policy has been a central means by which states have pursued the problematic couplet of self- and governmental regulation. There are many recurring motifs in curriculum policy world-wide that seek to effect the precarious feat of governing through the tutelage of autonomy, a principal form of 'steering at a distance' (Ball, 1994).

Two central motifs of this form will be discussed in this chapter. The first is the 'child' or 'learner-centred' curriculum. Naturally, the terms of the discourse will differ from context to context, from the USA (Evans and King, 1994), New Zealand (New Zealand Qualifications Authority, 1996), England (Whitty and Willmot, 1991), Scotland (Scottish Vocational Education Council, 1994) or Northern Ireland (McKernan, 1993) to mention only a few, but it is remarkable to what degree outcomes-based education rhetoric converges around the social aim of individual learner empowerment. What is brought well to the fore in the outcomes-based approaches that the South African documents draw on is the social project of maximizing the citizen–learner's flexibility, opportunities, mobility and access (see Department of Education, 1997a). Outcomes-based learning programmes are 'learner paced and learner centred' (Human Sciences Research Council, 1995, p. 21): the learners determining their own educational pace, maximizing their occupational opportunities and becoming fully participating citizens in all spheres of social, political and economic life is the guiding ideal. A binary distinction is drawn between traditional education which subordinates learners to élite, access-restrictive and ideologically discredited curricula on the one hand and outcomes-based education which empowers learners to take control of their learning as they take control of their destiny on the other. Indeed, with the social project so well to the fore, getting to grips with the politics of outcomes-based pedagogy is often tricky because to raise difficulties against it is all too often seen as raising objections to the social project driving it.

In many of the South African documents, the social project of egalitarianism and empowerment is linked to the skill needs of the national economy, usually also seen in the light of the global economy and global competitiveness. Global competitiveness, it is often said, means that economies require a well-qualified population and that they require workers with flexible, generic and constantly up-graded skills (see Chapter 2; Young, 1996, p. 1). National qualifications frameworks, the second related motif to be discussed here, is said to be a means to enhance flexibility and the educational opportunities of learners across all sites of formal and non-formal

learning. Such frameworks allow previously disadvantaged learners to redeem their unqualified competencies (recognition of prior learning) and permit recurrent and multiple re-entry for purposes of reskilling (lifelong learning). In fact, national qualifications frameworks are often put forward as the pedagogical reconciliation of personal, social and economic goals.

What is clearly evident in such frameworks is the attempt to marry the flexible, active and autonomous modal individual of reflexive modernization[1] to an educational framework that will not only promote flexibility, autonomy and choice but also presuppose it and, in a certain way, produce it.

Outcomes and Qualifications: the South African Case

Outcomes-based education in South Africa is part of an ambitious reform plan to project all certified and certifiable learning activities onto a single national qualifications grid, the National Qualifications Framework (NQF). The NQF and its parent body the South African Qualifications Authority (SAQA; established by the South African Qualifications Authority Act, 1995) are set to generalize the outcomes approach through all tiers of the education system, from general education through further education to higher education.

> The purpose of a National Qualifications Framework is to make it possible for all candidates to achieve national qualifications through a wide variety of mechanisms and a multiple delivery system. The Framework will generate coherence across the traditional divides of education and training, and allow articulation between currently fragmented and divided sectors and institutions. It will also provide access to, and progression through, recognised qualifications for all learners, whatever their level, and allow learners to transfer credit across different modes of study and qualifications within the national framework.
>
> (Human Sciences Research Council, 1995, pp. 7–8)

It is evident that the NQF vision is propelled by a strong version of the social project discussed above, driven as it is by the major African National Congress-aligned trades union federation through the medium of the National Training Board (NTB), from whence came the idea of a qualifications framework.

The qualifications framework idea rests upon a two-pronged argument, with an egalitarian strand and an epistemological strand. The egalitarian argument takes issue with the exclusivity and selectivity of the present qualification system which restricts both access and progress. The assumption is that the NQF, in contrast, should promote access and maximize progress. It should foster the former by accrediting prior learning by permitting multiple re-entry and multiple sites of delivery. It should foster the latter by permitting multiple reassessment on a pass–fail basis. This means, as Young

(1996, p. 5) noted, that '… in theory, therefore, all students can pass'. This will mean a move away from content-defined curricula and norm-referenced assessment to competency-defined curricula and criterion referencing, '… from information (content) to a focus on skills and competences' (Department of Education, 1996, p. 41). Furthermore, in theory, anyone can start anywhere in the NQF and proceed to any other level because the levels are all interconnected: 'from sweeper to engineer' or 'porter to doctor', as the union slogans have it. A popularizing pamphlet (Education Information Centre, 1996) depicts the NQF as a building site scaffolding, a kind of cognitive jungle gym, a universe of all transmittable knowledge and skills infinitely interconnected, a vista of 'seamless progression' (Human Sciences Research Council, 1995, p. 67).

The epistemological argument takes issue with the academic–vocational tracks of traditional education which are premised on a strong divide between mental and manual labour. The qualifications framework, by contrast, views all knowledge and skills as interleaved. Consequently, in place of learning tracks, the NQF and the outcomes approach offer 'learning pathways' which are learner selected and learner driven. Learner driven means that learners proceed at their own time and pace through the learning pathway, facilitated by arrangements of re-entry, reassessment and credit transfer and accumulation.

A social vision of integration and of social justice propels this epistemological elision. If it is a faulty epistemology that underpins the hierarchical division of skills and qualifications into mental and manual, academic and vocational and white collar and blue collar, then, the argument runs, the epistemology must change. The NQF thus assumes that all skills and competencies are essentially and in principle on the same epistemological footing. This must be the case if they are to be exchangeable in terms of a transferable credit value.

This in principle equation of the status of all learnings has at least three direct implications for formal education as it is traditionally known. First, if all learnings are generally of a kind, then at some level they must all be tapping the same mother lode of competence. Consequently, the approach divides the basic unit of competence, the outcome, into 'critical' and 'specific' outcomes. Specific outcomes are specifiable skills, particular things that a learner must be able to 'do' and these pertain to specific levels (unit standards), specific learning areas and specific learning programmes. This form of stipulation is familiar from vocationally based qualification schemes such as that of the Scottish Vocational Education Council (SCOTVEC). Critical outcomes, on the other hand, are generic transdisciplinary competencies which are said to underlie all integrative skills. Presently, these are extremely broadly framed, e.g. 'the ability to make wise and safe choices for healthy living' is one critical outcome. It is hard to see how they will be assessed. Indeed, it looks likely that the real assessment will be of the specific outcomes only.

A second implication is that the specialized status of schools, colleges and universities as 'specialised learning organisations' (Young and Guile, 1996) will be dissolved. The accreditation of prior learning depends upon a break between the site of learning and the site of assessment and accreditation. Learning sites and settings are thus despecialized and decentralized, whereas standard setting, monitoring and accreditation are recentralized into a new national bureaucracy as we shall see in a moment. Henceforth, as Young and Guile (1996) noted, we will have to deal with a host of 'non-specialised learning organizations', where the distinction between the context of acquisition and the context of application is increasingly blurred, where the social difference between learning a skill and displaying it at the workplace disappears. The affinity with the 'mode 2' argument discussed in Chapter 3 should be apparent.

A third implication is, consequently, a change in the specialized social definition of the pedagogue, the teacher. If 'there are certain generic qualities evinced by all teachers and trainers, whether they be in the formal classroom or on the factory floor or in the development context such as health education' (Department of Education, op. cit., p. 44), then the traditional notion of a teacher disappears.[2] And indeed, the NQF constructs a new pedagogical persona, the 'education and training development practitioner' (ETDP). The ETDP is the person who is engaged in 'the practice of organising systematic learning' (Department of Education, op. cit., p. 16), wherever that might take place. This holds too for teacher education: 'Teacher education should be understood as including the education of teachers in a wide variety of settings' (Department of Education, op. cit., p. 16). This shift is one that has long been promoted by non-formal educational practitioners of all kinds – the distance educators, the educational projects in the field of literacy, early childhood education, adult basic education and many others in the training field. It is a shift from a visible to an invisible pedagogy and entails a new though problematic invisibility of the pedagogue too, as we shall see below.

The NQF thus presages a shift from a transmission–content pedagogic model to an acquisition–competence model. It moves the emphasis and the focus from provision (the teacher, the textbook and the curriculum) to learning (the learner, the employer, learning outcomes and assessment). It is indeed, as the name NQF plainly says, an assessment or qualifications framework.

All qualifications frameworks, as noted by Young (1996), fulfil three functions: a selection function, a standard-setting function and an incentive-providing function. Frameworks differ as to how they fulfil these. Selectivity is either high or low. As Young (1996) noted, the rigidities of high selectivity make that form more appropriate to the stable hierarchical occupational structure of mature modernity rather than to the flat occupational networks in flux in late modernity. Standard setting is either norm or criterion referenced and incentivization is either through competitive incentives or through feedback incentives. The NQF is, in these terms, a low-selectivity, criterion-referenced, feedback-incentive framework.

At the heart of this curricular approach lies the 'learning outcome', a notion which refers simultaneously to two things: it refers to what the learner has displayed, their level of competence evinced at the end of a course, on the one hand and it refers to the stipulation or description of the expected standard of performance on the other. This latter, called a unit standard, is a systematic description of 'capabilities' (skill descriptors), 'entry assumptions', 'performance outcomes', 'assessment criteria', 'underpinning or embedded knowledge', 'range statements' (difficulty descriptors) and 'moderation' stipulations (procedures for standards monitoring). Unit standards thus recognize 'capabilities'; a prescribable set of unit standards make up a qualification which recognizes 'competence'.

This is a formidable architecture of educational delivery and learning facilitation. The devil, as always, will be in the detail, and the trick will be to write unit standards and qualifications standards that are broadly acceptable and user friendly. Who should do the writing is not altogether clear. A variety of industry initiatives have been in progress (in electrification, hospitality, engineering, transport, plastics industries and the adult literacy field, to mention a few), but the formal education sector has made only modest headway. The new formal curriculum based on outcomes, called Curriculum 2005 (see Department of Education, 1997b), was introduced into grade 1 in 1998. The other grades are to follow in the years to come. There are a number of popular discussion documents about the NQF prepared for different audiences in circulation. Most of them encourage or exhort participation with a greater or lesser degree of fervour. A newsletter from the Western Cape curriculum service proclaims 'To all our educators, trainers, learners, parents and everyone else concerned. An urgent invitation. *YOU* are urgently invited to take part in the design of a new approach to lifelong learning and development in South Africa' (Western Cape Education Department, 1996). This dream of direct participation is to be found in serious documents as well: '… all relevant stakeholders should participate in curriculum development for teacher education. Such participation should occur at all levels of curriculum development' (Department of Education, 1996, p. 46).

This stress on participation is entirely understandable given the social project of democratization and egalitarianism that drives the NQF, but it is difficult to imagine in practice. In the meanwhile, the NQF also proposes to establish an imposing new administrative infrastructure to oversee the new system, one which is over and above the existing rather cumbersome national bureaucracy. It will have five levels:

- the SAQA parent body overseeing the entire operation;
- a series of sectoral authorities (SETAs) acting as intermediaries in the employment field;
- a series of national standards bodies (NSBs), which are to establish competency standards;
- a series of standards-generating bodies (SGBs) for each domain, such as teacher education;

- a series of quality assurance councils (ETQAs) to monitor and audit the standards.

For the cash-strapped South African national system of education, struggling to achieve racial parity, this is more than a little ambitious, especially given the time frame, even if it is quite understandable given the virulent form of administered inequality that was apartheid education. Nevertheless, as may already be clear, the rationale for the NQF and the outcomes approach is not disputed; its pedagogic form and logic may well be. Commentators such as Young (1996) have made some interesting and useful comments about the area most likely to be contentious, that of standards and standard setting. Young (1996) cautioned not to try to overspecify the standards and to leave a certain leeway for professional judgement. He was also wary of the rigidities of unit standards and advised the curriculum planners to leave a certain space for originality and creativity. As Mulcahy (1998) shows, in Australia considerable differences emerge between central and local standards and competencies.

How do we know when or whether noble social goals are met by pedagogical arrangements? Or, put another way, how does one get to grips with a proposal of this nature that is so self-evidently righteous? I intend to approach the question by distinguishing between two different kinds of pedagogical model.

Competence and Performance Models of Pedagogy

Technology is society made durable[3]

The 'critical history of rationality' is a recent and increasingly influential approach in the field of the history of ideas and the sociology of knowledge (see Dean, 1996). Tracing a lineage back to Kuhn and Canguilhem, the main text of the approach is undoubtedly Foucault (1979) on 'governmentality'. Governmentality is a form of state craft forged in the eighteenth century which refers to a form of governing, or rather techniques or apparatuses – in a word, technologies – of governing whose principal distinctiveness lies in the yoking together of a body of formal knowledge (such as the human sciences) to a particular 'regime of practices' (say, schooling or punishing or curing). Thus, critical histories of rationality study the relation between disciplinary knowledge and practical knowledge embedded in a regime of practices, between theoretical discourses, particularly of the human sciences and practical discourses of regulation, between epistemé and techné, through the conjoining lens of a device called here a 'technology of government'. In what sense is the regulation to be regarded as technological? A technology may be thought of as an assemblage, a set of arrangements or, better still, a network which constructs programmes of action which co-ordinate a network of roles. A particular pedagogic practice, for example, distributes particular roles to agents that are both human (teachers, learners, employers,

development agents, etc.) and non-human (delivery regimes, textbooks, assessment protocols, etc.) in order to structure the field of possible action in one way rather than another (for a related approach to 'curriculum technology', see Mulcahy, 1998). If we consider the case at hand, outcomes-based education and the NQF, it will be seen that we have so far looked at disputes in the terrain of the discourse of practical regulation itself, but have not yet begun to characterize or analyse the disciplinary knowledge base nor the particular pedagogic model that informs it.

Popkewitz (1994, 1995) and others (such as Ball, 1990, 1994) have extended the critical history of rationality approach to the field of education. Popkewitz (1995) argued that inscribed in the discourse of systemic school reform is a research tradition of 'constructivist psychology', which forms a 'cognitivist template' for the allocation, or projection, of learners and teachers of a particular kind. Learners are projected as active, creative individuals, which Popkewitz (1995) regarded as an appropriate nod to the democratic emancipatory spirit of the times. For them, there are multiple paths to achieving the same end, and much of the choice there is theirs. The end or outcome is, however, not open to negotiation. Teachers are projected as 'self-governing' professionals, whose professional competence is judged not by mastery of an explicit set of rules or the achieving of particular results but rather by an internalization of goals, a fusing of social professional goals with personal goals. The constructivist projection thus blurs the boundary between the inside and the outside, the teacher's thoughts and feelings and professional practices in the classroom. Popkewitz (1995) remarked that this is potentially a far more pervasive form of regulation than that of merely regulating the professional actions of teachers. 'Good' teachers are now 'required' to feel personally involved and fulfilled as part of professional competence.

Besides regarding this as unnecessarily intrusive, Popkewitz (1995) also took psychological constructivism to task for being insufficiently socially constructivist. Psychological constructivism, despite a certain rhetoric of liberation and autonomization, in the end acts to naturalize and depoliticize the selectivity of curricular knowledge.[4] Despite its democratic lineaments, Popkewitz (1995) complained, constructivism acts as a mystifier rather than a constructor of social relations and divisions. This critique recollects an earlier critical theoretical approach to technologies and forms of knowledge, to the sociology of knowledge, one which saw these as impositions on already formed subjects. This is to regard technology and its forms of knowledge as working an objectification on 'already subjects', a form of symbolic domination. A progressive politics against 'technology-as-objectification' is consequently a politics of liberation from objectification and towards a world of unobjectified subjects. Foucault (1979) famously, but most of post-structuralist thinking as well, regarded and regards liberation as an essentially theological or metaphysical concept. In contrast, he wished to understand technologies of government as modes of subjectification, as modalities that

construct subjects with dispositions, acting within a determinate field. 'Emancipation' as a concept does not function in this view. It is rather by exploiting the free play of the system that respite occurs, through the daily practice of liberty and not through the endlessly deferred utopia of liberation that is for Foucault the progressive politics worth pursuing.

The questions to be asked now are as follows. 'What is the nature of the pedagogy inscribed in outcomes-based education and the NQF?' 'What is the technology at work here?' 'How does it construct teachers and learners?' The aim in what follows is to show the link between models of pedagogy and forms of social regulation. The aim is also to go beyond just showing the link and towards demonstrating its social logic, showing the imbrications between forms of pedagogic and social relations. Popkewitz (1995), much in common with the spirit of the present chapter, began to delineate the human science basis of many of the educational reforms which are now circulating globally. The identification of the epistemology as 'constructivist' is accurate and useful and I have adopted that rubric on other occasions (see Chapters 5 and 9). It strikes me here, though, that constructivist epistemology is but one part of a broader disciplinary constellation that looks not only at the formative dimensions of the form of knowledge but also principally at the form of acquisition or pedagogy that embraces it. This distinction is important to the argument here because I want to suggest that there are at least two distinct pedagogical forms being proposed in the documents of the new curriculum and that, in their pure form, these are in fact incompatible.

The discussion that follows draws on two different treatments of the problem given by Bernstein: Bernstein (1996) discusses models of pedagogic acquisition, with a principal focus on transmission and acquisition, in terms of models of competence and performance; he casts a broader net in Bernstein (1990) and includes under his distinction between visible and invisible pedagogies a discussion of the class agents or sponsors of these pedagogies and a discussion of the related division of labour. I shall risk running these together for present purposes.

