

**INNOVATIONS
IN EDUCATION**

Learning about Education

An Unfinished Curriculum

David Hamilton



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Education, like most meetings between two people,
is a chancy business.

(R.S. Peters, philosopher, 1967)

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David Hamilton

Series editor's introduction

The pace of modern life, the need to understand almost instantly, can seriously damage our chances of understanding anything properly. If I were asked quickly what education means, I would probably say 'teaching' or 'schools'. Yet I would sense that it means more than that and hope that the questioner would not probe too deeply.

But it is each person's right to know what education means. Teachers, and trainee teachers particularly, need to know where the word comes from as well as the activities and attitudes which it describes. If they do not know, with confidence, their part in the whole and their place in a history, they can become touchy technicians, frustrated by what they have to do and the changes they are ceaselessly expected to make. This is an eternal danger as well as an immediate issue for teachers. They can so easily become 'deprofessionalized' and 'deskilled' and depressed. If they know what education means clearly, economically and accurately for themselves, their self-esteem and self-determination would be much more sure.

David Hamilton realized this timeless truth years ago and set about developing a course which would respect teachers' rights to know about education. There would be psychological knowledge, political history, and so on: not as subjects but as sources of insights. Since the earliest relationships, human beings have been learning about growing up, about thinking and about ways of guiding learners. There were schools two thousand years ago but at the same time what we now call schools are relatively modern inventions. David Hamilton invites his readers to take an idea at a time, see where it came from, how its forms altered and what it means for education today and tomorrow. He writes as a warm person who has thought and researched so that he can explain without pomposity or waffle. This book was a long time in the making and that gives it a rare quality.

I learned and learned from each chapter. I turned from being reluctant to admit how little I knew, to gaining for myself some useful certainties. I now feel that behind the gentleness of Hamilton's invitation to learn with him he has a great gift. In business-type phrasing I feel I can 'own' being a teacher, I do not feel 'owned' by education. Better, much better than that, I can see the common ownership of education and that it could never be otherwise. I have been helped to accept my place in something bigger and to assert my purpose in something better than most. I knew I needed to know 'things', David Hamilton knew too. The difference is that he set about working out how to give what he knew to me. This book makes me glad to be a teacher.

Colin Fletcher

Prologue

The principal giver of instruction is our own past history.

(Jerome Bruner, psychologist, 1974)

It was my first morning as a temporary teacher. Nearly thirty adolescents had settled themselves into orderly rows of desks. Suddenly, a bell rang in the corridor. It came earlier than I had expected. Two children rose from their seats and, uninvited, made their way towards the classroom door. I had not foreseen this hyperactivity in my lesson plan. What was happening? 'Dinner tickets, sir', came the unsolicited explanation from a seated child. The fast disappearing pupils had, it seems, set off to collect their tokens for free meals. I resumed the lesson plan, albeit uneasily. I had no wish to underscore the ticketed pupils' embarrassment and humiliation. More than a week passed before I realized my error. I had misread the situation completely. The minor exodus comprised the children who paid for their tickets: free meals were the day-to-day experience of the majority of the class. Ultimately, therefore, the social embarrassment and humiliation were mine.

Since that gentle yet memorable incident – which occurred nearly twenty years ago – I have experienced many comparable interruptions and deflections in my work as a student and as a teacher. Such incidents have ranged from the amusing to the highly emotional. In turn, all have given me food for thought. Together, they have left me with a heightened awareness of the complexities of teaching and learning. The life of a school, like the life of a human being, does not take place in a social vacuum. It is part of a much larger universe that is, itself, in a constant state of flux. To understand the small world of schooling, much can be gained from investigations of its wider context. In my own case, I feel that such reflection has increased my sensitivity as a student and as a teacher. As my vision has been enlarged, I believe that my grasp has been strengthened.

This book, then, explores the breadth and depth of education and schooling. It builds upon a course which, between 1978 and 1989, I gave

annually to a group of undergraduates at the University of Glasgow. Week by week, small-group discussions accompanied my presentations. On many occasions, students reported their own equally memorable classroom experiences. Some students expressed anger about their schooling. Others recalled the positive support of individual schoolteachers. But many of them – even the most vocal – found difficulty in drawing wider lessons from their anecdotal experiences. They could speak volumes about isolated incidents. But, like me, they did not always find it easy to translate anger or gratitude into insight or understanding.

My predecessor on the Glasgow undergraduate programme had offered a 12-lecture history course. I was expected to organize my own teaching along similar lines. Unfortunately, however, my knowledge of the kings and queens – or Acts and facts – of education was, and still is, relatively limited. How could I validly fill the lecture time placed at my disposal? I was sympathetic to the view that an awareness of the past might be relevant to an understanding of the present. But how could I give substance to this notion? More specifically, how would it *illuminate* the present? It would be easy to write an antiquarian text about the passage of past events. But what would be gained from an endless catalogue of unconnected and eminently forgettable incidents? Eventually, I recognized the root cause of my difficulties. An aspiration to innovate is not the same as the capacity to innovate. In short, I was a teacher without a text.