Bernstein (1996) begins by suggesting that in the 1960s a 'remarkable convergence' in all the major social and human sciences occurred around the concept of competence, embracing linguistic competence (Chomsky), cognitive competence (Piaget), cultural competence (Lévi-Strauss), member competence (Garfinkle) and communicative competence (Dell Hymes). Where some writers may have stressed its biological provenance, some its acquisitional provenance and some an interaction between the two, all agree that competence refers to a capacity tacitly possessed by all members, capable of generating creative variety.

A number of features follow: competence announces 'a universal democracy of acquisition'; the presumed subject of competence is 'active and creative' and self-regulating; pedagogues are consequently suspect as meddlers in a natural process; this naturalness of learning as unfolding has an 'emancipatory flavour', whether of a liberal individual, radical or populist

sort (all distinct pedagogic submodes); and learning happens 'now' in whatever activity is being engaged in.

Although competence theorists have not written directly about education, their ideas have had a constitutive impact on pedagogies of cognitive empowerment, such as the child-centred movement of the 1970s, but also on cultural empowerment and radical empowerment movements. They were dominant in the Plowden Report of 1967 [Central Advisory Council for Education (England), 1967] and became orthodoxy in primary education in Europe and the UK and in literacy and adult education movements in various parts of the developing world during that period.

This all occurred against a broader backdrop of sociocultural movement in Europe and the USA, earlier referred to as reflexive modernization, which has seen an inexorable drift away from competence modes of schooling and towards a particular type of model, one which is far more dependent upon external determinants of desired educational outcomes. Since the two models distribute roles and specialize discourses differently, they will be briefly discussed in ideal–typical terms (see Table 6.1).

The different models have, in other words, different specifications for acquisition, transmission and evaluation and they specialize the roles of acquirers and transmitters in different ways. The discussion that follows will pick out some of the implications, necessarily selectively.

The first thing to note is that competence models stress regulative discourse. This means that the authority relations of transmission and acquisition are their particular concern. This puts the spotlight on 'process', virtually a code word for competence models. In all cases, a democracy[5] of relations is favoured. This entails that the transmitter or pedagogue must been seen to direct the pedagogic process as undirectively as possible. There are no rules to be followed. Classroom relations are personalized, not position dependent. The ideal, personal, individual communication between the learner and the pedagogue is complex and multilayered, so that the learners are able to externalize their feelings, fantasies, fears and aspirations the better to actualize their competence. As Popkewitz (1995) remarked above, the net effect of this is to put far more of the learner's private world on display. Mostly, this is firmly out of view behind the rhetoric of emancipation, actualization and learning freedom; it is freedom not privacy that is valued here.

The competence pedagogue deals with learner performances as variants or differences, not as deficits. They are not judged as indicative of the learner's potential because, in competence thinking, if everyone is in principle able to fulfil their competence then inadequate performance is the fault of extraneous (personal, cultural or political) circumstances.[6] Achieving competent display is just a matter of time. Competence pedagogies are, thus, generally speaking, seriously opposed to graded assessment on two counts. First, low grades may give an unfair picture of a person's competence (the fairness argument) and, second, grades do not predict future performance and are, hence,

Table 6.1 Pedagogic models

	Competence (acquisition competence)	*Performance (transmission performance)*
Learner	Control over selection, sequence and pace of learning	Little control over selection, sequence and pace of learning
Teacher	Personal control Transmission not pedagogically regulated Rules implicit	Positional control Pedagogically regulated Rules explicit
Pedagogic text	Ungraded and unstratified performance Competence read through the performance	Graded and stratified performance The performance itself
Assessment	General competence criteria 'Presences' in terms of difference	Specific performance criteria 'Absences' in terms of deficit
Learning sites	Anywhere	Clearly marked learning sites
Class sponsors	Professional and educational middle class	The new information or knowledge middle class
Costs	Higher teacher-training costs Hidden time-based costs Less efficient with large classes	Lower teacher-training costs Economies of external control Can deal with large numbers

potentially misleading indicators, particularly in crafts and professions (the predictive inference argument; see Eraut, 1994, p. 216). In short, what is assessed in the competence model is the competence itself read through the performance. The potential of the learner rather than their accomplishment is the primary object of the competence pedagogue's gaze.

The teacher-training costs will be high, comparatively speaking. First, to get teachers to internalize the implicit rules of this person-oriented, highly particularistic, 'invisible pedagogy' will entail in depth craft training not easily conveyed by short courses or by non-apprenticeship modes such as distance education. Second, there will necessarily have to be selectivity because not all aspirant teachers will absorb the moral universe of hyperpersonalized pastoralism, or, rather, they may absorb the rhetoric but not the practice (Ensor, 1999). There will also have to be greater numbers of teachers here because large class numbers make personalistic pedagogy difficult if not impossible. In addition, the hidden time costs of competence assessment – portfolios, continuous assessment and so on – will emburden the teacher corps. The discussion above should begin to show that the pedagogue, though 'invisible' or 'vanishing' (see Davis, 1996), is, if anything, more critical under a competence regime than under a performance one.

Competence pedagogies, especially of the radical or populist variety, are driven by an egalitarian project and are not geared to specialized futures. Performance pedagogies, on the other hand, are. These latter models move the focus from the learner to the learning course and to the learning outcome. The learner here may still be active, but their activity is more goal directed rather than driven from within. The emphasis, in other words, is here more upon the instructional than upon the moral order; more upon the order of objects in the discourse acquired than upon the authority and autonomy relations of the process of transmission and acquisition. Performance models consequently offer learners well-stipulated curricula with explicit rules of acquisition, little control over the learning course and definite criteria for the judgement of right and wrong and adequate or inadequate. Pedagogues in this pedagogy exercise a good deal of control over the process in a visible way and evaluate performances on graded scales.

Performance models are geared to be accountable to something outside the learner. We must distinguish between two rather different forms of performance model: the autonomous and the market oriented. The former is the traditional (élite) secondary and tertiary model – Young's (1999) 'curriculum of the past', where learners are subjected to the regime of disciplinary subjects; the latter is skilling tailored to specific needs, tasks and slots in the increasingly labile occupational hierarchy. We are witnessing two kinds of shift as we enter reflexive modernity, then. The first is the tendential shift in tertiary education from the curriculum of disciplinary singulars to market-responsive curricula, which are 'targeted' and 'niched' to capture some or other 'market segment' and to respond to some real or perceived market need (see Chapter 3). This will always be a partial shift and will always be contested. Nevertheless, higher education is also feeling the effect of a second tendential shift towards greater stakeholder accountability (see Chapters 8 and 9). Higher education therefore faces the twin imperatives of accountability and market relevance, and is responding, enthusiastically or reluctantly, as the case may be.

Unlike the rest of higher education, which is moving between an autonomous performance model and a market-oriented one, pretertiary curriculum reform in South Africa via agencies such as the NQF, at least in terms of stipulated outcomes, is being asked to move towards a model in which both competence and performance assumptions are jostling for dominance in the same reform. This entails a conflict not only between pedagogical ideologies and practices, between two different technologies of governance, but also between two different fractions of the middle class. At stake is the form of symbolic control appropriate to education. The class sponsors of competence are the professional agents and agencies of symbolic control – the educational professionals whose struggle is over the conditions of their own reproduction and expansion. The class sponsors of market-based pedagogies are, by and large, the economic and new information or knowledge middle class. The educational professionals want an extended

co-ordinative role for the state and an increased growth of public expenditure; the new knowledge professionals want a reduced role for the state, greater decentralization and greater local institution or sector-specific autonomy.

The position of this chapter is now coming into view: the sponsors of the NQF are an uncomfortable alliance of fractions of the economic and professional middle classes and the resultant model beginning to emerge is a mixed or hybrid one. The degree to which the competence sponsors prevail, therefore, is the degree to which the role of the pedagogue will be 'deregulated' and assessment ungraded. The degree to which the performance sponsors prevail will reflect the degree to which external, accountable standards of performance become the target of learning. The question that now arises is: can such a hybrid model exist or work, and what kind of learners will it produce?

On Mode Mixing

It would seem that the NQF is trying, as so many technologies in reflexive modernity are, to respond to conflicting tendencies, requirements and imperatives. The first is the project of social justice, egalitarianism, redress and empowerment. Scrupulous attention to this imperative prescribes the 'similar to' relations of the radical or populist submodes of the competence model with its attendant aim of universal access and techniques of ungraded assessment. The second is the instrumental discourse of flexibility, mobility and retrainability that comes from the employer sector as well as from some post-Fordist and post-modern theorists. In the South African case, the sponsors of the latter discourse declared common cause in the NTB. The new government officials have been systematically lobbied by the sponsors of the former discourse, the educational professionals particularly in the educational projects, from whose ranks many of the new government officials have come. The conjoint social agenda was carried forward into national education policy discourse and into policy. The semantics of the case have helped to obscure the differences; 'lifelong learning' is, after all, loose enough a concept to inhabit comfortably enough both discursive realms. It is only in the nitty gritty of writing the programme organizers, the unit standards and in the debate around gradable assessment, which has so far not occurred, that the scales will tip. It is certain that some of the industry board projects are writing their outcomes in performance terms, whereas others, for example in the adult literacy field, will be trying to write them in competence terms. The stage of development of the policy is such that the difference has not so far come to the fore, but surely must in time. Meanwhile, in the grades where Curriculum 2005 has been introduced, the policy confusion is taking a toll on the quality of learning.

If we take seriously Bernstein's (1996) speculation that competence motifs may be running into a performance wave on the rebound then we have to take seriously the possibility of competence practices in a performance regime.

Bernstein (1996) was here referring to what are sometimes called 'generic competences', which he discerned as a modular subtype of the performance mode. They belong to this mode principally because they are regulated from without via an analysis of the skills necessary for a particular task, practice or job. This is education deduced from supposed functional or instrumental requirements, not from personal, cultural or political ends. Confusion occurs because the term 'competence' is used here in the sense normally reserved for 'performance', thereby 'appropriat[ing] resonances of an opposing model' (Bernstein, 1996, p. 67). Jones and Moore (1993), for example, mount a critique of competency assumptions embedded in the 'new vocationalism' in the UK in just these terms. It is clear that they were concerned about the instrumental dimensions of competency which this analysis has located with performance pedagogy, following Bernstein (1996).[7] Boldly stated, competence and competency are quite different objects of pedagogic discourse. There is little doubt that this confusion is an integral part of the confusion of the policy field in South Africa.

It is worth exploring further the extent to which there is or has to be modular incompatibility between the competence assumption of 'competence realization' (where the competence is already possessed and the latent capacity must simply be made manifest) and the 'trainability' assumption of the 'generic competency' performance submode. In the case of the former, acquirers are already competent, merely unactualized, whereas in the latter they are endlessly trainable depending on opportunity. In the former case, the spotlight falls on maximizing opportunities for access to assessment and continuous assessment, whereas in the latter it falls on maximizing opportunities for access to new skill training. If the former dominates, state spending goes toward complex and expensive assessment technologies, support and repair services and standards-monitoring agencies as well as on prohibitively expensive teacher (or ETDP) pre- and in service education. If the latter dominates, state and private spending goes on educational provision, curriculum and materials development and on technologies of delivery. Market-based (for profit) provision will also proliferate.

The common auspices of equality or 'similar to' relations (Bernstein, 1996, p. 69) makes them compatible in social aim and purpose, but what is 'similar' will differ: similarity of citizenly qualities, broadly speaking, for the former and similarity of general shared skills underlying a range of specific performances for the latter. As we saw in Chapter 3, it is by no means obvious which would best serve the millennial citizen. However, as I suggested above, the organization of symbolic control will also differ and here lies the rub. It is certainly the case that 'mixed modes' are conceivable: 'The models and modes may give rise to what could be called a pedagogic pallet where mixes can take place' (Bernstein, 1996, p. 70). However, the fundamental mode is the one which will foreground the importance of either instructional (performance) or regulative (competence) discourse.

In response to weakened institutional boundaries, to increased calls for public accountability in the new reflexiveness of risk society (Beck, 1992) and in response especially to market calls for relevance, effectiveness and efficiency, the pendulum in all national systems conscious of their competitive position in the global economy swings towards performance models, towards a concern with the universal entrepreneurial seller of infinitely modifiable labour power and away from the pastorally individualized citizenry of the competence utopia. It may be surmised that in such a global climate competence proper, as distinct from generic competences, has a long-term future only in early (primary) education, in adult literacy and repair agencies of academic support and development. It is only in unusual cases where the sponsors of this last mode have disproportionate influence on government policy, as they do in South Africa, that serious confusion and conflict must arise.

It is not so much that the social goals of equality and empowerment are in tension with those of efficiency, accountability and competitiveness, although that too is partly the case. The point being made here is rather that the different pedagogic regimes are arranged to produce different pedagogic subjects. Competence regimes need highly trained individualizing teacher–facilitators, whose pedagogic success depends on their invisibility or, more accurately, whose success depends upon maintaining a fiction of invisibility (Davis, 1996). They accordingly produce learners who actively proceed up a learning pathway at an individualized self-determined pace, actively integrating insights as they develop their expertise by realizing their potential. When this mode malfunctions, through inefficiency or teacher incapacity, then conceptual learning of any kind is the first victim (Taylor and Vinjevold, 1999).

The instrumental skill shoppers, the modal learners of 'universalised reflexivity' (Zizek, 1999), on the other hand, are externally not internally oriented. They monitor the skill requirements of changing skill niches and 'skill up' accordingly. This is self-regulation of an altogether different order. There can be no general sense of integrative progression here because there is and must be in principle infinite variability of skill bundles that can be acquired. The apocryphal story of the average Organization for Economic Co-operation and Development worker who is completely retrained six times during their working career is illustrative here. The entrepreneurial skill shopper is not maximizing their potential, as is the empowered realizer of the competence regime; they are maximizing their skill value, their skill capital, in a competitive and ever-changing labour market. The ambiguity at the root of the union slogan 'from sweeper to engineer' is here made plain. The intent behind the slogan is without any doubt one of equality and egalitarianism. However, it is more likely to happen, if at all, in a performance regime where the sweeper grimly acquires bundle after bundle of instrumental skills until they reach the engineer's plateau. This pedagogical optimism has an unintended ironic resonance with other currents of the

market-place, as in the story of the worker sweepstake winner related under the heading 'From factory worker to millionaire' (*The Saturday Argus*, 28 September 1996). Neither have very much to do with actualizing an intrinsic capacity, with a realistic 'crossing of borders' (see the Introduction) or with social justice for that matter.

The difference between the pedagogic models can easily be overstated. Both models aim for generic skills; both models mean thereby transferability of competent performance across performance settings. However, where that ability is an integrative skill in the former model, it is an adaptable purely instrumental skill in the latter. Skills are synoptic in the former, flexible in the latter. And, in the end, which obtains will depend directly upon where the state decides to place its investment – with the pastoral professionals or with curricular and materials arrangements.

Conclusion: Beyond Pan or Sisyphus

It is tempting but misleading to conclude that advanced industrial societies are on a preordained track that takes them from an autonomous, introverted, élite performance pedagogic submode (curriculum of the past) via a brief detour through a learner-centred competence regime to a market-regulated, extroverted performance submode (curriculum of the future?). The analysis above suggests that South Africa, for one, has not followed this course. The moral of the story is, equally, that recontextualizing fields, both official and pedagogic, are fields of contest with various social fractions with different degrees of social power sponsoring pedagogic regimes which, despite some similarities of rhetoric, will have quite different policy implications and, more to the point here, will construct different teachers and learners.

Analyses of the 'risk society' of late modernity, together with the struggles for recognition and autonomy of groups and movements to be found in such societies, all point inevitably to the autonomous self-regulated learner–citizen as a presumptive civic ideal. Self-regulation has become a widely prescribed pedagogic, civic and social goal.

However, this is by no means the whole of the story. Struggles in the recontextualizing fields will lead to different self-regulative modes. Strong or pure competence modes will erect as the overarching ideal an emancipated, pastorally individuated citizenry, and as the emblematic successful learner a New Age Pan or nature's child, who has succeeded in throwing off the shackles inhibiting an authentic interiority, who has realized their full untrammelled capacities and competence. 'Transdisciplinary competencies' will be the pedagogic watchword and preferred outcome of this panic pedagogy.

A market-based performance pedagogy will, on the other hand, work to construct a recurrent, self-directed learner, or skill shopper, whose principal virtue is patience, strategy and persistence, not the quest for an integrative, untrammelled subjectivity. Where the realization of potential is the end of

panic pedagogy, for this Sisyphean learner, a potentially endless vista of learning modules to be mastered stretches out to the horizon. Whether we should regard this as the pedagogic equivalent of social justice and infinite opportunity or, on the other hand, as a life sentence, death by learning, is an open question.

The possibility of a generic mode might offer some relief from the arid extremes, but it might also produce confusion and antieducation. This chapter has shown how the architecture or technology of a pedagogy has wide-ranging effects not only on learners and their learning but also on the shape of the citizen they are being educated to be.

In the next chapter, the focus shifts from learning to the way that policy debates are conducted in public, i.e. in a determinate field of shaping forces that operates in some ways very like a pedagogic technology.

Notes

1 'Individualisation means, first, the disembedding and, second, the re-embedding of industrial society ways of life by new ones, in which the individuals must produce, stage and cobble together their biographies themselves' (Beck, 1994, p. 13).
2 In more didactic vein: 'The perception of teachers as dispensers of knowledge will also have to change to one where learners are valued as equal and active participants in learning and development processes' (National Curriculum Development Committee, 1996, p. 14). Critics may well leap to the conclusion that the NQF is a scheme to empower learners by deskilling teachers. The enquiry here is rather into whether learners are indeed to be empowered.
3 This is the title of the paper by Latour (1991).
4 'The psychological constructivism, in its irony, obscures the social constructions and power relations embedded in knowledge' (Popkewitz, 1995, p. 65).
5 '… the apparent democracy of the pedagogic regime' (Bernstein, 1990, p. 82).
6 This is the standard alibi in competence writing: 'Thus, a student's competence might not be validly revealed in either classroom performance or test performance because of personal or circumstantial factors that affect behaviour' (Messick, quoted in Eraut, 1994, p. 178).
7 It must be pointed out that Jones and Moore acknowledge the point: 'Indeed, it can be argued, using the alternative, Chomskian view of "competence" as an underlying, generative capacity, that it is really focussing upon performance and not competence at all' (Bernstein, 1996, p. 390).

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7 Critics and Reconstructors

> Are intellectuals prophets and sages; or are they scientists, specialised researchers, or technical innovators? Are they critics of power or expert advisers to politicians, direct or indirect moulders of public opinion?… Positions on these questions, and on a host of related ones, are rarely held in full consciousness; they are implicit orientations … a permanent substratum of thought, a part of the cultural preconscious, a vital source of the cognitive dispositions at work in the intellectual field.
>
> (Fritz Ringer, 1992, pp. 6–7)

Introduction

Stephen Appel (1993) has argued that educators schooled in theory and reflection are not automatically qualified thereby to offer policy prescriptions. Appel's point is that mastery in the discourse of critique does not necessarily transfer to mastery in the discourse of positive reconstruction.[1] Appel is here valuably reminding us that each discourse has its own grammar, its own language game.[2] His polemic is against a certain group of educators who seem to feel entitled to provide policy for the new democratic state in South Africa on the basis of critical credentials and liberation movement membership rather than demonstrated expertise in the protocols of the policy game.

The question pursued in this chapter is not so much whether theorists (or, in the idiom of this chapter, critics) are or are not suited to reconstructive work. Neither is it to establish the epistemological distinctiveness of the two domains of activity [see the distinction Appel (1994) draws between 'theoretical' and 'political' social practice]; and nor is it to advocate one above the other, as Dale (1993) does when distinguishing between 'critical theory' and 'problem solving'. Obviously, the concerns are related. It is rather the sociology of knowledge, one of the conditions under which intellectuals become positioned in one or other camp and how this positioning takes place in a concrete instance.

All is Activism

Civil society as a social–interpretive construction of equality and universality shares with nationalism, in all its varieties including national liberation, the virtue and vice of suppressing the potentially divisive interests that lie at the heart of the social division of complex modern societies (Lefort, 1986). To put that another way, it allows for the construction of a wider community and commonality, a shared horizon of striving which goes beyond personal, ethnic or occupational self-interest, and this allows in turn for a canopy of common sense that highlights common aspirations while de-emphasizing local and particular goals and preoccupations (Tester, 1992). This way of talking about social–interpretive constructions does not assume that these form a Parsonian 'action frame' in any strong sense. In other words, this does not imply that people actually set aside their particular interests for common ones in a civil society imaginary, although this may well happen. It merely asserts that they are predisposed to understand and intervene in the field of social representations in these terms.

In the period up to 1990, intellectuals aligned to the South African national liberation movement, an aspirant civil society and a national–popular imaginary of great power, understood themselves to be waging the struggle in ways that were different only in degree, if at all, from that of mainstream political activists. Many intellectuals were themselves mainstream activists and so their activism and their intellectual work could only have seemed to them all of a piece. At the height of the struggle in the mid- and late 1980s, intellectual work was seen by intellectuals and activists alike as waging the struggle by other means only (see also the Introduction).

There were a number of entailments to this view. First of all, intellectuals had a sense of belonging to a larger endeavour. This was its greatest advantage and certainly not to be taken lightly in an era of global intellectual fragmentation. But it fudged the distinction between analytical knowledge and strategic knowledge, and obscured the occupational boundary between intellectual workers (such as academics) and that of other workers; they were all 'in the struggle' in the same way, and intellectual work in no way conferred any status – in fact, quite the contrary. It also blurred the boundary between political and social power; 'the people' as a bloc, so it was tacitly assumed, would come to rule one day. The possibility that a political élite might come to political power and that a social élite might continue in privilege could not be voiced in the rhetoric of the national–popular imaginary. It obscured the fact that national liberation, if not invented by intellectuals (because real popular struggles did construct real histories of reference), was at least shaped and narrativized by intellectuals, for instance by historians both in and out of the Communist Party and by sociologists of work who had declared themselves for the working class. It is self-evident now, but was not so then, that the strong narrative of 'people's power' as a political driving force was a construction set out by intellectuals and propagated by leadership élites. They were, after all, the ones with access to the tools of narrativization. To be sure,

the best intellectuals were well aware of this. But in the day-to-day construction of the struggle, the difference between intellectual work and activism proper was blurred, so that to all intents and purposes, all was activism. Insofar as these activities continued to separate out in practice – since intellectual concerns were not always necessarily strategic – popular wisdom had it that intellectual work should be subordinate to the strategic needs of the struggle, always and absolutely. It is not too much to say that intellectuals were all but invisible as a separate category within the national–democratic movement at this time, except as they obdurately kept surfacing as aspirants to leadership.[3]

In writing about these things in the mid-1980s, Nico Cloete and I (Muller and Cloete, 1987) were inclined to share the ambivalence of Konrad and Szelenyi (1979) about the social effect of intellectuals who were, as they put it, 'on the road to class power', of intellectuals who did not acknowledge their social base and social project within a broader national social movement. At that time, we were somewhat more optimistic than I am now about the prospect for democratizing the process of knowledge production, for minimizing the impact of exclusion through methodological means – through participatory research and other supposedly democratic methodologies (see Chapter 8).

It is not the place here to embark on a critique of intellectuals in the struggle in South Africa, but rather to look more specifically at what happens to a loose community of intellectuals in a particular area, namely education, when the social movement for national liberation that they, in different ways perhaps, felt part of changes gear as it did in South Africa in February 1990 when the minority White government agreed to negotiations and thus ending minority rule. This is an account of how such a fledgling community, embedded deep within the bosom of the struggle, is winkled out and repositioned by changing social forces and conditions, and how its own strategy in response has, in addition to a host of other things, become part of the ascendance of the informational middle class in the post-liberation period (see also Chapter 6).

The account will inevitably overhomogenize this group of educational intellectuals. The intention of the present story is merely to establish the contours of the broad trajectory within which subsequent subtrajectories fell. The methodological concern here is to establish how the interpretive interventions of the intellectuals can usefully be analysed as social constructions in a determinate social field, and how they can be analysed in their shifts as part of the forces at play in the field and in the wider society.

World–Historical Context

Intellectual fields and subfields of particular countries are increasingly shaped by, and help shape, the world–historical context. Within the globalizing forces at work today, two major and somewhat contradictory dynamics can be

discerned which seem to tug the intellectual task in one or other direction; in practice, in both directions at once, albeit unevenly. The first is an *epistemological* challenge to 'strong thought', including:

- antipositivism and a serious vogue for qualitative participatory methods (discussed further in Chapters 8 and 9);
- a strong assertion of the critical role of intellectuals, e.g. Adorno's negative dialectics and Foucault's antiprophetic stance;[4]
- metaphysical critiques of 'strong' thought and of master narratives in post-modernist writings and pragmatic organizational analysis alike (for example Vattimo, 1988; Mulgan, 1989).

Yet today, despite the development theory critiques of the 1970s, the current global discourse around development is arguably stronger than it ever has been. Development has, in other words, become a polysemic globalized master narrative in an era resolutely inimical to master narratives (see Pieterse, 1991).

The second is a *political* challenge to occupational experts, notably an increasing popular suspicion of 'expertise' in general and of 'policy' in particular, which is particularly marked in Eastern Europe but elsewhere too, especially where International Monetary Fund conditionalities are causing hardship (for example see Amsterdamski and Rhodes, 1993).

This is undoubtedly fuelled by the collapse of planned socialism in Eastern Europe, but also by the unexpected economic successes of the Pacific rim countries among others. Nevertheless, in all of this, although contested, economism – the priority of economic growth – remains dominant. Indeed, despite the critiques, it seems to have grown in influence.

The third is increasing discussion around the *changing role of intellectuals*. This is said to be from 'legislators' to 'interpreters', in Bauman's (1987) terms,[5] or described as an increasing disconnection or cultural desynchronization between élites and masses.

Nevertheless, the emergence of global problems with effects stretching far beyond national borders acts against this localizing trend. For example, global warming and other ecological threats, the nuclear threat and the AIDS epidemic have all contributed to the *rise of the international expert,* the *international (mode 2) development consultant* (see Chapter 3), and have established the indispensability of the expert and of expertise in thinking through policy dilemmas that are increasingly unthinkable for the ordinary person.

As Ringer (1992) has shown, the way in which intellectuals have situated themselves with respect to these two opposing dynamics, which in the chapter I call respectively *'critique'* and '*reconstruction'*, depends upon the structure of the intellectual field and its relation to the field of power in any historical conjunction. The particular intellectual community that I want to focus on here is a group of self-styled *progressive educational intellectuals* in South Africa, many of them, but certainly not all, academics; to examine how they

responded to the social forces surrounding them; and to look at how they came to change their role as well as their view as those forces came to change.

I will look at the evolution of this community in three phases, which straddle the momentous political transition in this country:

- mid-1980s to 1990;
- 1990 to 1992;
- 1992 to April 1994 (the first democratic election).

In each of these phases, I will examine how the tension between 'critique' and 'reconstruction' was configured. In each case, I will suggest, this was dealt with on the symbolic level by means of a debate, and it is the shifting terms of this debate that is the main focus of this chapter.

Phase One: Mid-1980s to 1990

Until quite recently, formal state education, ever since it was taken over by the state in the nineteenth century, has featured in the discourses of the Western New Left largely by way of a *critique of its social control function*. That is to say, the New Left has overwhelmingly dealt with education in terms of critique. Second, the overriding tenor of progressive educational politics in South Africa has been that of *oppositional politics* since at least Soweto 1976, for entirely understandable reasons. This has only relatively recently begun to change. Together, these two contextual features, against the background of those above, had a number of distinct effects on the way in which progressive educators came to see their task in the early and mid-1980s, at the nadir of the apartheid state.

At this time, two sets of distinctions were to emerge that later could not be made, such was the homogenizing suction pulling everyone into a central binary vortex, into singular identification with either the 'people' or the 'state'.

These distinctions were:

- the distinction between *political work* and *civic work;*
- the distinction between *activism* and *intellectual work.*

In other words, intellectual work was conflated with activism, and civic work conflated with political work. As we shall see later, the terms of the first conflation begin to separate out in phase two, whereas the second conflation begins to separate out only in phase three.

Among the many implications of these conflations, I will mention only two, by way of example.

- In the liberal universities where progressive academics taught, those learning to be teachers were given, from the early 1980s at least, an astringent diet of Marxist reproduction theory, a feature common in the

USA and the UK at the time too. The guiding theorist was of course Althusser, who with his famous theory of ideology was, in his own context in Paris, trying to theorize the conditions for political action in the wake of the failed revolution of 1968. In South Africa, militant action in the streets was to continue sporadically from 1976 up to 1990, and the students who had become acquainted with Althusser beat the plough shares of his theories into militant slogans that fuelled their implacable activism and lent it coherence and justification. Althusser might have been flattered, but he surely also would have been astonished (Muller and Tomaselli, 1998).

For both intellectuals and activists at this time, the 'road to the state was closed' (Morphet, 1986). That is to say, there was no room for reasoned persuasion in the polarized politics of the time. The left-wing academics with their borrowed reproduction theory were as a consequence practising, on the level of theory, what the activists were doing in the streets, i.e. writing the implacability of the state and the need for absolute resistance. The effect was a totalizing stand-off between the 'people' and the 'state', what later was to be called a 'violent and unstable equilibrium' (for example see Wolpe, 1991).

- The National Education Crisis Committee (NECC) was formed to intercede in the educational stalemate because schooling had virtually ground to a halt in large parts of the country. In 1985, a grouping of seasoned political activists, notably Eric Molobi and Vusi Khanyile, organized an umbrella group of parent, teacher and student organizations with the aim of taking the stalemated struggle out of education, and getting the youth back to school. This strategy was never really successful, but the founding of the NECC did lead to the establishment of a distinction between *political work* on the one hand and *civic activities* on the other. At a national NECC workshop at St Luke's near Johannesburg in August 1989, the distinction was publicly made between *political* and *programme work*, the latter coming to mean bursary programmes and policy research among other things. It was said at the time that the strategic needs of the NECC's political agenda should not hinder the on-going work of the programme. This prised apart a distinction, albeit hotly contested at the time, of two different forms of struggle. This distinction was later to mature into the political–civil society distinction. Nevertheless, the distinction would take time to filter down into the interstices of political and civil life.

As the 1980s wore on, the NECC leadership had become persuaded of the need for 'intellectual assistance' in the struggle, and, in partnership with some liberal universities, set up first two and later a third Education Policy Units (EPUs) to do this. Because the issue was never properly clarified, it was completely understandable that the NECC would have one conception and the universities another of what the EPUs were supposed to be doing.

The NECC had an activist definition of service to the struggle, one where the EPUs' role was to provide intellectual ammunition to undergird the strategic needs of political struggle. The universities on the other hand had a conventional definition of scientific work, one where the EPUs' role was that of research and development. The first view was a short-term one; the second a long-term one. In addition, the NECC was distinguishing only between the first distinction (political and civic work) and the universities implicitly also between the second (activism and intellectual work). This unacknowledged difference in orientation led to numerous arguments and, all too often, to an impasse.

What did academics and activists working in the EPUs think? They too were confused and torn by conflicting loyalties. And as they could not choose, they were not permitted to adopt wholeheartedly one or the other role, they shuttled unsatisfactorily back and forth between them (Muller and Vinjevold, 1991).

The EPUs were effectively paralysed by this dual and incompatible expectation. They were never able to provide intellectual ammunition effectively, mostly because by the time they had written their reports the strategic moment had passed, nor were they ever able to carry out development work efficiently, for a reason I will discuss further below.

Although civic activities were now separated from political work proper, it is fair to conclude that to make any distinction between critical work and reconstructive work was virtually impossible in the political crucible at this time. Those who did try, for example on a *theoretical* level distinguishing between Habermas's cognitive and strategic interests, were ignored (Muller and Cloete, 1987); or on a *practical* level, like those in the Urban Foundation, were suspected of being complicit with the state. The specificity of reconstruction for the struggle was a concept completely unthinkable to the ordinary educational activist and, indeed, for most education intellectuals too, though its time was almost come.

Phase Two: 1990 to 1992

When President de Klerk liberalized the political climate on 2 February 1990, he unlocked a series of chain reactions that he could never have foreseen. The major one, undoubtedly, was that the bipolar social logic of 'people'–'state' began to unravel and fragment. The 'people' began to split into multiple interest groups, some closer to and some further away from the state. Another was that groups such as the NECC, or at least their national leadership who had thought of themselves as being in opposition for perpetuity, were suddenly confronted with the possibility of being in government. Indeed, after decades of contact in police cells only, within weeks they were talking to the state departments and were being asked to submit plans for emergency budgets. Where would they get these plans from? They turned to the EPUs. But the EPUs, it will be recalled, were discursively hamstrung; they had at

best done some short-term activist analysis and a little orthodox academic work, so were entirely unpractised in this new kind of reconstructive activity, which they soon realized.

So quickly did events move in that intoxicating time that by the middle of the year the slogan *from critique to reconstruction* was already a cliché. Everywhere, from every side, not only policy think-tanks but also non-governmental organizations and academics were being enjoined to leave aside critique and to embrace 'reconstruction' (Chisholm, 1992). One should not underestimate with what *stunned apprehension* this was met by the education intellectuals, both in and out of the EPUs. How were they to do this? It went against their whole training, their social–epistemological view of knowledge and their view of their own role in society. In addition, there was practically no indigenous Left education tradition of reconstruction to draw from, except perhaps in the field of literacy work (Paulo Freire) and Patrick van Rensburg's Education with Production. And they soon became aware that the field of comparative policy work had become rather technical with the rapid influx of international consultants in the shape of the Harvard Institute of International Development, the Paris-based International Institute of Education Policy, the World Bank and other non-governmental organization-connected global development agencies.

From within the EPUs and in protracted discussion with the NECC national leadership, the idea was born of a fixed duration national effort at sketching the policy terrain for the progressive movement. By 1991, a full-scale national investigation, the National Education Policy Investigation (NEPI), was set in motion involving some 300 educators and activists in twelve research groups. (A fuller description of the genesis of the NEPI and its stance on research is given in Chapter 8.) By the end of 1992, the reports were published (The National Education Policy Investigation, 1993).