In my uncertainty, I turned to a slim volume that had already voiced some of my broader educational interests. Despite its title, Joan Simon's *The Social Origins of English Education* (1970) is not a chronological account of early English education. Rather, the author introduces her book by begging a series of open-ended questions about the basis, organization and purposes of education and schooling. She queries the status of the human animal (is society anything more than a human zoo?). She asks about the ecological adaptation of *Homo sapiens* (are humans merely a direct product of their environment or 'the system'?). And she focuses attention upon distinctive human attributes (how has the evolution of the human species been affected by language and speech?). By such means – and drawing upon notions from anthropology, biology and elsewhere – Joan Simon adopts an important perspective. She identifies education as an essentially human process, one that has played a major part in shaping the course of human evolution and the uniqueness of human society.

I was keen to build upon Joan Simon's book in my teaching. But a major disruption occurred a few days before my first presentation. I learned from the university bookshop that *The Social Origins of English Education* was out of print. Inevitably, the students who had signed up for the course were short changed. They had to fall back upon my hurriedly prepared notes and hurriedly organized lectures.

As the years passed, I gradually expanded the course notes. But they still remained unfinished and unpolished. My thinking always seemed to run ahead of my capacity to express my ideas clearly in a written form. In their feedback on the course, students reported reactions that ranged from severe indigestion to mild intoxication. They pointed to inadequacies, contradictions and confusions in my formulations; and, equally important, they reported degrees of difficulty in entering and understanding my arguments.

Year by year, I was able to amend my presentations in the light of these criticisms; but, after 1982, my text remained untouched. Eventually, however, the supply of copies ran out. Worse still, the original set of duplicating stencils went missing. Worried by the prospect of becoming textless again, and encouraged by outsiders and by the publishers, I set about preparing this version for a wider audience. What, then, are the themes and viewpoints that have shaped the organization of this book?

First, I am unwilling to claim that schooling is necessarily a 'good thing'. I do not, therefore, regard its present form as the unfolding of a glorious idea disseminated by Christian missionaries more than a thousand years ago. Instead, I try to acknowledge that schooling is a two-edged social instrument. It is as much a tool of oppression as it is a lever of liberation. The history of schooling, therefore, is best seen as a history of changing circumstances, not a history of inevitable progress. Accordingly, the political, power-based dimensions of schooling – past and present – receive due attention in this book, as in J. Karabel and A.H. Halsey's *Power and Ideology in Education* (1977) and C. Karier, P. Violas and J. Spring's *Roots of Crisis: American Education in the Twentieth Century* (1973). Equally, I am very aware that many accounts of schooling are written by, and for, winning participants in the educational race. They recount a world that is cosily familiar to their readers. But is it also familiar to the unplaced runners and outright losers of the educational race? Can a book about education, therefore, do justice to the inner-city Boston circumstances of Jonathon Kozol's *Death at an Early Age* (1968) and to the rural Italian circumstances of the School of Barbiana's *Letter to a Teacher* (1970)? And how should books about education and schooling respond to the vivid accounts of Scottish teenagers gathered in Leslie Gow and Andrew McPherson's *Tell Them From Me* (1980), and the telling reminiscences, collected in Bristol, Manchester and elsewhere, that are analysed in Stephen Humphries's *Hooligans or Rebels?: An Oral History of Working-Class Childhood and Youth 1889–1939* (1983)? Indeed, at one stage in its preparation, this book had the working title *A Loser's Guide to Education and Schooling*.

A second thread that runs through this book has already been touched upon. It is the distinction between education and schooling. As a social

process, education is much older than schooling, as old as the human species itself. Moreover, throughout its history, education has been an untamed, undisciplined, unorganized, unpolished, everyday activity. It was, and is, an integral part of everyday life – initiated as and when it was required. Schooling, on the other hand, is a relatively recent human invention. Historically, it is the domesticated offspring of earlier educational practices. Its domestication and refinement have largely been the responsibility of socially developed civilizations. As a result, the practices of schooling are fenced in and nourished by a complex network of rules and regulations. These, in turn, give a characteristic shape to the material artefacts of schooling – its textbooks, desks, registers, blackboards, etc. Indeed, most histories of education focus preferentially upon these cultivated artefacts. As a result, they might be more vividly understood as histories of schooling. Certainly, few of them treat the distinction between education and schooling as worthy of serious attention.