Because of its heritage, the NEPI was not in any position to execute a neat leap from critique to reconstruction, from activist theorizing to technical planning, despite certain strong expectations from some quarters that it would. Indeed, quite the contrary. The policy development enterprise, from the guiding committees to the research groups, was set up with the explicit brief to balance intellectual and political inputs, to achieve a balance in the policy discourse itself between strategic and analytical demands. There were activists as well as academics in each work group, at least such was the intention, setting the stage for an explicit confrontation between two purposes of intellectual work that had up to now been latent. And, more important for this account, the intellectuals began to differ among themselves as to which, intellectual or strategic considerations, should play the steering role.

The debate was variously figured: between an 'ends-based' discourse and a 'means-based' discourse; between a state and civil society-centred discourse; between equity and efficiency (Parker, 1993). But by far the bitterest contest occurred around the concepts of 'equity' (or sometimes 'equality') and 'development'.[6] 'Equity' came to stand for people's needs, aspirations and

struggles, for a composite conception of social justice; and 'development' came to stand for macroeconomic requirements and macroefficiency, for the imperatives of a transforming state system whose needs superseded this or that group which may, as a consequence, be expected to defer their group-specific needs for those of the greater good.

For those groups or intellectuals leaning toward the activist side, equity considerations were incontestably paramount, and the 'discourse of development' was rejected as an excuse for not satisfying the needs of the people. 'Equity', it was asserted, was the primary goal of the education struggle. For those leaning towards 'development', to insist on 'equity' before all else was simply populist ignorance. With the conviction of those who know that the state requires reconstruction more than critique, academics of this persuasion sailed without further ado into development and reconstruction. Where, we may ask with Appel (1993), did they learn it? Largely from the economists who came to sit in quite a few of the research groups, and from those, such as Peter Buckland, who had found themselves in homeland government before. The rest invented it as they went along.

The editorial group of the NEPI had been given the impossible job of ensuring that each research group balanced both 'equity' and 'development' considerations in their final reports, although quite what 'balance' might mean no one clearly knew beforehand. By and large, and with greater or lesser reluctance, the groups took up the challenge, and a NEPI-wide debate ensued about how the 'balance' should best be effected. This debate can crudely be represented in terms of the following two opposing positions.

- Proponents of position one, *'development'* ↔ *'equity'*, construed the two policy goals as irrevocably in tension. They evinced a certain cynicism about the automatic benevolence of 'development' – after all, as long-time theorists, the proponents of this position were steeped in underdevelopment theory and in other critiques of development (for example see Wolpe, 1980), but they nevertheless recognized that some or other view of development was essential in order to locate national priorities (Wolpe, 1992). Proponents of the view realized too that 'equity' of every kind demanded is not realizable (Gerwel, 1992) and that policy poses the question of how to choose.
- Proponents of position two, *'development'–'equity'*, assumed, implicitly or explicitly, that it is in principle possible to balance or reconcile 'developmental' criteria with 'equity' demands. Indeed, some argued that it was essential to make this assumption in order to pursue reconstruction while retaining legitimacy in this period (Kraak, 1992). And it is this view too that is reflected in the reconstruction and development programme of the African National Congress (1993a) and their policy framework for education and training (African National Congress, 1993b).

Both positions thus implicitly recognized the need to keep 'development' and 'equity' in some or other relation, spurred on as they were by the editorial group at the behest of their Executive Committee. But proponents of position one wished to retain the tension between the two as a constitutive tension at the heart of the intellectual enterprise of doing policy, whereas proponents of position two wished to move beyond the uncomfortable tension into some or other relation of accommodation as soon as possible. While such an accommodation was sometimes advocated in order to keep as many constituencies within a broad consensus as possible, an accommodation was also necessary for policy to be amenable to technical solutions. Without it, policy debate stalls in a stand-off over divergent ends, as Weber so clearly foresaw. It was inevitable then that the debate, although having political and ideological overtones, was in the end not a debate about political ideology so much as it was a debate about the politics of intellectual work. Discernible in position one is a particular embryonic version of what I call 'critics'; in position two, a particular version of 'reconstructors'.

The tussle in the NEPI was surprisingly heated at times, but, in the end, the stake was far larger than the NEPI; it had to do not only with about how policy should best be carried out but also about the political and professional forms that policy work should take. But these material co-ordinates were only to emerge clearly in phase three; in phase two, the initial jockeying for position in the intellectual field was conducted largely as a debate around equity and development, and this form of jockeying was conditioned largely by the early stage of interest–differentiation characterizing this phase (Badat et al., 1994). In other words, because the emergent interest contests had yet to take on mature institutional and material forms and because the 'struggle' continued to provide a unifying, if diminishingly so, definition of the terrain, the emergent conflict of interests among the intellectuals could best be fought out in symbolic ways only. And yet, the terms of the discursive conflict, albeit locally inflected, are the terms of distinction that divide the terrain of intellectual work in all complex modern societies. For that reason, the 'equity–development' debate in the NEPI provides a revealing case study of the emergence of educational policy expertise, of the emergence of 'reconstructors' in South African educational policy discourse and of the repositioning of critique and reconstruction.

There were, of course, in the NEPI ranks those who propounded an 'equity only' position. These tended to be either politicians expressing, so they said, the demands and needs of their constituents or non-governmental organizations who had been founded to deal directly with those expressed needs. On the other hand, there were also those who propounded a 'development only' position. These were mainly economists and human resources experts, admittedly in a small minority in the NEPI. But with hindsight, it is remarkable that the debate was, by and large, joined in terms of some or other *necessary relation* between them. The engagement between the two positions is the nearest that the national educational debate had so

far got to balancing the intellectual roles of critique and reconstruction. History may well judge that the NEPI's greatest success was, for a brief period, to succeed in juggling, in the same discursive space, equity and development, politics and expertise, critique and reconstruction, without allowing them to become either conflated or split.

If phase one was a phase of fission and phase three was to be a phase of severance, as we shall see, phase two was a phase of teeth-gritting accommodation. To this extent, the NEPI was an exemplary antitechnicist policy endeavour, one both reflecting and deflecting the time of fledgling emergent interest group activity within which it was embedded.

Phase Three: 1992 to 27 April 1994

The third phase places these emergent features of post-liberalization civil society – the fragmentation of unified front constituencies and the emergence and consolidation of specific institutions taking either 'critical' or 'reconstruction' positions – into clearer focus.

By 1992, 'reconstruction' had become serious business in South Africa, spearheaded not least by the two major founding activists of the NECC, Eric Molobi (Kagiso Trust) and Vusi Khanyile (Thebe Investments). Especially Molobi, by 1993, was co-ordinating and directing European Community (now Union) funding to 'reconstruction and development' projects only, and many donor-funded projects were either adapting from an 'equity only' position or going to the wall.

What Molobi and Khanyile as the NECC's pre-eminent activists had learnt was the self-defeating effect of collapsing strategic and analytic activities, equality and development considerations. They came thus to pursue development *for* equity of a certain sort, and, in so doing, they came to emphasize the technical task of reconstruction. In so doing too, they came to embody the view, if only implicitly, that only by *splitting* the two could reconstruction be promoted. In the event, neither Molobi nor Khanyile supported the NEPI to the end as both became impatient with the way that the balancing enterprise slowed everything down. They were unimpressed too with the NEPI decision to present policy options rather than a coherent policy model, a decision perhaps more in keeping with the exigencies of the second phase than the needs of the third.

Some academics felt obscurely betrayed when the NEPI consciously closed down at the end of 1992. It had, after all, been a national rallying and organizing initiative and had provided a forum for many local and individual voices that might not otherwise have found a national resonance. But any brake on the forward surge of progressive educators by the NEPI's demise was more apparent than real. In truth, the field was in more ferment than ever. The discussion below can give only a small flavour of it, and here only in terms of certain broad tendencies. I would certainly not want to claim that all educators now came to define themselves as either 'critics' or

'reconstructors', but I would suggest that all of them came to define themselves, if only implicitly, with respect to the two tendential roles of academic work, and thereby came to position themselves in a specific relation to both state and civil society.

Numbers of erstwhile NEPI academics returned quite happily to their 'critical' colleagues in academia who had been morally marginalized by the first wave of policy work in phase two. From these quarters has emerged a new wave of critique, critical sometimes of prevailing concepts of 'development' (Chisholm, 1992) and sometimes of the idea of policy itself; the paper by Appel (1993) is a scholarly version of a more widespread 'critical' received wisdom.[7] A related feature of this 'critical' regrouping is the beginning of professionalization of critical academia. The Southern African Comparative and History Education Society was founded in 1992 and the annual Kenton Conference, long holding out as a 'family' rather than an organization, succumbed in 1993 to become Kenton Educational Association; so too the South African Association of Academic Development, and others. It is certainly too early to say how this professionalization will turn out, but it may be surmised that educators taking this route will seek common cause (because of common material interest) with similar professional associations who, for reasons of political affiliation, they would previously have avoided like the plague: the conservative Pedagogical Society has, for example, approached the Kenton Educational Association for a possible merger. Both the sociological and psychological national communities, previously split into pro- and anti-apartheid organizations, have already remerged. This is what the 'post-ideological' period, in the sense of Offe (1990), will mean in practice.

Two other developments also deserve mention here. The first is the regrouping among the education projects that were previously 'equity' driven. These have now begun to form themselves into national protoprofessional networks. While many of these may be seen and may indeed see themselves as 'reconstructors', their position is undergirded by a resolute polarization between state provision and civil society provision. Indeed, many projects see themselves as the champions of 'the people' ('development is about people') against an uncaring state. The second development is the proliferation of donor-driven 'programme evaluations', formal assessments of project work in education, commissioned from either academia or from market-based educational consultancies, giving rise to centres of instant educational expertise that sprouted rapidly in this period (Taylor, 1995).

A second group of erstwhile NEPI academics, together with others perhaps disappointed to have missed out on NEPI, bitten by the bug of policy and keen to pursue it further, have looked for and found spaces to pursue these interests in the proliferation of education policy agencies, commissions and think-tanks. Others, keen to have a more direct impact on policy, allied themselves to working groups of forums such as the National Education Training Forum and the National Training Board. This work has not emerged

as abashedly technical as that in related sectors such as housing, trade policy and health, although that will undoubtedly still come, especially as quantitative indicators of schooling quality become the policy fashion of the moment. Nevertheless, this work is demonstrably 'development oriented', engaged in macrosystemic concerns, and is nationally reconstructive in focus. To that extent, it has reached out to power, so to speak, and has cut itself quite adrift from the localist, particularist, needs-oriented discursive currents that were far more centrally evident in the mainstream of policy work in phase two. To that extent too, this work has forged multiple links with international policy and planning operations such as the World Bank and other global educational consultants who visit now with increasing frequency. Willy-nilly, this branch of policy work is becoming part of the global mainstream concern with 'development' and 'reconstruction', terms popularized, operationalized and quantified by successive World Bank reports (see World Bank, 1991).

The EPUs survived the transition to the third phase with mixed fortunes, continuing to shuttle rather unsatisfactorily between political and civil society, accepting commissions from both but continuing to worry about their appropriate role.

At the point of transition in April 1994, the groups of education academics, briefly and disorganizedly cobbled together under the NEPI mantle and forced to accommodate each other, had drifted apart, had differentially organized themselves and their relative reference groups and had affirmed the split between the two roles, or comportments, of intellectual work once again (Hunter, 1993–4).

There are those who will claim that, in their persons, they have resolved the tension between critique and reconstruction, and that they are now integrated 'critical reconstructors'. The point being argued in this chapter is not that these individuals are not doing both critique and reconstruction work, but that in their critiques and reconstruction, respectively, the tension between the two modes is not held in dynamic balance, except perhaps where the policy work is of a very general nature or in exceptional cases. The more that policy work drives towards planning and implementation the less can it entertain doubts about its constitutive grounds. Or, in Weberian terms, ends have to be accepted for means to be technically elaborated (Weber, 1949). And yet, just as planning must be practical and strategic, so critique is only coherent when it undertakes a systematic interrogation of those constitutive grounds. This argument is not about conceptual incompatibility so much as it is one about the social conditions that enable or constrain specific forms of intellectual work. When the agencies of collective association define 'good practice' as a dazzling display and deployment of 'high critique', for example as the annual Kenton Conference did (for a critique of such critiques, see Christian, 1989), and when the outside commissioning development bodies and donors will pay only for 'hard-nosed' reconstructive policy, then a balancing act such as that accomplished in phase two, however desirable it

may or may not be, simply cannot be sustained. Critics and reconstructors can then only comport themselves in separate and separated fields of endeavour, meeting occasionally (and uncomfortably) on one or the other's turf, but never in some discursive space where the game of either critique or reconstruction has not been predecided.

Reprise: 'Scoundrel Time' Again?

This chapter has tried to capture the flavour of the social movement of a very particular subset of intellectuals, the progressive educational academics in South Africa, over a relatively short period of time, in terms of a set of framing concepts which effectively set the terms of operation for the field at the time.

In the first phase, there was a *collapse* of the distinction between cognitive–analytical activities and strategic activities, between long-term intellectual work and short-term strategic work. The result was that both kinds of activity were hamstrung and that neither was particularly productively pursued in this period, with some individual exceptions of course.

In the second phase, social justice concerns were separated out from development concerns, with the ensuing debate that was cast most often in terms of 'equity' and 'development', by and large keeping the issues in some kind of dynamic tension or *suspension*.

In the third phase, with the momentous political events beginning to shape the reforming state–civil society relationship, the tension between 'critique' and 'reconstruction' to some extent *snaps*, and agents of the two domains of activity busy themselves consolidating their organizational life and their relative bases of social power. In so doing, South Africa comes into line with other democratic polities, on the intellectual as well as on the political plane.

The intention has not been to depict a simple movement from social homogeneity to heterogeneity, which would be a seductive but fatal trap. Nor is it to represent, cynically, political liberation as a triumph for unrestrained self-interest jostling in the market-place. The concern has been to show that intellectual work and argument is not only historically variable, but that neither the debating terms nor the values attached to them are easy to predict as the continuum of intellectual roles is reconfigured within changing historical circumstances, some of which are entirely local and others are quite global. Certainly, nothing can be read directly off the global trend against certainty in the social sciences called post-modernism. For some, following in the critical theory footsteps of Adorno, our world is fatally fallen, and to pretend to be able to give a positive reconstructive account of the conditions for equality and social justice is but another round of blind idealism that will trigger mass violence once the masses realize that they are being served more 'false promises' (Aronowitz, 1973) and they look for a scapegoat upon which to visit their fury: 'To try to abstractly portray the conditions of redemption, to give form to the hope of reconciliation as if it

existed now, only promotes accommodation to a fallen world' (Cornell, 1992, p. 181). For the unreconstructed critics, therefore, from Adorno and Foucault to Holiday, to pursue positive knowledge of any kind in the world that we find ourselves in is to become sucked into the power machine. Here is Breytenbach (1994, p. 5), articulating this definitive critical position in his commentary on the April election and its aftermath: 'How can those of us who fought against the power corruption of the previous regime now shirk the responsibility and the sheer joy of opposing without let-up our dear comrades snared in the putrefaction of power under the new rule?' The same sentiment is heard every day in the education project networks. This is war talk, the battle lines are drawn, the perennial critical task of the intellectual reinvented for a new free South Africa. The honeymoon transition is over, says this view, the state is again the state and civil society must again gird its loins to oppose it.

Others draw different conclusions from the loss of certainty. If transcendental truth is gone, then all knowledge, including policy knowledge, becomes worldly and pragmatic, and it falls to intellectuals to find the best possible set through research, discussion and political debate (Taylor, 1992). This is classic Weberianism reinvented for a post-apartheid South Africa. The reconstructors thus become public intellectuals at the same moment that their critical colleagues retire to the semiprivate spheres of academic conversation. By and large, the split is not mourned by the reconstructors and they are relieved to have the carping critics out of their hair. There is serious work to be done, they seem to be saying, people's well-being depends upon it and the doubters must keep out of the way. We have had enough of the 'schooling of power'; it is time to reassert the 'power of schooling'. The reconstructors in this phase go from analysis, to policy, to power.

No one can win this argument. We are now in what Zizek (1991, p. 188) calls a new 'scoundrel time', when the social basis for a mediatory position able to balance the two has all but disappeared. To say this is by no means to end by siding with the pessimists. Quite the contrary. Anyway, one intellectual task will always be to look for dialectical play, for redemptive openings precisely at the point of apparent stalemate (Wexler, 1994). Critics, after all, speaking in the name of an unattained utopia, help to keep 'open the "beyond" of currently unimaginable transformative possibilities precisely in the name of Justice' (Cornell, 1992, p. 182). Critics may feel that this is their most appropriate contribution to reconstruction, although it is one that is perennially appreciated neither by reconstructors, donors or erstwhile comrades in government. This is just one more demonstration that the sentiments of actors are at best a partial guide to the actual state of play in a given social field.

Chapter 8 continues the discussion of the relationship between education and politics. But where this chapter has been concerned to examine how the line between the two gets historically drawn and how roles of intellectual engagement become variably available, Chapter 8 explores the political

possibilities of educational research, the degree to which research can itself become democratic. As I shall show, the limit occurs at the boundary discussed in Chapters 4 and 5 between common sense and good sense.

Notes

1 'We have no distinctive capacity in this regard – it is bogus to pretend that we do' (Appel, 1993, p. 232).
2 'Our colleagues have given up science for social programmes … these academics have … changed their tune because they are playing a different game' (Appel, 1993, p. 236).
3 '… the priest, the Church, the apparatchik of every country substitutes his own vision of the world (a vision deformed by his own *libido dominandi*) for that of the group of which he is supposedly the expression. The "people" is used these days just as in other times God was used – to settle accounts between clerics' (Bourdieu, 1992, p. 214).
4 'Knowledge has no light but that shed on the world by redemption: all else is reconstruction, mere technique' (Adorno, 1978, p. 247).