A third influence on the organization and content of this book has been my interest – shared with Joan Simon – in the role that education has played in the transformation of the human species. The human species has accumulated a vast storehouse of experience during its existence. And it is often assumed that education revolves around the transmission of this stored up experience from generation to generation. But is this stockpile analogy adequate to the educational record? Year by year, does the stockpile merely grow in size? Or does later experience lead to the modification of earlier experience? In short, is the accumulation of human experience a transformative as well as a cumulative process? And what are the social consequences of such transformation? How important, for instance, was the change over from oral to written literacy, as discussed in Michael Clanchy's *From Memory to Written Record* (1979) and in Ivan Illich and Barry Sanders's *The Alphabetization of the Popular Mind* (1989)? What educational and social significance should be attributed to the invention of moveable type printing, as documented in Elizabeth Eisenstein's *The Printing Press as an Agent of Change* (1979)? And what are the consequences of a shift from print-based to electronic media, as examined in the futurology of Stewart Brand's *The Media Lab: Inventing the Future at MIT* (1988)?

A fourth strand in this volume is the attention given to changes in the terminology and semantics of education and schooling. The Latin and Greek words for 'school' (*ludus* and *schola* respectively) denote the pursuit of leisure activities. What does this tell us about ancient schooling? Likewise, what inferences might be drawn from the fact that the words doctor and docile come from the same root – the Latin word *docere* (to teach)? Such questions not only open up windows upon the past, they also point to important differences between the past and the present. The study of terminology fosters an appreciation of changes in the organization of

social life. More generally, too, the study of language also provides access to the condensed wisdom that guided the practices of the past. The educational record is littered with prescriptions like 'spare the rod and spoil the child' or 'as the twig is bent, so the tree groweth'. In turn, such formulations become the truths which shape and legitimate future practice. They are both a summation of past experience and a springboard for new practices. What, for instance, might be made of the exhortation, included in a British government policy document (*Education: A Framework for Expansion*, 1972), that a minority of students should be allowed to study specialized subjects 'to the top of their bent'?

Another consideration shaping the organization of this book has been a concern to acknowledge the seamless quality of educational practice. In the twentieth century, the study of education and schooling has become fragmented. It has been divided up among groups of specialists – psychologists, sociologists, administrators and managers. Wittingly or unwittingly, it is assumed that only persons in possession of such specialist knowledge can reach an informed understanding of education and schooling. A social consequence of this assumption is that the world of twentieth-century education and schooling is populated by two tribes: a small cadre of *experts* and a much larger community of *operatives*. Members of the latter group – notably teachers and learners – are expected to be doers, not thinkers. Most of them have relatively little time, opportunity or encouragement to reflect upon the short- or long-term merits of the prescriptions of experts. And they have even less time to explore the wider implications of education and schooling. But should education and schooling be left solely to the guardianship of politically interested experts?

Another guiding assumption – one that follows from the previous argument – is that to experience education and schooling is not the same as to understand education and schooling. Understanding and appreciating a task is not the same as doing a task: it draws upon a wider frame of reference. Understanding may be triggered by experience: Isaac Newton's encounter with a falling apple is a classic, if apocryphal, instance. Ultimately, however, understanding arises from intellectual activity. It is acquired through discussion, reading and reflection – the reworking and recasting of experience. And the crucial difference between experience and understanding is neatly captured in the aphorism 'once you know what you are doing, you are no longer doing it'.

Many people, including students in higher education, are denied opportunities to evaluate and rethink their experiences. Books, for instance, are often expensive, if not unreadable; libraries are overcrowded, if not unwelcoming; teaching rooms are cold, draughty and uncomfortable; and many teachers declaim statements and avoid questions rather than give

their attention to promoting discussion and accepting dialogue. This book, therefore, seeks to overcome such shortcomings. It is not a series of golden tablets inscribed with *all you ever need to know about education and schooling*. It is a series of prompts and provocations, not a catalogue of truths and prescriptions.

Finally – and for related reasons – this book questions the assumption that there can be a predictive science of education and schooling. Instead, it seeks to acknowledge that education and schooling are necessarily unstable and unpredictable. Much that passes for prediction is in fact, more accurately described as projection. At root, education and schooling are social encounters whose participants (teachers, learners, etc.) are highly reactive. Indeed, if humans lost their reactivity (or wilfulness), they would cease to be human. In these terms, therefore, the education and schooling of human beings can never take place under fully controlled conditions. Education and schooling have an in-built instability, which acts like a grain of sand. It may cause the process to grind to a halt; or it may engender unimagined pearls of innovation.

Summary

Dissatisfied with conventional treatments, I have written this book as an examination of the positive and negative roles that education and schooling have played (and can play) in the creation, maintenance and transformation of the human species. In so far as I have used examples from the past, the following chapters draw upon the history of education. But in so far as I have highlighted a set of pivotal concepts (e.g. schooling, education), these chapters are also an essay in educational theory. In attending to history, I have tried to make the past more accessible; and, in attending to theory, I have tried to make the present more comprehensible. Either way, this book is dedicated to extending the educational grasp of its readers.