> 'I absolutely will not play the part of one who prescribes solutions. I hold that the role of the intellectual today is not that of establishing laws or proposing solutions or prophesying, since by doing that one can only contribute to the functioning of a determinate situation of power that to my mind must be criticised'
>
> (Foucault, 1991, p. 157)

5 Related distinctions are potentates and travellers (Said, 1991), fools and knaves (Zizek, 1997) and, with a slightly different emphasis, vagabonds and tourists (Bauman, 1997) and natives and settlers (Mamdani, 1998). In each case, the second term denotes the new cosmopolitans of global society.
6 See Gilmour and Soudien (1994) for an argument for the difference between 'equality' and 'equity'. Again, such an argument could not easily be taken on at this time.
7 Holiday (1993, p. 178) concludes a thoughtful paper by writing that such (critical) writings 'are not calls to action but curbs on activism, geared to still enthusiasm and not to stimulate it'.

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8 Beyond Unkept Promises

Introduction: On Parachutists and Truffle Hunters

Since the inception of social science, there has been a debate between those favouring structure and those favouring agency; system and actor; the collective and the individual; the particular and the universal; the micro and the macro; the large and the small. It is simultaneously a debate about the proper object of social investigation, and the most appropriate method for studying it. The sociological study of education is no exception.

It is not simply a tug of war between two opposed and mutually exclusive positions. Each side must make an explicit or implicit accommodation of the other's viewpoint, raising the problem of linkage and the problem of level or scope (Archer, 1987). Positions can be distinguished as to whether they are monistic and unitarian or whether they are dualistic (Archer, 1982, 1987; Wacquant, 1992). Many contemporary dualists assert the distinctiveness of the two objects and levels of analysis, but then go on to concentrate largely on either the micro (for example ethnography) or the macro (for example large-scale survey research), ignoring the other and therefore deferring the crucial questions of scope and linkage.

Traditional monists or unitarians assert the ontological primacy of either the micro (methodological individualists, such as the rational choice theorists) or the macro (methodological holists, such as some forms of structuralism and systems theory). Here, the question of linkage does not arise because in the case of the former the macro is collapsed into the micro and in the case of the latter the micro is dissolved into the macro. The problems of scope and linkage are thereby conjured away. This holds too for the situational individualism (or methodological situationalism) of Knorr-Cetina (1981) which, by considering macro structures as endogenous to micro situations, does not permit the assessment of possibly differential weight that different kinds of structure and different kinds of agent might have in a particular case (Archer, 1987, p. 97).

These problems are directly addressed in a number of recent contributions. All of them might be said to be pursuing a kind of *methodological relationalism* in which the relations between various parts of the social field are considered to be more important than either structure or agency taken alone. Notable

among these are the 'duality of structure' structuration theory of Giddens (1979, 1983), the habitus–field structuralist constructivism (or constructivist structuralism) of Bourdieu (1992) and the 'analytically dualist' morphogenetic approach of Archer (1982). All three of them accept the 'double reality' of the social world, but while Giddens seems unwilling to address the methodological implications of his ontological position (Muller, 1987a) Bourdieu and Archer in different ways make provision for different methodological moments of analysis within a broader investigation.

These disputes are not likely to be easily settled, and a broad methodological pluralism, albeit constantly contested, will remain the order of the day. These disputes are however not only disputes about theory and method. Some writers have divined the emergence of a set of related changes in late modern society itself, which are beginning to destabilize the relationship of the universal to the particular arrived at in modernity. In late modernity, say these writers, we are witnessing the emergence of new forms of globalism and universalism – especially in the global economy, information networks and the media – and at the same time new forms of particularism, localism and active assertions of cultural and social difference – seen especially in the burgeoning youth subcultures, in the new social movements and in the assertions of ethnic particularity in the West, East and Africa alike (for example see Giddens, 1990; Seligman, 1990; Robertson, 1991). Bauman (1998) deploys the term 'glocalization' to describe this complex phenomenon (see also the Introduction and Chapter 2).

No longer afforded easy recourse to linear and evolutionary models of social development, social scientific theory and methodology have struggled to come to terms with this confusing emergent configuration which, says Robertson (1991, p. 73), is 'a massive, twofold process involving the interpenetration of the universalisation of particularism and the particularisation of universalism…' On the one hand, the sociological poles have been asserted again with renewed vigour, and we are seeing simultaneously the return of 'grand theorizing' (for example see Alexander, 1988) and innovations in historical macrosociology, and, on the other, the triumph of the 'micro-sociological revolution' (Collins, 1985), without any successful or sustained attempts to unite the two traditions. Whether we have moved beyond Mills's two *bêtes noires* 'grand theory' and 'abstracted empiricism' is indeed a moot question. But on the other hand, in the emergent late modern global condition of openness, confusion, rupture and contingency, a number of writers of widely differing persuasions are detecting new modes of personal and collective action, new forms of reflexive self-monitoring and self-interpretation (Giddens, 1991), new modes of 'historicity' and 'auto-creativity' in the new social movements (Touraine, 1977; Hegedus, 1990) and an aestheticization and culturalization – that is, a greater choice governedness – of politics and everyday life (Featherstone, 1991).

Writers following this line of analysis have, in other words, displaced the

question of structure and agency from a methodological to a sociohistorical issue. They mean, in plain terms, that *the scope of agency vastly increases in late modernity* and that, by implication, methodology should follow suit. As Lash (1993, p. 19) says, with only a trace of irony, 'Given these transformed social conditions, even the hardened structuralist is forced to be an action theorist'.

Whether or not these changing social configurations can be demonstrated to be so is beside the point. After all, as Bourdieu (1992, p. 179) wryly points out, the 'return of the subject' has been heralded with monotonous regularity since the time of Marx, Weber and Durkheim. Whether the present 'resurrection' differs qualitatively is hard to say. Nevertheless, it is important to note that, commensurate with this contemporary trend, a new aggressive methodological direction, especially in education, is most distinctly discernible; enter what Laermans (1993, p. 153) calls the 'new existentialists', a new breed of Le Roy Ladurie's 'truffle hunters', separated from his macromethodological 'parachutists' not so much now by epistemology and methodology as by politics, espousing the value of grass roots participation above all else. It is a style that is avowedly and unrepentantly partisan, proadvocacy, constructivist, antipositivist and, above all, radically democratic and empowering in process and goal (for example see Lather, 1991, pp. 52–6 for a programmatic statement of this position). It is a style of research that sets itself sharply *against* other forms of research, most scathingly against a variety of empirical methodologies that are usually rejected as 'positivist' but also at times against earlier emancipatory methodologies such as action research, dismissed by Lather (1991, p. 56) as operating from 'an ahistorical, apolitical value system'. What Lather has in mind is far more than mere consultation, participation and involvement, but a research process and a resulting theory that is 'an expression and elaboration of progressive popular feelings rather than abstract frameworks imposed by intellectuals on the messy complexity of lived experience' (Lather, op. cit., p. 62).

There are many social scientists that would view this trend with some alarm, and there are probably some who would dismiss it out of hand. After all, as Bernstein (1991) points out, there is in such radical gestures of opposition and negation, in such heady rejections of the methodological *status quo*, no necessary change in the terms and parameters of method but the possibility of a curious preservation if not affirmation of the *status quo*, only now reversed or stood on its head. In this way, such gestures of radical negation can easily end up 'complicit with, and parasitic upon what they are presumably rejecting' (Bernstein, op. cit., p. 308). That is, however, by no means to say that we can simply ignore them. If there is any basis at all for accepting Lash's diagnosis that we are heading for a world where the scope of agency is indeed increased, then this form of research is also likely to increase in scope, quantity and insistence. I suspect it is a form that we will have to take very seriously indeed.

The particular form of 'new truffle hunting' that I will explore in this chapter is that of *participatory policy research* (PPR). I will hinge my analysis by

reflecting upon a concrete context of research, the National Education Policy Investigation (NEPI; introduced in Chapter 7), and, more particularly, upon a specific attempt to pursue participatory policy research in one of the NEPI research groups (The National Education Policy Investigation, 1992, 1993). By interrogating this experience and a written reflection on it, I will address the following questions.

- What kind of 'usable knowledge' (Lindblom and Cohen, 1979) can be got from ordinary people by 'just asking them' (Harré, 1979) when the object of the investigation is to devise policy-linked knowledge?
- Who gets 'empowered' in PPR, if anybody, and how?
- What are some of the possibilities and limits of PPR?

The National Education Policy Investigation

As I have said before, the liberalizing reforms of 2 February 1990 changed the political ground in South Africa decisively. In the first place, the longed for deliverance from apartheid and other forms of oppression zoomed in from the distant future to within palpable reach. This meant that political contenders became rapidly obliged to spell out the details of their desired future for this or that sector of government or administration. In similar vein, groups such as the National Education Co-ordinating Committee (NECC) – a national umbrella structure bringing together teacher, student and parent groups mainly from educationally disadvantaged Black communities for the purpose of orchestrating opposition to apartheid education – found itself being consulted from all directions on its position with regard to future education policy (see the previous chapter). The NECC had, in the last part of the 1980s, sponsored the establishment of a number of Education Policy Units at sympathetic liberal universities, but these units had by no means generated a comprehensive view of the education system nor had they systematically explored concrete policy alternatives. This had now become an urgent necessity.

In December 1990, the NECC commissioned a national investigation, to be known as the National Education Policy Investigation (NEPI), charged with providing comprehensive and systematic policy options for a future education dispensation from the value perspective of the 'broad democratic movement' and within the programmatic framework of 'People's Education' (Muller, 1987b). In December 1992, the NEPI published twelve sectoral report booklets and a Framework Report.[1] Over 300 researchers took part countrywide (The National Education Policy Investigation, 1993). This was, without question, one of the largest policy investigations in size, scope and scale to have taken place in South Africa outside the aegis of the state or the parastatal organizations.

Because of its provenance in the NECC and the democratic movement, it was expected that NEPI would be accountable, participatory, democratic

and egalitarian. The NEPI was to analyse policy options *for and with 'the people'*. This meant *inter alia* the following: that community representatives would sit on all the guiding committees; that NEPI should make extraordinary efforts to involve and 'empower' disadvantaged social sectors (Blacks, women and rural persons being considered the most important); that practitioners and, in some cases, interested members of the community should participate in the research groups; that NECC constituencies should express a popular opinion about the viability of policy options before publication; that NEPI should popularize and disseminate its findings as widely as possible via 'consultative forums'.

The ethos and values of 'People's Education' runs strongly through all of these expectations and, in particular, through what may be called the republican (as opposed to liberal) view of equality and participatory (rather than representative) view of democracy (Hindess, 1990). In this tradition, equality means above all the right, the ability and the duty to participate in the political life of the community; the good of the individual as well as of the community depends upon it. Given the definitively exclusionary nature of apartheid education, it is small wonder that 'People's Education' as a normative ideal set itself against apartheid education by insisting on maximizing participation not only in the educational process but also in the policy-making process and, indeed, in some formulations, in the determination of the curriculum and of knowledge itself (Mashamba, 1990).

The NEPI research groups responded unevenly to these injunctions, particularly with regard to participatory involvement. It was said at the time that the pressing time limits precluded comprehensive participatory involvement; no one denies that proper participatory methods are time consuming. On the other hand, there were some serious attempts at participatory involvement. Before I go on to examine one of these attempts further, it may be worthwhile examining some of the issues at stake in carrying out empowering participatory research. The question hovering in the background is 'was it feasible, or even desirable, for NEPI to have entertained a more thorough-going participatoriness?'

Some Limits to Full Participation

There is an obvious sense in which policy research without some form of popular engagement is self-defeating; for if research results, and policies based upon them, run directly counter to popular common sense, then the likelihood is great that grass roots resistance will defeat the aims of the policy. The clash between birth control policies and fertility mores in many Third World countries, such as the Middle East, is a case in point. Similarly, the progressive multilingual language of instruction policy of the new South African government in the late 1990s has made little impact on the beliefs of most Black parents who want their children schooled in English (Taylor and Vinjevold, 1999). As Grossberg (1993, p. 13) says, we can never afford to

forget the 'fundamental lesson: that people cannot be successfully changed or moved politically if one begins by telling them that their deepest beliefs and investments are mistaken'. On the other hand, that this resistance stands a chance of disadvantaging the resisters rather than advantaging them is an ironic twist unfortunately all too familiar in the literature at least since Willis (1977) and his self-confirming 'lads'. Nevertheless, the imperative to articulate with 'the people' has become distilled as the central methodological issue for certain researchers with a progressive bent and has become, for some, enough to forsake any attempt to carry out effective policy research without extensive use of participatory methods (Shaeffer, 1992).

The problem is compounded in the field of education by the fact that there are great numbers of ordinary persons around who have some first-hand experience and knowledge of the system. After all, there is no literate person who has not been a direct witness to the operations of the system. It seems but a small step to go on to say therefore that those who do participate, and have participated, in the system have a right to participate in the generation of knowledge about its change.

The strong form of this claim from the 'new truffle hunters' is, as we have seen, for 'full reciprocity in research' (Lather, 1991, p. 60). This claim, as we have also seen, is exemplified in the ethos of People's Education as it enjoins people to 'think through and actively participate in creating a new education system' (Kruss, 1988, p. 18), to 'participate in generating knowledge' and to 'participate in the very definition of what reality is' (McKay and Romm, 1992, p. 101). It is also a guiding ideal of Curriculum 2005, discussed in Chapter 6.

The 'full reciprocity' programme consists principally in rejecting the claims of a critical theory or indeed of any metanarrative, scientific or otherwise, to provide a 'better' account of social life than that provided by common-sense accounts. Indeed, in another but related idiom, Ellsworth (1979) refers to such emancipatory theories as 'repressive myths' which, against their empowering intents, have themselves become 'vehicles of repression' (Ellsworth, op. cit., p. 298) based on chauvinistic enlightenment rationality and its progenitors' (sometimes unconscious) desire to dominate the symbolic universe. The 'expert' in this view has access to no method to gain a 'higher' view of social life, and her expertise has no superior epistemic warrant (Lynch, 1998). Her role in social investigation becomes one of 'facilitating' the participative and democratic generation of social knowledge.

The 'new truffle hunters', in their efforts to evade the impositions of an alien and oppressive theory, in their striving for a radically democratic research and knowledge generation process, in their desire to go 'well beyond' more traditional forms of action research (Lather, 1991, p. 56), run the risk of parting company with critical theory, traditionally conceived, which lies at the heart of democratic emancipatory forms of research to date. Central to all forms of critical theory, including that of Marx, Durkheim and Weber, is what Bourdieu (1992, p. 8, n.14) calls the 'principle of non-consciousness'

or non-transparency. This refers to the *doxic nature of all first-hand knowledge* and to the need for an analytical narrative of the social world to account for the constitution and limits of doxa (the theoretical basis for this argument is presented in Chapter 9).

It does not much matter whether this doxa is said to be located in false consciousness, in ideology, in habitus, in common sense or even accounted for in neo-Freudian terms of repression and self-deception. The point is that doxa *is not transparent to itself* (or, as the Introduction puts it, it is not self-referential or reflexive). Foucault has named the problem with precision: 'People know what they do; they frequently know why they do what they do; but what they don't know is what they do does' (cited by Dowling 1992, p. 1). To dispense in the interests of equality and democracy with the distinction between analytical narrative and doxa, between analyst and lay person, is, from the view point of critical theory, to risk recycling common sense as good sense and to forego the possibility of generating emancipatory or empowering insight (Deacon and Parker, 1991). In its democratic intents, therefore, it risks leaving the participatory approach without critical resources for empowerment.

These cognitive resources have themselves, however, come under increasingly critical scrutiny. Traditional action and participatory research, as Shaeffer (1992, p. 10) says, is 'a process fraught with difficulties, disappointments, and unkept promises'. The source of that disappointment can be traced back in part to simplistic assumptions about the nature of doxa and what keeps it in place. The most established versions assume that it is grounded in epistemological error and that the critical theorist would act as some kind of benign educator, conceiving this process of 'social therapy' on the model, as Bauman (1983, p. 115) has rather unkindly put it, of a '"learn in" or "teach in" session'.

There are three points to add here. First, to use Bourdieu's language, dispositions cannot realistically be expected to change if the positions that they depend upon have no hope of changing. Dispositions, in other words, have material implications and consequences which the educative mode generally cannot deal with, nor realistically empower people in the short term to deal with. Second, dispositions and habitus are, after all, more or less comfortable and congenial bodily modes of accommodation to one's position in the world. It would be strange if people did not feel some kind of attachment to these modes of being and therefore some reluctance to take on the new orientation. As Eder (1999, p. 209) provocatively puts it: 'Why is it so hard to change the world? The answer would be: because societies don't like to learn. They would rather stick to what they know and to the rules that stabilise what they know'. And third, it may well be, as the neo-Freudians suggest, that the *active resistance* that critical theory has so often encountered in the past (for example, Willis, 1977) rests upon evasion of uncomfortable realities. If one accepts all or only some of these views, then a direct epistemological assault of the Habermasian variety, a critical theory

that aims to empower by creating enlightenment (Fay, 1977, p. 104), is open to question and risks making promises that it cannot keep. The 'new truffle hunters' do not need to share any of these reservations to share the scepticism about the emancipatory and empowering possibilities of critical theory. But, as we have seen, in rejecting the pretensions of critical theory on political grounds they reject for that reason also the doxa–analysis distinction, and in rejecting it risk another kind of simplification. Above all, they dispense with the only relational tool they might have had which could relate agency and structure in their research practice; they thus lose the *relationality* discussed above and regress theoretically as well as methodologically in the process.