CHAPTER 1

In the beginning

Every individual lives from one generation to the next; and contributes, however minutely, to the shaping of society and the course of its history.

(C. Wright Mills, sociologist, 1959)

In the late 1850s, Charles Darwin and the American naturalist Alfred Wallace confronted the Victorian intelligentsia with the claim that human beings were directly related to other members of the animal kingdom. Before Darwin, it was conventionally assumed that humans differed from other animals, to the extent that they had a soul. Further, souls were deemed to be the special gift of God who, many years previously, had created mankind independently of other living creatures.

In the century before Darwin, the animal kingdom was envisaged as a great chain of being. Humankind took its place at the top of the chain; and the lowliest organisms congregated at the bottom. This natural order of things was assumed to be immutable and fixed for eternity. Inevitably, then, the basic premise of evolutionary theory – that each species is an ever changing entity – was nothing short of revolutionary. Darwin had arrived at his theory in the 1830s but, recognizing its controversial tenets, waited until 1842 before committing it to paper, as a 35-page pencil sketch. Only the circulation of equivalent ideas by Wallace prompted their joint presentation to the Linnaean Society of London in 1858 and, in the following year, to the publication of Darwin's *Origin of Species*.

Although Darwin was cautious in his claims – the title he offered his publisher was *Abstract of an Essay on the Origins of Species* – and although Darwin had taken great care to win the support of major British scientists, *The Origin of Species* was still accused of being an atheistic and blasphemous anti-Bible. It was commonly assumed that Darwin had rejected the power and primacy of God's design and, in its place, had substituted blind chance as the ultimate source of the order of things.

In biological terms, the Darwin–Wallace theory was important because, supported by vast amounts of data, it proposed that differences between humans and other animals should be regarded as matters of degree, not as a matter of kind. Whatever else they were, human beings

were also animals. Nevertheless, Darwin's and Wallace's ideas did little to dismantle the great chain of being. Certainly, leading scientists no longer held that each species had a preordained and static position in the great chain of being. But the chain metaphor was retained in their belief that evolution was a race in which some species had made more progress than others. Given the European origins of the great chain of being, it is hardly surprising that white European males were accorded a place at the top of the ladder, with white women and non-white humans occupying successively lower ranks on the scale of being. Stephen Jay Gould has engagingly explored the political and pseudo-scientific basis of this differentiation in *The Mismeasure of Man* (1981), a volume whose sexist title deliberately underlines the gender bias of much nineteenth- and twentieth-century social theory.

Re-examination and reconceptualization of the great chain of being has continued throughout the twentieth century. Much of the research and debate, however, has been framed by post-Darwinian questions such as 'What are the human species' most evolutionarily significant features?' and 'What part did these features play in the human species's rise to prominence?' Answers to these questions have been sought in a variety of ways. One approach has been to focus upon settings occupied by animals (e.g. chimpanzees) assumed to be subordinate, yet closely related, members of the great chain of being. Over the years, too, anthropologists have examined the life styles of materially limited communities; palaeontologists have excavated fossil beds believed to contain traces of early humans; and, more recently, biochemists, endocrinologists and geneticists have sought to evaluate evidence drawn from the organs, cells and chromosomes of humans and their near relatives.

Another approach has been to extrapolate from twentieth-century human beings to their early ancestors. In a sense, this approach tries to strip down the human species and, thereby, find its true essence. Such a study – the examination of early humans – has a long history. It provided the stimulus for Daniel Defoe's *Robinson Crusoe* (1719), Jonathan Swift's *Gulliver's Travels* (1726), and, more recently, William Golding's *Lord of the Flies* (1954).

Other recent scholarly examinations of the human condition have often focused upon human speech and human use of tools. They have repeatedly asked whether such activities hold the key to human uniqueness. In fact, systematic observation of apes has cast doubt upon such claims. It now seems accepted that chimpanzees, like many other animals, use primitive implements in their natural habitat (e.g. to poke insects out of holes). And it has also been claimed that chimpanzees can manipulate abstract symbols in a manner approaching the linguistic competence of human beings. But, critics ask, are these observations valid? Is the tool-

using capacity of apes merely copied from their human observers and keepers? And can the linguistic behaviour of chimpanzees be satisfactorily distinguished from sophisticated mimicry?

Finally, archaeologists, palaeontologists and others have given much attention to the social consequences of changes in the human body. They have reflected, for instance, upon early changes in the life style of the human species. How important, they have asked, is the upright gait of human beings, and the resultant release of arms and hands for other tasks? And what evolutionary significance should be ascribed to the skeletal structure of the human hand (which allows objects to be readily manipulated between fingers and thumb)?

Unfortunately, however, few of these questions appear to have generated consensus among the scientific community. Indeed, one of the most readable reviews is deliberately – and significantly – entitled *Bones of Contention: Controversies in the Search for Human Origins* (Lewin 1989). Is it possible, then, to summarize the insights gained over the decades since Darwin? Overall, research seems to indicate that, in their internal make up and external life style, humans, apes, and their common ancestors are very similar. Equally, there is widespread agreement about the significance of certain evolutionary events (e.g. the acquisition of upright mobility). Nevertheless, scientists interested in human evolution still seem to be a long way from agreeing upon which events came first in the evolutionary sequence. And a further reason for the lack of consensus is that since such research is conducted by human beings about human beings, it is neither disinterested nor dispassionate. Like abortion-prompted discussions about the sanctity of human life, debates about the origins and make up of the human species always invite the same kind of theological fervour that originally surrounded (and, to a degree, still surrounds) the Darwin–Wallace propositions.

Nevertheless, most commentators seem to accept that apes do not build computers, write sonnets or fly to the moon. Perhaps the simplest explanation of these differences is as follows. In the prehistory of humankind, small biological changes (perhaps not yet identified and dated) gave certain individuals a much greater purchase upon both themselves and their environment. *Homo sapiens* emerged as a group of social animals who sought to shape themselves and their world to their own constructive (and sometimes destructive) designs. As a consequence, the human species gained an immense social advantage within the animal kingdom. It ceased to be a product or prisoner of its environment. It broke out and created a new world – a social environment that stood between its biological self and its material surroundings. And it is in this new, non-animal world that the human species has created its own homeland and its own life styles.

Mental and manual tools

At some point in the break out sequence, members of the human species must have developed the capacity to think and to reflect upon their circumstances. Early humans did not simply react to their environment; they were able to take stock of their surroundings. Earlier experiences, stored as memory traces, could be revisited, re-evaluated and recast. These mental manipulations (i.e. thinking rather than remembering) enabled early humans to reimagine the past and, in the process, to rethink their place in the world. The concept of social change became thinkable and the practice of social change became doable. The *status quo* lost its aura of permanence. It was never the same again.

The emergence of human awareness also had other consequences. Thinking became more than the manipulation of memories. It became a productive activity, a means of apprehending (literally, grasping) the world and rebuilding it in the form of new mental constructions. Indeed, thinking is one of the most important forms of human tool-use. And through extending their appreciation of the natural and social worlds, human beings have enlarged their capacity to make the future more than just a rerun of the past.

The development of abstract reasoning, like the development of tool making, enabled the human species to break further away from its animal contemporaries. Gradually, too, the mental toolbox of the human species changed in character. Over thousands of years, number systems (one, two, three, etc.) were joined by more complex concepts such as 'zero', 'infinity' and 'decimal point'; and the organization of social life became suffused with notions such as 'government', 'democracy' and the 'welfare state'. Humans built their homes around increasingly complex structures. But, in the process, they also devised a set of mental structures that raised an equivalent shelter – a comparable sense of organization – over their social existence. Ultimately, humans were able to find a place in the world that was both materially comfortable and intellectually comforting.

Production and reproduction

The creation of inside-the-head solutions to practical difficulties enabled humans to overcome survival problems that might, otherwise, have led to their extinction. *Homo sapiens* has never succumbed to environmental change. Sufficient numbers have always survived. Whereas other species have survived by finding a supportive ecological niche, humans have been able to custom-build their own niches. For humans, therefore, survival is not simply a matter of finding an evolutionary lifeboat; it can also be based upon a strategy of lifeboat building. Necessarily, then,

survival of the human species has been based as much upon intellectual activity as upon physical struggle. It has rested not merely upon procuring enough food for tomorrow, it has also been accomplished through the allocation and preservation of enough seed for next year.

In reality, humans possess two survival mechanisms. First, human beings are able to survive by instinctive behaviour – a mechanism that is probably more important to other animals. The relevant feature of instinctual behaviour (e.g. the suckling strategies of new-born infants) is that it is transmitted genetically. The second survival mechanism – social learning – is a non-genetic process. Later generations survive and flourish with the assistance of lessons learned socially (i.e. non-genetically) from earlier generations. Furthermore, social learning is one of the most important features of the evolution of the human species. That is, the humanity of the human species is based on intergenerational learning, not upon the vagaries (or ‘blind chance’) of genetic transmission.

Yet, as suggested in the prologue, social communication from generation to generation is inherently unstable. As messages are passed from person to person and from generation to generation they are exposed, consciously and unconsciously, to interference and distortion. The received message may bear little relationship to the original signal. In a apocryphal example from the First World War, frontline troops signalled: ‘Send reinforcements, we are going to advance’ – a request that was logged at headquarters as ‘Send three and fourpence, we are going to a dance’.