If the 'new truffle hunters' have become cynical about the emancipatory claims of traditional theory, some of them have in similar vein come to be sceptical about the claims of participatory research to deal with the contributions of all participants in the research process on the basis of equality. Not everyone has the same contribution to make, not everyone has the same set of skills. Both of these are a product of each person's past history of opportunity and experience, and both of them are deeply marked by relations of power. The reality of power differentials cannot be wished away by egalitarianism, nor is the latter well served by assuming that all participants are equal negotiators in the research. Yet certain forms of participatory or action research assume the equality of contribution that an older critical theory saw as its goal. The result is paradoxically likely to benefit the ones already relatively privileged in the situation by a process of what Bourdieu (1992, p. 143) calls 'symbolic de-negation' (Freud's *Verneining*), i.e. 'the fictitious bracketing of the relation of power [which] exploits this relation of power in order to produce the recognition of the relation of power that abdication elicits'. When this 'fictitious bracketing' and 'denial' leads to the reproduction of privilege and disprivilege, the result of this can only be disillusionment and anger on the part of those who had hoped for, and had been promised, more.

This section has examined some of the limits to the programme of 'full participation', namely the impossibility of doxic self-transparency and therefore the indispensability of analytical (or reflexive) discourse and the ubiquity of unequal social relations in the research process. This sets the stage for examining the vicissitudes of a concrete attempt to empower less experienced participants in a participatory process in one of the research groups of the NEPI project.

Once Bitten…

The Support Services Research Group was a group with three main subgroups: Guidance and Counselling, Special Education and School Health. The Guidance and Counselling subgroup was in turn composed of academics, guidance teachers and students and people from the guidance non-governmental sector. A decision was taken early on in the life of the

group to pursue collective decision making and a collective research process 'where responsibility for the process and product of the research is a collaborative one' (Lazarus, 1990, p. 1).

This group took up in good faith the NEPI injunctions to try to train less experienced (mostly Black) researchers, and such people formed part of the team. They took up too the NEPI values of democracy and equality.

There was a pervasive expectation that collective participation would, in itself, be empowering, and that the more experienced researchers would (somehow) create the conditions conducive for this to happen. What precise role they would play in this was never clearly developed, probably due in part to the desire not to highlight formal differences of skill and capacity in a context where democracy and equality of participation were the primary virtues and possibly, too, because the group found itself working to fairly tight deadlines.

The allocation of tasks was the result of collective decision making, and it may not be too surprising that the more experienced (White) researchers were allocated the relatively more complex researching and writing tasks whereas the less experienced (Black) researchers volunteered for the less complex tasks that utilized the skills they felt more confident in performing, such as organizing meetings and community liaison (Ganie and Prinsloo, 1993). The result was that the more experienced researchers gained invaluable practice in research and writing, while the less experienced researchers did not. It is not hard to imagine who was empowered in the process.

On the face of things, the cynic may well feel that this was bound to happen. *Why* it happened may easily be surmised from the pressure of deadlines and from the findings of research training efforts that have discovered that to impart methodological skills in a less than superficial way is an onerous and time-consuming business (Motala, 1991). *How* it happened or, rather, how it was allowed to happen, embedded as it was in a context where empowerment of the less experienced was an explicit aim, is the more interesting question.

The first thing to note is that, at the time, the participants were by and large unaware of what was happening, i.e. they inhabited their own self-description of the situation which was in terms of 'equality of participation', 'democracy' and 'empowerment' of the less experienced Black researchers.

After completion of the project, a number of the participants got together with the aim of reflecting on their experiences of participatory research. A first draft produced what they later came to consider a bland and superficial paper from within their received self-understanding, leaving them frustrated and dissatisfied. Upon further slow and painful reflection, it began to dawn on them what had happened, and they began to reconstruct the dynamics within the research group with growing anger.

The paper that resulted (Ganie and Prinsloo, 1993) does not simply blame the more experienced White researchers. On the one hand, they were certainly partly culpable for not challenging the less experienced researchers

more persistently to take greater responsibility for developing their skills. On the other hand, the less experienced researchers, with 'lack of confidence' as an alibi, consciously ('democratically') chose the 'less complex tasks', thereby actively colluding in their lot. In other words, neither the more nor the less experienced researchers took responsibility for taking the decisions that could produce the empowerment that was to be both process and aim of the research. The real culprit, the writers came to see, was the collectively produced and maintained 'situation of false equality' in the group. It was this false equality which, while remaining unaddressed, acted as an effective block to the group's dealing with the heart of the problem.

It is important to recognize what had happened here. The participants came to see that, by enacting the democratic and equalitarian ethos of a certain form of participatory research, they had *actively if unwittingly duped themselves*, producing in the process the opposite result to that intended. But this is not the end of the tale. In reconstructing the process, not only in discussion and in reflection but also in writing – the very task they had declined to assume in the NEPI – in reconstructing the construction of their disappointment and the failure of the empowerment process, the participants have come, through recognizing their own resistance and their own failure to take responsibility, to assume the responsibility they declined in the NEPI. In taking responsibility for their own resistance in a systematic way, the participants have written themselves through their own disempowerment, and in so doing they did what they could not do in the NEPI – they began to empower themselves.

It would be wrong to overstate the case. On the one hand, the participants have been empowered by means of emotional purgation as well as by useful practice in the very skills that they felt excluded from. But for them to become skilled researchers and writers will yet require arduous and disciplined practice. They have only taken the first enabling step, they have not magically been catapulted into full mastery. But the step they have taken is arguably the most important one to take for anyone wishing to adopt an analytical stance towards the social world. For they have come to see at first hand, in terms of their own case, what Bourdieu (1992, p. 136) laconically calls the 'complicity between position and dispositions', the way in which, by making use of the only rules that our habitus makes available to hand, we habitually 'play the game' and thereby collude (from ludus, the game) as a matter of ordinary social existence. This is the insight which certain forms of participatory research, in their 'spontaneist populism' (Bourdieu 1992, p. 82), actively block.

Conclusion: Beyond Sour Grapes

It may be the case that empowerment, like love, is essentially an artefactual state, a by-product of another process altogether. As Elster (1982) says, we do not and cannot say to ourselves, 'now I will fall in love'. At a certain

moment, I *find myself* in love. Perhaps empowerment is such a state, something we have to find ourselves in rather than actively pursue in and of itself. One may even say that empowerment is the dispositional counterpart to the concrete acquisition of valued social capital, such as research skills for example. If that is so, then it is the skills that must be pursued for the state to be realized.

This could be expressed another way. Pursuing the democratic generation of knowledge may not directly engender empowerment. What it may produce, as in the case here, is frustration at its non-production, and it may be this very frustration (or something like it) that may provide the conditions, which the original innocent intention could not do, for the kind of effort of which empowerment is the by-product. As Zizek (1991) says, the paradigmatic by-product state is Freud's transference, and it is arguably this that is arrived at when people, like our participants, work through the truth of their own resistance.

This does not of course imply that we should forsake the aim of empowerment, or forego democratic contexts of knowledge production. But it does mean that we should be far more sanguine about their achievement, and that we should be far more mindful about the complex personal and social dynamics involved when we embark on social missions such as 'empowerment' in unequal societies and social contexts.

This chapter has been a somewhat circuitous attempt to address Lather's (1991) question: how can we have an emancipatory critical theory in a post-foundationalist age? My response has been, first, to acknowledge that critical theory may, in some of its manifestations, function in repressive and counterproductive ways, but that to dispense with a critical theory or an analytical narrative altogether is to dispense with tools for understanding the constitution and limits of our habitual ways of thinking. To forego this kind of moderate realism for a 'hot relativism' (Turner, 1998) of the kind espoused by the 'new truffle hunters' is both an epistemological and political mistake, an argument I address directly in Chapter 9. Second, I have tried to show, by means of a case study, that 'equality' and 'empowerment' as desired social ends, will be fatally stymied if we do not have a way of understanding how our very social arrangements (here, a particular form of participatory research) collude with the *status quo* in ways that are not immediately evident to common sense.

And so to return to my introductory remarks. Our social existence in late modernity may well be placing greater onus on us as decision making and self-monitoring beings than heretofore. But that does not mean that our thoughts and actions thereby become transparent to us. Arguably, the issue of analytical reflectiveness, of a reflexive social science, becomes even more important in such a context. The 'new truffle hunters' are clearly responding to real social trends and tendencies as they perceive them. It would be a great pity if they lost their balance into microactionist perspectivalism and 'hot relativism' altogether. The challenge is how to deal dialectically and

relationally with systemic issues from the vantage point of the self-understandings of actors. It is only then that these self-understandings of actors can mean anything useful for policy.

The final chapter picks up where this one ends by asking what kind of educational research for policy we can responsibly pursue that avoids the traps of 'hot relativism' and a superseded objectivism alike. The burden of argument is to show how to move beyond relativism to a moderate realist research practice that redefines notions of engagement and responsibility for these risky times and beyond.

Notes

1 The following booklets are in the NEPI series:

- The Framework Report and Final Report Summaries
- Adult Basic Education
- Adult Education
- Curriculum
- Early Childhood Educare
- Education Planning, Systems and Structure
- Governance and Administration
- Human Resources Development
- Language
- Library and Information Services
- Post-secondary Education
- Teacher Education

They have all been published jointly by Oxford University Press and the NECC.

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9 Reason, Reality and Public Trust

Introduction: Science, Politics, Relativism

We live at a time when faith in the viability of politics based on science and objective knowledge as an antidote to poverty, race, unemployment and social insecurity has all but disappeared. Such old-fashioned notions as objective knowledge have, it seems, lost their purchase on popular imagination and national striving.

Is this to overstate the case? There are those who say that all we really need is a strong national movement of restoration, an ethical or cultural 'back to basics' that involves a stout defence of the modern project and the state's leading role in it, a quick but devastating attack on post-modern cynicism and irony and a clear rededication of faith and resources to the enterprise of the research of useful knowledge for politics. But perhaps it is too late. Perhaps, as the discussion in Chapters 2 and 3 has suggested, the nature of the institution of science really has changed, that its relation to the worldly spheres of politics and the economy really has been realigned, that the debates around the objectivity, neutrality and relativism of knowledge really have changed the nature of knowledge and the practice of its construction, research.

The greatest pitfall in considering these issues is to imagine that it is all one, or all the other, an apocalyptic style of thought which marks out particular positions in the debate rather than depicts the debate itself. As I hope to show below, this 'all or nothing' style of thought can be found on both sides of the debate – from those who say that the enterprise of science hasn't changed fundamentally at all and that the doubters must be repelled at all costs to those who believe that we have left one paradigm behind for ever and now inhabit some or other post-scientific brave new world.

The position to be defended in this chapter is the following: the institution of science has changed; notions of 'useful knowledge' have left us in little doubt that ideas of absolute certainty, objectivity and neutrality can no longer be supported. For all that, and accepting most of it, it is still possible, and more important than ever, to maintain that there is a real social world relatively independent from our ways of viewing it, about which we can

make assertions of whose veracity we can reliably judge. Just because there are no universal rational values or norms does not spell the end of the enterprise of rational knowledge and research. The naked truth might no longer be attainable but a modestly clothed one surely is, and to be prized all the more highly.

The two subsections which follow attempt to lay out the grounds for this position. First, the question of the changing social role of science will be investigated; second, some contemporary debates around the nature of knowledge, truth and reality will be reviewed. The argument made here is that some of these positions exceed their philosophical warrant, that they conclude far beyond the remit of their propositional base; that they are, in good old-fashioned language, wrong. This will then set the stage for the next section, which examines the emergence of this style of 'overreach' in educational thinking. Finally, this part of the chapter will reflect on the unfortunate and quite unproductive polarization that has resulted, a veritable 'dance of the strawmen', and will explore some routes to its supercession.

Science–Politics

The grand era of technocracy in world politics is over, its founding ideals completely discredited. When Vannevar Bush announced in 1945 in his report 'Science: The Endless Frontier' that the USA would embark on a glorious path of scientific eradication of poverty and all other social ills, he could not know that he was putting a capstone on a tradition that, from Francis Bacon to Max Weber, conceived of politics as the 'world of values' which created problems for the 'world of science' to solve (Sclove, 1998). Politics was the realm of interests; science was the realm of disinterested knowledge that produced knowledge for policy dilemmas based on those interests. The two realms were, and had to be kept, quite separate. The scientists would produce knowledge, but not decisions. They would speak truth to power, but just as the political problems originated with politics so the decisions based on the truth would also reside there. The researcher-as-technocrat was thus conceived as a neutral truth relay between political problem setting and political decision making. This tradition has come to an end.

It broke down at both ends of the relay. Most spectacularly, it broke down when important, public and visible scientifically based decisions turned out to be wrong, as in the disasters with nuclear reactors, with pharmaceuticals and in a rapidly proliferating set of ecological areas where scientifically based interventions produced unanticipated outcomes – for example the destruction of the ozone layer and global warming. Or is it, in fact, 'really' getting warmer? Here lies the second rub; scientists don't necessarily agree on these matters. In this and in countless other matters, from cholesterol to exercise, it came as a shattering blow to public confidence in science that science could be plural – that not all scientists necessarily agreed or that Science with a capital S didn't always deliver Truth in the singular and with a capital T.

And why did these scientists disagree? Was it merely that the truth had not yet been finalized, like some kind of engine prototype that was rough around the edges but correct in 'the essentials'? Or was it, as some in the public sphere began to suspect, because scientists too had interests; these different results were quite simply explicable in terms of the different interests, agendas and ideologies that scientists held or served? Was science, in fact, simply 'politics pursued by other means', as Latour (1993, p. 111) has famously claimed?

The reality is rather more mundane, although no more reassuring to an anxious public. There had in fact always been dispute and difference of opinion among scientists, in Aristotle's time as well as Bacon's and Weber's. Two factors served to shield it from the public's gaze, which has been quite uncurious until recently. The first was the inwardness of science, its relative insulation from the outside world. This insulation kept most of the workings of science from public view, showing only its products and then selectively. The second was the relatively small numbers in the scientific community. The massification of higher education in the developed countries had by the 1960s and 1970s extruded an exponentially greater number of competent, knowledgeable scientists and potential researchers than the traditional take-up capacity in the higher education institutions, traditional think-tanks and research and development laboratories could absorb (see the discussion in Chapter 3). New forms of research-based bodies sprang up, in the private sector, in NGOs and in civic advocacy forums. These were all increasingly numerous competitors for increasingly finite and, by the early 1990s, globally dwindling resources for research. Consequently, the internal disputes of science could no longer easily be contained, especially when scientists began to align themselves with worldly civic interest groups, which they increasingly did as the instrument of uncertainty reduction par excellence; science itself began to contribute to the very uncertainty that it was supposed to contain. And so, as uncertainty became lodged as a political factor in the consciousness of the public in the developed, and to a lesser extent developing, world, so science, which was now a prime producer of the new 'riskiness', was also and increasingly looked to in order to assuage or arbitrate the burgeoning uncertainty and complexity of everyday life.

The interlinked or close-coupled (Weingart, 1997) nature of the phenomenon should be clear. As society has more and more recourse to research or knowledge-mediated products, so uncertainties proliferate. As uncertainties proliferate, so people turn to science for uncertainty reduction. The increase in uncertainty is partly a product of the increased visibility of disputation, as discussed above. But the proliferation of science-generated errors and, sometimes, disasters must also be explained. The increased use of expertise and knowledge in political and economic decision making drives experts to go beyond the scope of their knowledge, 'beyond the evidence' as it were. The pressure of politics and competitiveness drives scientists to produce judgements on real world problems that go beyond the current

level of consensus in the expert community. They stray, in other words, out of their scientific zone into the sphere of prescription and advocacy. Mistakes are made and disagreement is aired. When that happens, science begins to leak legitimacy. This leads in turn to a greater, not a lesser, desire for expertise. Thus, we can see that even attempts at control of expertise will proliferate its social need and function.

This is only paradoxical if one imagines that close coupling entails an erosion of the functional differentiation between the science system and the politics system, leading to a convergence in kind between science and politics. On the contrary, even as the systems become more closely coupled, so at the same time and by the same logic the systems, or at least the science system, is spurred to greater internal differentiation. Closer coupling thus accompanies, and causes, differentiation; it does not occur instead of differentiation. Yet, it is this latter conclusion that the post-moderns persistently derive from the phenomenon of systemic close coupling. And it is this derivation that leads to particular consequences in the practice of educational research.

The post-modern interpretation, which has become relatively common, has a further social impact: it signals to the public not only that scientists can't be trusted but also that in the execution of their scientific work they have interests that cannot be expunged from the process. It takes the further step which portrays scientists and researchers as merely another interest group, with no special claim to arbitrate the veracity of warrantable assertions. As Couzzens and Woodhouse (1995, p. 533) say, 'From guardians of the common good producing objective knowledge, scientists are now perceived as hired brains of special interests and lobbyists for their own'. Alexander (1995, p. 3) has called this the 'sociological fallacy', namely that because ideas have social sources they can be adequately explained by reference to the social source alone. This form of reductionism entails a kind of dumbing down of expertise. It is a view which scientists and academics, for understandable reasons, have begun vigorously and often aggressively to rebut:

> The displacement of the idea that facts and evidence matter by the idea that everything boils down to subjective interests and perspectives is second only to American political campaigns – the most prominent and pernicious manifestation of anti-intellectualism in our time.
>
> (Laudan, 1990, p. x; quoted also on the Sokal Affair homepage)

The debate to be discussed below, characterized as it is by misunderstandings, misattributions and, not least, misnomers, arises as we shall see directly from this retaliation of 'working scientists' against what they perceive as an intellectual undermining of their professional practice. The debate is thus frequently high flown, but it is always also about professional and political standing.