The instability of social transmission among human beings – a recurrent feature of teaching and learning – stands in marked contrast to the relatively faithful communication of information through genetic channels. Further, these differences in the fidelity of transmission suggest a conceptual distinction – between production and reproduction – that helps to clarify important differences in educational practice. The clearest case of faithful transmission occurs in single-parent, or asexual, reproduction. Typically, the parent sloughs off part of its body which then develops into a new member of the species. Genetic information is transmitted unchanged to the offspring, and the entire process is usually known as cloning. Necessarily, differences between the parent and its offspring are slight. In short, cloning is associated with high levels of intergenerational stability. By contrast, two-parent or sexual reproduction is more complicated. Offspring receive genetic information from two sources and, as a result, differ visibly from either of their parents. Accordingly, slow intergenerational change takes place, the kind of biological evolution identified by Darwin and Wallace.

But how do these sexual behaviours illuminate educational practice? When social communication entails distortion free transmission and inter-

generational stability, it fosters cultural reproduction. The practices learned and adopted by the offspring are very close to those communicated by the parent. Each child is a living facsimile of its parent. On the other hand, when social communication promotes new forms of behaviour and understanding, each new generation differs visibly from its parents. Cultural production is the outcome.

In practice, of course, social transmission and social learning are always a combination of reproduction and production. Nevertheless, educational practices differ in terms of the emphasis they give to production and reproduction. When social practices are directed towards conserving a way of life (e.g. maintaining the *status quo*), they tend to be concerned with reproduction. When social practices are directed towards the transformation of a way of life, they tend to be concerned with the production of new cultural forms. Education and schooling are key agencies of social transmission. And they, too, can be examined for the role they play in intergenerational reproduction and production.

Economy and culture

As noted earlier, early humans did not merely adapt responsively to the exigencies of nature, they also began to act positively and develop new survival solutions. For instance, life support systems emerged (e.g. forms of shelter and fire) which enabled human beings to domesticate hostile elements of their surroundings. Further, this domestication process – the taming of the environment – enabled human beings to transport their houses and hearths to all parts of the globe.

Early humans probably shared a scavenger–hunter existence. But, as they migrated across the globe, the focus of their hunting and scavenging varied from climatic zone to climatic zone. Some human groups built their lives around the vagaries of sea fishing, others relied upon the seasonal rewards of fruit gathering and others still, took advantage of the infrequent entrapment of large animals. Not surprisingly, the life styles of these different consumers began to be linked with the life styles and life cycles of their staple foods (plants and animals). Moreover, these links took a variety of forms. For instance, humans probably spent as much time dreaming about their food and fuel as they did gathering and consuming it.

Foodstuffs, therefore, figured prominently in the mental worlds of early human beings, as they still do. Like the sacred cow of the Hindu, discussed in Marvin Harris's *Cow, Pigs, Wars and Witches: The Riddles of Culture* (1978), foodstuffs not only began to be regarded as day-to-day sources of sustenance, they also became powerful symbols of survival. Within each human group, therefore, essential artefacts took on more

than a survival significance. They began to be seen, inscribed on standing stones and cave walls, in a spiritual or magical light. In turn, humans acquired an enlarged and supernatural (or non-worldly) sense of their life style – a state of affairs reflected in the title and contents of David Attenborough's *The First Eden: The Mediterranean World and Man* (1987). Together, these material resources and mental assumptions constituted, and still constitute, the way of life of human groups. Foodstuffs and fuel provide the resources for living, while mental assumptions, an outlook on life, furnish the reasons for living.

But what is the relationship between material resources and mental assumptions, between economy and culture? Is a culture merely the mirrored reflection of its accompanying economy? Is the relationship, simply circular and self-confirming? If so, the culture would merely reflect (or reproduce) the economy and vice versa. Social change, therefore, would be impossible. As already noted, however, a culture is an enlarged conception or reflection of an economy. Just as human thought processes extend beyond a person's immediate environment, so a society's culture – its collective assumptions – necessarily transcends the limits of its economy.

Nevertheless, there may be a direct relationship between a culture and its host economy. Many societies, throughout recorded history, have consciously cultivated substances that elevate their members on to new mental planes. Fermented barley (and its derivatives) play this role in Scotland; and grapes, mushrooms, marijuana and poppy derivatives serve equivalent purposes elsewhere. As important, humans have learned that altered mental states can also be induced without the aid of externally derived material stimulants. Music, meditation, dance and other forms of exercise provide such opportunities. It may be no accident that, throughout the world, there is a close association between music, dance and narcotics.

Through such practices and substances, people are 'taken out of themselves' (a loose translation of the Greek word for ecstasy). They gain entry to a mental world that is only partially encompassed by their material world, a disjunction central to the neurological case studies reported in Oliver Sacks's *The Man Who Mistook his Wife for a Hat* (1986). A gap is opened up between the material world that people inhabit and the mental world that they dream about. Where they are, and where they would like to be, are not the same place. Their 'consciousness' (culture) is not the same as their 'being' (economy). And it is in the attempts made by humans to close that gap – to bring heaven down to earth – that the mainspring of social evolution is to be found.