There is at least one indisputable social benefit that accrues from the sceptical gaze that society now casts on the scientists. In the past, scientists could safely assume that society regarded science and the products of their expertise as inherently worthwhile. This is no longer the case. As disputes arise, and as politicians and the public wonder increasingly who they should believe, the scientific community will increasingly be expected to demonstrate the worth of its endeavours to a bemused public – whether this worth is economic (does it lead to technological advance?) or political (does it help us make better decisions?). This new demand for *social utility* and for *public accountability* is a direct outcome of the repositioned status of the scientific community in a closer-coupled social complex (Couzzens and Woodhouse, 1995). Though scientists will chafe under the new restrictions which accompany these demands for utility and accountability and though it could lead to abuses of power and corruption (as in the global jockeying around a cure for AIDS), close coupling in the end makes visible links that have in various ways always been present, and allows society therefore to build democratic safeguards. What this new public scepticism does not need is artificial amplification by a reductive post-modernism that reduces all expertise to power and interest.

Constructivists and Realists

Almost without anyone quite noticing its approach, social science research in general and educational research in particular finds itself in the middle of a fully fledged methodological war. Who is winning the war cannot easily be gleaned from the writings of the protagonists because both sides claim dominance by the others and underdog status for themselves. For Guba and Lincoln (1994), for example, it is 'positivism' (or perhaps 'post-positivism') that has supplanted what they call 'Aristotelian' approaches to research. It is not easy to tell whether they mean anything more by this than that quantitative methods seem to enjoy precedence over qualitative ones in the high-status publishing forums. For Martin and Sugerman (1993), on the other hand, it is the 'Aristotelian' approaches themselves that have overrun the research terrain, and they call for a turn to 'Galilean' social science instead. What they seem to mean is that the qualitative approaches prized by Guba and Lincoln, in their frequent invocation of 'grounded theory' (which is mostly used as an alibi for no theory at all), are in fact atheoretical and naively empiricist: 'Without truly explanatory theory that can act as a map to assist navigation through such empirical labyrinths, researchers are left without sufficient theoretical guidance, and the research effort inevitably becomes "hit and miss"'(Martin and Sugerman, 1993, p. 21).

This is, at the very least, confusing. The onslaught by the 'Aristotelians' resembles something like a holy war against 'positivism' as the 'dominant discourse of science' (Usher and Edwards, 1994), which somehow 'imprisons difference'. The 'Galileans' respond with charges of a-or antitheoreticism

and a critique of the empiricism that results when the researchers attempt to release the 'imprisoned voices', an empiricism that, paradox upon paradox, seems suspiciously positivist! 'Is a radical qualitative empiricist not perhaps a masked positivist?' asks Henning (1995, p. 31).

It is certainly clear that being a positivist is not a good thing to be. Why is the proper place to start. As we shall see, the protagonists in this contest do not so much disagree about what is wrong with positivism; where they differ, and differ radically, is in understanding what the *implications* are for conducting research.

What *is* positivism and what is wrong with it? Just what, as Taylor (1995, p. 2) asks, is one wanting to deny? The Aristotelian view, against which positivism is cast, makes the assumption that the observing mind does not merely depict the objects in the world it also participates in their constitution. For positivism, the scientific gaze must be separate from the world that it observes in order to create an objective true representation of reality. Truth then is the degree of correspondence between the representation and the reality. The degree of correspondence is measured by evidence, by which certainty about the correspondence is generated. This operation depends in turn upon a certain self-reflexivity, a certain 'self-transparency', enabling the scientist to interrogate the representation methodically.

This view of knowledge and truth depends pre-eminently upon the idea of the *disengaged observer* as well as upon a notion of truth as representation. The most profound critiques of this view therefore all attempt to demonstrate that observers are always also agents and that, as such, are always also *engaged* in the world they seek to depict as objectively as possible: 'that the condition of our forming disengaged representations of reality is that we must be already engaged in coping with our world, dealing with the things in it, at grips with them' (Taylor, op. cit., p. 11).

This critique of positivism is thus perhaps the most important source of the now commonplace notion of humankind as an active, producing, fabricating agent of her or his destiny, an 'implicatedness in the world' which can never be completely suspended even when doing science: 'Even in our theoretical stance to the world, we are agents' (ibid.).

It may seem surprising to enthusiastic antipositivists, but there is very little in this critique that is controversial. Every serious contemporary philosophical current accepts this as a starting point. The issue is: what are its implications for the pursuit of truth, or science or, even more practically, for the conduct of research?

To say that we actively construct our world is not controversial, as I have said, nor is it controversial to say that all assertions are paradigmatic, or theory laden or community or language game specific. It only becomes so when the conclusion is drawn that therefore there can be no objectivity, truth, evidence or warrant simply because, by not being able to step outside worldly implicatedness, all talk of truth is for ever after fatally compromised. In other words, the constructivist thesis is not relativist as it stands and is in fact

embraced by every serious contemporary social theory: the thesis only becomes so when it is applied to social research itself (Hammersley, 1995, p. 16). When that happens, then the possibility of making epistemic distinctions between assertions is lost. Manning (1998), for example, distinguishes between 'procedural' and 'reflexive' constructionists; the latter, applying their thesis about the constitution of society to themselves, become in Manning's sly phrase 'literary critics with empirical ambitions' (Manning, op. cit., p. 166) or in Osborne's even more provocative label 'macho' constructivists (Osborne, 1998, p. 232). For the radical or 'macho' reflexivists, then, reflexivity can't be artificially terminated at the researcher's door but goes 'all the way down' (for example see Ashmore, 1989). Those who don't follow are routinely accused of a 'failure of nerve' (for example Grint and Woolgar, 1995). Henceforth, when I refer to 'constructivists', it is this radical variety that I mean.

It is on this point then that the social theory universe splits into two. Taylor speaks of the 'neo-Nietzschians' on the one hand and the 'defenders of critical reason' on the other. The former group, by one account, includes 'constructionists, constructivists, deconstructionists, pragmatists, post-modernists, epistemological relativists, subjectivists, skeptics, interpretivists, and reflexivists'. What do they all have in common? 'The family resemblance is a determined (or stubborn) antirealism' (Edwards et al., 1995, p. 43). What 'antirealism' means here is simply the claim that there is no reality beyond constructive description, that there is nothing 'outside the text' (nothing that is not a product of representation) and therefore science takes its place as a human activity next to all other activities. Science is in this gesture 'dethroned' as a producer of privileged statements about the world. The knowledge it produces becomes one kind of knowledge among other knowledges that are all worthy in their own way. By denying that there can be better statements about the world, and believing that the world is made not discovered, the constructivists end up denying that there is any such thing as 'the' world. It is in this sense that they are 'antirealist'.

This barefaced denial of the existence of reality regularly enrages realists whose ripostes are often grimly humorous (as in the realist joke, 'show me a relativist at 30,000 feet and I'll show you a hypocrite'). Indeed these ripostes typically fall into two sorts of bottom-line argument against relativism, 'death' arguments and 'furniture' arguments. The joke above is implicitly a 'furniture' argument; so is Samuel Johnson's kicking the table to prove its existence. 'Furniture' arguments point at the materiality of the world and imagine that nothing more needs to be said. They are arguments of 'no argument', of unvarnished reality. Such arguments frequently too include a claim that relativists 'must' also believe in the world's materiality, or be either mad or duplicitous. 'Death' arguments point at the irrefutably real fact of suffering and death and challenge the relativists to deny them, which they are at times quite happy to do: Baudrillard (1995) has provocatively claimed that the Gulf War was a media event and thus didn't actually happen.

'Death' and 'furniture' arguments seem compelling but they miss the point, which is that, formally speaking, scientific arguments are no different from non-scientific arguments. Rorty (1991, p. 53) makes the point: 'My own, strictly amateurish, guess would be that any "inferential principle" (or any other principle, I would add) which is "central to scientific explanation" is going to turn out to be central to practically every other area of culture'. True, and anthropologists have been demonstrating the point now for many years (Worsley, 1997). But that is not the crux of the matter either. Inferences may be formally the same, but, especially insofar as they are intended as guides to action as research for policy surely is, they are not all equally commendable. They differ in terms of their 'superempirical virtues' – consistency, explanatory power, fecundity, comprehensiveness and simplicity. They differ, in other words, in terms of their *coherence* or 'epistemic gain' (Taylor, op. cit., p. 17; see also Haack, 1993; Farrell, 1996).

'Epistemic gain' is just what the constructivists don't want to concede: 'the social constructionist arguments have shown that scientific knowledge has no privileged claims to truth and has thus placed all knowledges, in theory, on a common epistemological footing' (Couzzens and Woodhouse, op. cit., pp. 545–6). But that can never mean that inferences and assertion can't be epistemically distinguished. The activity of research depends upon it. The critique of positivism may have displaced views of absolute truth and thereby of absolute epistemic privilege (views which had, after all, more to do with scientific self-image then anything else), but it does not displace the notion that we can discern epistemic gain:

> … what is special about science is not that it has a unique method for getting at the truth, but that it has done rather well, by and large, at meeting the criteria – experiential anchoring and explanatory integration – by which we appraise the well-foundedness of any empirical beliefs. Science, in my view, is not *privileged* epistemically; it is only rather *distinguished* from an epistemic point of view.
>
> (Haack, 1992, p. 10)

Put like that, it is surely hard to disagree.

Assessing the positions soberly, it is somewhat surprising that the dispute has generated, and continues to generate, so much heat. In large part, it is a dance of straw men, with each side exaggerating and caricaturing the other. For the constructivists, any claim to 'epistemic gain' is obdurate positivism. For the realists, the relativists are malicious and scientifically ignorant troublemakers and are fair game for hoaxes like Sokal's (see Sokal Affair homepage) and other forms of brisk retaliation. The relativists have at times seemed hurt that the realists take their deconstructions so seriously (for example see Fuller, 1995a, b), but, as we shall see later, the implications for social governance are somewhat more serious than the relativists usually concede.

In the end, the difference between realists and constructivists comes down to the following:

> … realists want to distinguish clearly between two different levels of observation: first order observation (ordinary observation) and second order observation (researchers observing people observing). Because everyday observation is constructivist (first order) does not mean that second order observation is therefore the same as first order observation (Fuchs, 1995). To equate them is to take an existential or psychological claim (that knowledge of the world is mediated) as an epistemological claim.
>
> (Schwandt, 1994, p. 131; see also Moore and Muller, 1999)

Because scientific and non-scientific statements are formally equivalent does not mean that they are substantively equivalent. In other words, because statements have the same structure, it does not mean that they are equally valid.

Constructivists and relativists thus collapse and conflate distinctions that realists regard as essential to the very enterprise of science and research. These conflations are regarded as consequent on the critique of positivism for the constructivists but not for the realists, who agree in most essential respects with the critique of positivism. I will end this section with a brief discussion of two implications of the constructivist position for the professional conduct of research.

'Yes, science is indeed politics pursued by other means …' (Latour, op. cit., p. 111)*

As we saw above, constructivists take the dictum of world implicatedness to refer also to researchers. This is sometimes taken to mean that researchers represent a constituency of interests, or that the knowledge produced favours one or other set of interests. Some versions of the 'knowledge–interests' view, such as classical Marxism, retain a belief in the distinction between good and bad assertions (here, between ideology and critique) so that even though knowledge may be interested, the aspect of interest can be isolated and relatively objectively commented on.

Other versions of the 'knowledge–interests' view adopt a strong or radical constructivist view which denies that we can distinguish ideology from non-ideology. In this version, one is ineluctably 'in' one's interest constituency – most often an ethnic or gender one – and one speaks the 'truth' of one's situatedness even though this 'truth' is admittedly partial.

In this tradition, the 'voice' of the members of the group in question is what research should articulate, a 'voice' that the 'voice' of dominant science (male reason) is said to suppress. If given the chance, the dominated 'voice' will 'speak for itself'. The vocation of research is to give it this chance.

Partisanship here is presented as a virtue: because we are always 'world implicated' – that is to say, because we are condemned to the inevitability of politics everywhere – the way to beat a partisan-dominant science is to be partisan and engaged in return. In some versions of this tradition, such as standpoint epistemology, the claim is made that, while the validity of all knowledge is relative to social location, one particular social location has a unique access to the truth (for example see Harding, 1991).

A science and research practice of this sort surrenders any possibility of making knowledge claims that can be arbitrated on intellectual grounds. Here, truly, 'all is politics', a view shared by Nazism, Stalinism and Maoism, rather inconveniently, because standpoint theory and other relativist approaches generally present themselves as progressive and emancipatory; indeed, as a form of 'radical chic' (Pels, 1996). The feminist realist Patai puts the case forcefully:

> Feminism, today, as it conflates politics and education and effaces any distinction between political agendas and the protocols of research, is in danger of suppressing – it already dismisses – any calm, reflective stance that sees some strengths in the effort (however difficult to achieve) to set biases aside and that still regards research as a valuable and satisfying endeavour not in need of quite so much post-modernist angst… By its refusal to recognize the distinct boundaries that do, and, in my view, should demarcate the realms of politics and education, and politics and scholarship, feminism threatens to entirely delegitimise any research effort not hopelessly mired in collective ideological conformity or in individualistic self-reflexive shenanigans.
>
> (Patai, 1994, p. 62)

Patai makes evident here too the particularly self-crippling effects of an 'all is politics' research strategy. In a climate of increasing public apprehension about the equivocal virtues of expertise, about the fallibility of experts and expertise, a methodological strategy that openly announces its partisanship to a sceptical public in need of reassurance is, as Patai puts it, a strategy of 'extraordinary blindness' (ibid.). It is a strategy that will also probably jeopardize not only the constructivist cause but also that of educational research in general.

It is for this reason that social scientists such as Bourdieu (1998), noting with alarm the signs of mounting public impatience with a 'frivolous' research community, call for a 'real politics of reason', a concerted international campaign to defend the probity and integrity of the 'scholastic attitude' which, despite all the modifications made to it in the light of the positivist critique, still remains the only path of 'access to the universal' (Bourdieu, op. cit., p. 137) and out of the particularisms of post-modern research practices.

'Who believes in naked truths?' (O'Neill, 1995, p. 104)

Radical constructivists hold to a construal of the research world as one in which a small number of enlightened but beleaguered souls keep the faith against a mass of unreflective positivists, who care about only what they can see, replicate, prove and generalize. In other words, those resisting the constructivist turn are widely believed to be crude empiricists. This is curious for a number of reasons.

First, most realists, far from being empiricists, are as interested in unobservable as in observable entities. Many, if not most of them, believe that the most important organizing entities of social life – for example class, status or trust – are unobservable. Theories hypothesize about the way unobservable entities connect to, and organize, observables, and empirical research is the means to see whether these connections indeed function as the theory expects them to. This means that the world, for realists, cannot be 'incorrigibly known'; it is always a hypothetical order that is under investigation and, as such, can always be refuted by the data.

For example, one of the stable results from the USA, the UK and Australia in school choice studies shows that social class predicts patterns of choice. That is to say, the idea of monitoring indices of school quality, and exercising a 'rational' choice on the basis of them, is a feature of the habitus of middle-class and not of working-class parents. Although the theory may be quite complicated in that it assumes links among socioeconomic position, class culture, consciousness and choice, the empirical test of the hypothesis is quite simple: are there or are there not class-based regularities in patterns of school choice? As it happens, some evidence is beginning to emerge that suggests that South African working-class parents and students *are* exercising forms of rational choice of school (Hoadley, 1998). This goes against the theory, and the next step would be to ask why that is. This would lead to a new hypothesized set of (unobservable) relations which can then again be tested.

In this example, two things are visible. The first is that assertions in realist research are fundamentally open to refutation. For constructivists, who deny the truth–value of assertions, assertions are as unrefutable as they are unverifiable. This leads on to the second point. Constructivists deal with the flux of construction most usually by means of methods – such as interviews and questionnaires – that allow the constructors to 'speak' about their construction. In this approach, there are rarely unobservables; the account is regarded as the presented 'reality'. To use an old formulation, the data are expected 'to speak for themselves'; categories for analysis must not be suggested from without, they are to be discovered 'emically'. This is the principal supposition of and rationale for 'grounded theory'. But there is a central fallacy at work here, that consists in expecting interviewees, for example, necessarily to have access to the grounds for their actions. Bourdieu

calls it the 'scholastic fallacy', which consists in 'asking interviewees to be their own sociologists' (Bourdieu, op. cit., p. 132), a practice which he also refers to as 'the most serious epistemological mistake in the human sciences, namely, …putting a "scholar inside the machine" …to place the models that the scientist must construct to account for practices into the consciousness of agents…' (Bourdieu, op. cit., p. 133). Or as Fuchs (op. cit., p. 315) more scathingly puts it, 'ornithologists don't communicate with one another through chirps and twitters'. Trying to generate 'theory from the ground' is, then, to mistake 'chirps and twitters' for ornithology.