Summary

Small changes in biology seem to be associated with the peculiarly human

attributes of *Homo sapiens*. The human mind – working in conjunction with the human body – developed the enduring capacity to be rather more than a storehouse of memories. It began to act as a buffer zone. Information from the senses was not simply accumulated; it was recast and reused in many different forms. In turn, the capacity to manipulate manual and mental tools enabled human beings to rehearse the future with their minds, share the future with their neighbours, and to create the future with their hands, as discussed, for instance, in Tom Ingold's *The Appropriation of Nature: Essays on Human Ecology and Social Relations* (1986). Such visionary activities were disseminated through social rather than through biological channels. Empowered by the lessons of social experience, and aided by social dissemination, the break out of the human species took place. Early humans began to occupy hitherto unwelcome environments. They migrated with their material possessions on their backs and the remainder of their culture in their heads. But however far their bodies travelled, their minds travelled even further. The march of human history had not only begun, it began to seem unstoppable.

CHAPTER 2

From survival to subordination

We had the experience but missed the meaning.

(T.S. Eliot, poet, 1943)

As already suggested, the early history of the human species is a chronicle of biological and social survival. Yet, as humans survived, so they also changed their life styles. They became increasingly conscious of their place in the world and of their capacity to change – or domesticate – their immediate surroundings. Gradually, the human species hijacked its own biological evolution. It became less concerned with biological evolution and more concerned with social improvement.

Planning for the future of the human species took many forms. At one level, it must have entailed the development of future-oriented linguistic forms (e.g. the future tense). At another level, it must have encompassed the invention of organizational forms that would outlive their creators. And, not least, planning for the future must have embraced a social re-evaluation of child-rearing practices.

Human socialization and acculturation

The survival of individuals to sexual maturity takes place largely through the processes of nurturing or upbringing. In the nurturing process, children become humans: for instance, they develop a capacity to use abstract thought and language, to a degree unknown among other animals. But these skills do not arise fortuitously. Rather, they are fostered in a particular cultural context. Our thoughts and our language are no less part of our life style than the foods we eat and the games we play. Upbringing, therefore, is a combination of two processes: socialization – which makes us all human – and acculturation, which enables us to become students in higher education, French models, Italian waiters, American footballers, Soviet gymnasts and so on.

Socialization, therefore, is not the same as acculturation, despite the fact that they occur simultaneously. Human beings become socialized

through their communication with other members of the human species; and they become acculturated because the content and form of the communication varies from one social context to another. To talk of socialization is to refer, preferentially, to the attributes that all humans share; whereas to talk of acculturation is to focus on differences of life style.

Typically, cultures differentiate themselves linguistically in their languages, dialects and accents. But cultural identity is also stored and transmitted through many other channels, including the ways that people design their habitations, wear their clothes, eat their food, give each other flowers and hold each other's bodies. In these terms, joining a culture – or acculturation – is rather more than becoming a human being. It is an intensely social experience comprising induction into a complex array of conventions and practices. Collectively, these practices form the fabric of a culture. They provide the reasons and resources for living and, in the process, provide reassurance to the members of a culture. To be acculturated is not merely to become human, it is also to acquire a life style and, just as important, to acquire an associated outlook on life.

But full membership of a culture is rarely acquired instantly. Typically, it requires an extended period of induction. The transition from candidate member to full member, or from outsider to insider occurs only when the novice has learned how to behave with full cultural propriety. Somehow, the newcomer has assimilated the conventions – the inner logic – that sustain the fabric of the culture. A culture, therefore, is not merely a way of living or a set of practices, it is also a repository of deeper meanings which must be decoded before a newcomer can really feel at home in the receiving culture. It is one thing to mimic a life style; but it is something else to understand and appreciate it. People can be shown *how* to dress and how to eat. But these practices only become fully accepted when people understand *why*, in terms of the logic of the culture, they should eat and dress in such ways.

Acculturation is therefore based on the transmission and reception of cultural messages. Moreover, the idiosyncracies of the logic (or 'riddles') of the culture means that many cultural messages are incomprehensible to outsiders. In such terms, acculturation becomes a process whereby novices gradually crack a cultural code (e.g. the queuing conventions of different cultures). But there is an in-built problem with this model of cultural communication (and, hence, with all forms of education and schooling). How can coded messages be successfully communicated to someone who does not already have access to the codebook? To overcome this difficulty, newcomers need to receive a compound message, one that also includes extracts from the codebook of the culture. Human acculturation is as much a process of explanation as it is a process of demonstration.