Relativism and realism are, as they stand, not incompatible. Relativism is about warrantability; realism is about the ontological status of a discourse. We are all relativists of one kind or another; certainly, many people would be cultural relativists. It is a particular kind of cognitive relativist, combined with an antirealist ontology, that constitutes the radical pole of this kind of research.

Of course, very few people will admit to being the radical kind of constructivist depicted here. Most would admit to being moderate constructivists only. But here too there lies another kind of danger: that of inconsistency. One cannot be a selective constructivist, i.e. one cannot easily believe in 'grounded theory' and then also claim superior truth status for one's research assertions. This is what Woolgar and Pawluch (1985) call 'ontological gerrymandering', trying to have it both ways. The results of such a stance are, in the end, incoherent.

Finally, although the constructivist or relativist position often portrays itself as 'progressive' or 'emancipatory', as in the participatory research school of constructivism that as we saw in Chapter 8, 'Relativism has no ethical and political implications at all' (O'Neill, op. cit., p. 103). Nor has realism for that matter. For both, what matters is what one does with them, how they are deployed in practice. It is to this that I now turn.

What Educational Research Can and Can't Do

In the first part of this chapter, I examined the paradox of how an increase in the production and circulation of social knowledge leads to an increase in social indeterminacy. Indeterminacy is a Janus-faced condition. On the one hand, it may enlarge the sphere of human action and thus contribute to the possibilities for human freedom. On the other hand, it may lead to an increase in complexity, making decisions more risky and their outcomes more uncertain. Both increased complexity and enlarged freedom contribute to the increased *fragility* of our social world and contribute to the difficulty of governing it. It is in this context that the potential role of educational research in reducing complexity and contributing to policy and political decision making arises in a new way. I say in a new way because the utility or social usefulness of educational research has been debated for decades, largely in terms of the distinction between basic ('pure', not immediately useful) and

applied research, where first the truth is discovered and then is later applied. Debates used to ponder the niceties of how to make research more useful, by which was meant how to create applications for relatively certain, already discovered knowledge.

With the world changing towards an innovation-based economy and an informational society (Chapter 2), with the challenges to notions of truth and reality as we have seen and with the increase in social fragility, the expectations directed towards social research have in recent times become rather more urgent. The distinction between basic and applied has tended to blur, and, in certain quarters, the idea of basic research is seen as a luxury we can no longer afford. Nevertheless, there are some limits to what research can and cannot, should and should not, do. It is the changes, but also the continuities, in the social role of research that I will examine in greater detail below.

Usefulness and Accountability

Is it reasonable and legitimate for the Minister of Education to expect from policy research that it produces *useful knowledge* – that is to say, knowledge that not only explains why things happened the way they did but also predicts how they will happen in future; or, better still, how they should happen? Can and should policy research produce reliable guidelines for policy decision making, for better practice and performance?

From the Minister's perspective, the expectation is eminently reasonable. He is all too practically aware that success in his job depends on simplifying the complexity discussed above in a systematic way. Indeed, this is another way of saying that all governance is the systemic practice of complexity reduction. Which systems will produce the desired results – this is what he is after and what he will look to research for assistance with.

It may surprise the Minister to learn that not everyone will agree with him. In fact, the idea of forward extrapolation, of prediction, is of rather recent origin, arising, as the constructivists point out, in its modern form with the logical positivists. For the first 300 years of productive science in the modern era, the primary aim of scientists, in accordance with the Western philosophical project, was to explain events and phenomena 'after the fact'; 'an explanation told you why the event had to occur given that it already has' (Fuller, 1995b, p. 2). This was the meaning of Hegel's famous aphorism of the owl of Minerva (goddess of wisdom) that always flies only at dusk (at the end of the event to be explained). In this tradition – and it is worth remembering that it was the mainstream or dominant tradition – the job of science was to remain not only out of politics but also out of the game of functionality altogether. Explaining the conditions of possibility for an event to occur constituted the boundaries beyond which scientists ought not to go. This view is still current and is displayed, for example, by Nobel prize-winning physicist Weinberg in a recent article on Thomas Kuhn:

> If one scientific theory is only better than another in its ability to solve the problems that happen to be in our minds today, then why not save ourselves a lot of trouble by putting these problems out of our minds? We don't study elementary particles because they are intrinsically interesting … What drives us onward in the work of science is precisely the sense that there are truths out there to be discovered, truths that once discovered will form a permanent part of human knowledge.
>
> (Weinberg, 1998, p. 50)

We saw above that this view of knowledge was co-opted by the technocratic vision of good government, and by and large served it well, from the responsibility – disclaiming 'useful idiots' of Lenin and Hitler to the scientists in the Manhattan Project who exploded the first atom bomb. The technocratic promise was that dispassionate knowledge could be wedded to social ends. That vision of the relation of knowledge to politics and policy now lies in tatters. What seems to be taking its place in the closer-coupled world that we increasingly inhabit is a view that researchers and research should exhibit greater public accountability and responsibility to society, to the public good and to policy. This is a far harder-edged mandate to satisfy. It will be as uncongenial to the contemporary neo-Kantian 'basic' researchers as the technocratic lure of co-operation in rational good government was to their forebears. But it will be uncongenial too to the post-modern constructivists for a range of reasons that bear closer scrutiny.

First, I must flesh out a little what it means to say that constructivists refuse to put their assertions up for confirmation or disconfirmation and thus refuse, as it were, to play the 'truth game'. When constructivists encounter an assertion about the world, they do not automatically treat it as an assertion requiring validation or refutation. They do not treat it as referring to states of the world. Rather, they put inverted commas around it, they 'ironize' it, and treat it as a piece of language, a textual symptom, signifying something quite other than its assertional purport. Otherwise put, they treat 'uses' of language as 'mentions' – they do not recognize the use–mention distinction (O'Neill, op. cit.). The refusal to treat assertions *as* assertions is the central move in current mainstream relativism.

An example makes the point. When the De Lange Commission into educational reform in South Africa issued its report in 1981, it was received in certain progressive quarters as 'another brick in the wall', as a prop to shore up the dominant apartheid hegemony. This diagnosis was rarely based on taking the De Lange claims as assertions and putting them to conceptual or empirical test. Mostly, the denunciations were based on the lack of representivity in the research committees, as if the truth content of the assertions were determined by the social origin of the commissioners or researchers, or their social base or the need to obtain consensus – in other words, as rhetorical symptoms of something else rather than their substantive content (good examples of Alexander's sociological fallacy).

This refusal to treat assertions as assertions has another crucial effect. Ironism brackets decisions about assertions, and in so doing, by refraining from judgement, removes us from the possibility of any discourse about action at least in terms of the assertion. There may be a supervening or gerrymandering discourse about action as there frequently was in commentaries on De Lange – namely that apartheid must be overthrown – but this did not issue from an analysis of the assertions of the Commission as such. This abstention is not so much the high-minded neo-Kantian abstention from prescription that we find, for example, in Foucault (1991, p. 157): 'I absolutely will not play the part of one who prescribes solutions'. It is, rather, an ironic desist, a refusal to treat language as in any way an extension of action. Neither of them, however, are of any help to a complexity-ridden Minister, or to a policy in need of systematic investigation. Neither of them, therefore, present themselves as candidates for policy research.

When the constructivist does go into the field, she (or he), partly out of an assumption that empirical methods would tar her with the positivist brush (mistakenly, as we saw above), invariably decides to use perspectival methods, methods which take actors' accounts as the only reality worth examining. Of course, methods such as interviews are not in themselves either realist or constructivist; it is the interpretations of the data that are. Because the world is constructed by actors, it seems to constructivists that it follows that we should best get data about the world through the self-report of those actors. By why does it so follow? As we saw in Chapter 8, actors do not have any privileged insight into the way they see (or construct) their world. This merely limits us to the subjectively perceivable, and eliminates from possible examination the intransitive unobservables that may well, as grammar does for speech, construct the objective possibilities for expression. How helpful will this be for the Minister or for policy? It may be perfectly helpful to find out what various constituencies think about this or that feature of their lives or about this or that policy, but this will not tell us much about whether the policy actually works or why it does so. In other words, perspectival data on their own have a useful but limited role to play in policy research.

Finally, in flight from generality, the constructivist going into the field is likely to want to concentrate on the study of singularities, or case studies, although the latter term may have different connotations; in medicine, for instance, untroubled by doubts about universality, case study results are frequently taken to establish the basic parameters of a generalizable finding. In educational research, the generalizable case study is rarely found. In education, by and large, cases are singulars, especially when prosecuted by constructivists.

But will this be helpful for the Minister? Probably not. It is fairly well established in the methodological field that the study of singulars is most likely to be helpful to practitioners, the study of generalities to policy makers (for example see Bassey, 1995, p. 108). It may well be reasonable to suppose

that practitioners in specific concrete localities ought to be the primary focus of policy concern; but that is another argument and the Minister is unlikely to share that view, not because he is uncaring or disengaged but because it is the broader *systemic* effects that command his attention. As Ladwig (1996, p. 165) says, 'Politicians, policy makers, and managers do not always rely on generalised knowledge simply because of some misguided beliefs in objectivity or "neutrality" but because they deal with generalised systems'. It is the very existence of systemic effects that the constructivist denies.

In this section, I have reviewed a series of implications that may flow from the theoretical commitments of constructivists seeking to carry out policy research in education.

These include:

- an ingrained antiempiricism;
- a preference for the study of singulars;
- a preference for perspectival methods;
- a reluctance to engage with a discourse of action.

It seems inevitable to conclude that constructivist research is limited in what it has to offer educational research for policy.

The final section here will review the attendant implications for research and social responsibility.

Research and Social Responsibility

> Is there no-one left in the Left still prepared to argue that scholarship is valuable in and of itself?
>
> (Patai, op. cit., p. 69)

There are three issues that are invoked by the word 'responsibility' which must be distinguished. The first is the idea of 'engagement'. As I claimed above, by acceding to the critique of positivism, one accedes too to the ineluctability of 'engagement'. We are always engaged, whether we like it or not; this is the force of the critique. The same, incidentally, goes for 'reflexivity'; also as a consequence of the critique, reflexivity is a constitutive part of being-in-the-world, not something that constructivists do in their research practice and others don't. Reflexivity, or 'reflex reflexivity' as Bourdieu (1996, p. 18) calls it, is sometimes invoked to indicate the need to 'reduce as much as possible the symbolic violence which is exerted' (Bourdieu, op. cit., p. 19) as a consequence of the conceptual framework that the researcher imports into the life-world of the interviewee. 'Engagement' is in any case, as I have said, part of being-in-the-world, and can only be reduced or minimized, not eliminated. 'Engagement' is, in this sense, an impediment to good research.

Some constructivists construe 'engagement' not as a hindrance but as a virtue. In this sense, researchers *ought* to be engaged and the research ought to be politicized. In this form of 'responsibility', the more the researcher identifies with the group being studied, the better the research is thought to be. But even advocates of politicization recognize the risks involved. Black and Solomos (1993, p. 185) warn against the dangers of 'insiderism' and 'radical credentialism', where the researchers' main concern is solidarity rather than careful research. There are certainly ways to minimize the effects of this kind of commitment, although the most effective ways will eventually pit objectivity against commitment. This is because commitment, or indeed group membership, often entails that the researcher comes to share the same habitus as that of the people she is studying, comes to take the same things for granted, with the same things being invisible for both. 'One of the major reasons for these failures is the perfect match between interviewer and respondent, which allows the latter to say everything … except that which goes without saying …' (Bourdieu, 1996, p. 35). When this occurs, it is only solidarity, not understanding or explanation, that is served.

The third meaning of social responsibility implies something rather different from these first two. It comes closer to addressing the idea of accountability that, I claimed above, comes to press more heavily on researchers in a fragile world. Responsibility in this sense tries to answer the question 'what *ought* researchers ideally to be doing in order to "serve" society in the way that accountability seems to expect of them?' They must guard at all costs against going 'beyond the data', a temptation especially in important policy-related research where the data don't quite allow the researcher to say what she passionately would like to say. Why must this be guarded against? Is a bit of fudging for the right cause not a permissible transgression? No, it is not. This interdict has ethical as well as democratic force, and the researcher is triply bound to it: first, by the rules of her discipline (of science); second, by the implicit public trust she carries by virtue of taking public money; and third, by virtue of the democratic mandate she carries as a co-participant and partner in public governance, for that, as I claimed above, is what policy research is (see also Radder, 1998).

It may well be argued that we invariably do go beyond the data and, of course, this is true, but it behoves the researcher to be as vigilant as possible here since the quality of public trust and believability invested in researchers is a fragile and increasingly vulnerable one. Once lost, this trust is not easily regained.

The responsibility of the researcher must be exercised not only with respect to the state but also in the name of an informed citizenry, indeed in the name of their right to be informed. The responsibility works the other way too: researchers have a responsibility to the citizenry to carry out research that holds state policy to account. As Brown et al. (1997, p. 37) put it:

> When we think about all the claims to empirical 'truth' made by politicians and journalists over the last two decades, the need for independent research which subjects such assertions to account is crucial to the future of democracy.

Brown and his colleagues have explicitly in mind here empirical research which, provocatively, they wish to label a 'new political arithmetic'. They are mindful that they will attract the ire of the constructivists but have also arrived at the conclusion that 'By rejecting quantitative methods, post-modernist researchers … turn their back on the vital task of holding the state to account for its policies' (Brown et al., op. cit., p. 37). So, perceiving the lack, precisely by way of trying to exercise their social responsibility, Brown et al. have joined their voice to a growing number that see that it is the task of a revitalized Left to reclaim the ground vacated by both the positivists and now the post-moderns.

Must We Choose?

The case that I have tried to defend in this chapter can be summarized as follows: everybody, barring perhaps the odd Rip Van Winklish natural scientist, nowadays accepts the critique of positivism as definitive. In other words, the constructedness of reality is no longer controversial and we all are, to some degree, constructivist. Constructivi*sts*, on the other hand, go further than this, and this extension of the conventional position creates for them, as it does for educational and social research in general, dilemmas of relativism, generalizability, accountability and social responsibility. To avoid these dilemmas, I have argued, requires tempering the idea of the constructedness of the world with a certain moderate socially based realism in order to admit the idea of *epistemic* or *cognitive gain*. Without this key idea, I have argued, educational research loses its central rationale as a socially aware and politically responsible practice.

Given this relatively moderate and modest conclusion, it is sometimes hard to credit, let alone account for, the vituperation and bile that characterizes the on-going antagonism between the realists and the constructivists (for a recent exchange around the proper nature of educational research, see Hammersley and Gomm, 1997a, b; Romm, 1997). And while both sides decry the dysfunctionality of the polarization, the mock heroics show no signs of abating. Quite the contrary.

A tolerant pluralism has been suggested in some quarters (for example Davis, 1997), but this really defers the question of reasoned adjudication and leaves research communities in their present polarized state, which is hardly desirable because it leaves them weak and vulnerable to powerful outside interests and forces. Besides, this solution is likely to appeal to liberal post-moderns only; it will satisfy neither the radical post-moderns nor the realists, for whom the problem will merely have been exacerbated.

Must we then choose? This seems a drastic solution, but the terms of debate seem to admit of no other alternative. Yet there are compelling reasons why an either–or choice is also far from desirable. To opt for constructivism is to make a claim, implicitly or explicitly, for its superiority over realism. But since the inherent relativism of constructivism disallows such a claim, the very gesture of choosing constructivism undermines itself because to claim superiority while avowing relativism is unintelligible. To opt for an exclusive realism, on the other hand, would mean eliminating constructivism, which can be achieved only by means of an apodictic (or foundationalist) argument of the sort that has been discredited with the critique of positivism. Death and furniture, the two major classes of bottom-line arguments against relativism, fall prey to just this trap, as I showed earlier. In other words, it is precisely when realists try to eliminate the entire constructivist ensemble of premises that they slide back into positivism, as constructivists gleefully like to point out (Edwards et al., op. cit., 1995). In short, constructivists can't eliminate realism without being unresolvably self-contradictory, and realists can't eliminate constructivism without resorting to a form of argument that leads straight back to positivism. Hobson's choice indeed.

If in the present chapter I have spent rather more time in pointing out the shortcomings of some contemporary constructivist research, it is not from the conviction that constructivism is all bad and realism all good. It is, rather, because constructivism as it stands, and especially a radicalized constructivism, does not and cannot on its own yield a defensible research practice or a strategy for responsible political participation. For this, the constructivist opening salvo that helped to bring positivism down must be enriched by a bracing dash of social realism, 'a form of realism that avoids the problems affecting foundationalism' (Hammersley and Gomm, 1997a, p. 8). This means a move beyond relativism. To do this, we do not have to make any claims about the absolute veracity of assertions. A comparative claim is perfectly adequate: 'Its message is: whatever else turns out to be true, you can improve your epistemic position by moving from x to y; *this step is a gain*' (Taylor, op. cit., p. 54, emphasis added). To concede this is to concede no more than that some research findings tell us more than others do. Otherwise put, some claims to knowledge are less valid than others are: 'We are not free to interpret reality just however we like, that is part of the meaning of the word "reality"' (Hammersley and Gomm, 1997b, p. 2).

With such a move towards a moderate realist research practice, I believe that the educational research community puts itself in a position to reclaim a responsible, accountable and perhaps indispensable role not only in an increasingly fragile world seen globally but also in the shared governance of society committed to rational transformation.

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