Upbringing, education and schooling

As a major activity of acculturation, child rearing is also a process of transmitting and decoding cultural messages. Among early humans, child rearing presumably took place alongside adult activities. Youngsters were not given a life style. Instead, they picked one up as they engaged, like other animals, in their own survival activities. Subsequently, however, child rearing became a more culturally focused activity. Individuals and groups began to recognize the survival potential of an improved upbringing. They took steps to transform its form and content. In short, they began to reorganize the encoding and decoding procedures of their culture.

Viewed from the twentieth century, the net result of this reorganization was the consolidation of a distinctively human activity – education. As humans adopted routines and rituals to cultivate the environment, so they also invented routines and rituals to cultivate themselves and their successors. These routines and rituals became the object of repeated, if not continuous, renewal. Gradually, education was transformed from a human activity into a human institution. It became a highly visible feature of the cultural landscape. Significant areas of educational practice became separated from everyday life. For example, they were deemed to be the responsibility of specialist personnel (tutors, child minders, teachers); they were conducted through specialist activities (e.g. games, exercises, homework); they were linked to specialist materials (e.g. toys, textbooks, teaching machines); they were associated with specific periods in young people's lives (e.g. before the onset of puberty); and, finally, educational activities were identified with specialized locations (e.g. nurseries, kindergarten, playing fields).

In the transition from a process to an institution, education also underwent a further change. It became less of an undisciplined, *natural* process and more of a regulated, cultural institution. In turn, these qualitative changes in education meant that it also acquired a new designation – schooling. The rise of schooling, therefore, was rather more than the rise of schools, teachers and textbooks. It also entailed a major reconceptualization of social learning. Experience which, previously, had been passed on in a non-formalized fashion became the subject of sophisticated human reflection. In an important sense, the history of schooling is the history of attempts to overcome the acculturation (i.e. coding and decoding) difficulties described earlier in this chapter. Questions like 'What should be taught?', 'Who should be taught?', 'Where should they be taught?' and 'How should teaching be conducted?' were moved up the cultural agenda, in order that acculturation might be rendered more effective. Nevertheless, this was not a process that occurred overnight. It was not until the sixteenth century that schooling began to be opened to

all children, regardless of their sex and social status. And it was not until the nineteenth century that all British children were officially required to attend school.

Thus, schooling was more than just a technical innovation, a set of tools designed and constructed to extend the intellectual reach of the human species. Rather, schooling rose to prominence as a political institution. In the process, it was charged with meeting political goals. It left behind issues of survival and focused attention on more abstract entities such as spiritual salvation, social progress and citizenship. Schooling is as much a political institution as an educational institution. And, given its political remit, schooling has acquired a distinctive culture. It is an island of established order within a much wider – and much less colonized – educational archipelago.

Such, then, was the historical fate of education. It began, long ago, as an embedded social activity; it emerged as a visible set of practices; and it matured as a partitioned and formalized social institution. Today, education operates in parallel and in concert with schooling. Necessarily, though, schooling receives more political attention than education. In the twentieth century, for instance, schooling has been repeatedly called upon to compensate for older educational agencies (e.g. employers, the church and the family). It is claimed that the latter have relaxed or abandoned their former educational and cultural responsibilities. Yet, can schooling fill the educational space relinquished by other institutions? Does schooling compensate for education? Or does it, rather, replace education with something else – resulting in the consequences discussed in Paul Corrigan's *Schooling the Smash Street Kids* (1979), Lynn Davies's *Pupil Power: Deviance and Gender in School* (1984), Paul Willis's *Learning to Labour* (1977) and Madeleine Arnot and Gaby Weiner's *Gender and the Politics of Schooling* (1987)?

Education and the division of labour

The long-term history of education and schooling can be examined from many perspectives. One valuable approach is to reflect upon schooling in terms of the division of labour. An important element in the organization of schooling has been the subdivision of human experience into separate categories and activities. In the twentieth century, for instance, adolescent children rarely learn about the complexities of modern life. Rather, they learn the mysteries of physics, mathematics, geography (etc.) – elements of a cosmology that is only obliquely related to the cultural and material world that they inhabit outside school. Schooling, therefore, conventionally addresses the complexity of human experience by passing it through a prism marked 'the technical division of labour'. Just as the

complexities of house construction can be broken down into roof building, plumbing and electrical installation, so schooling has also been conceptualized as a comparable set of discrete activities.

Educational Jack-of-all-trades survive, conspicuously in nursery and primary schools. But modern education (including primary schooling) is increasingly organized like modern house building. Separate tasks are allocated to separate specialisms (e.g. physics, mathematics, geography). More important, these discrete activities become associated with specialist personnel. The technical division of labour, therefore, merges with the social division of labour. Schooling is not merely reduced to a series of tasks, it also assumes that each task should be the responsibility of a different person.

These social divisions produce their own subcultures. As the common pool of stored experience is fragmented, new territories of knowledge and expertise are created. Furthermore, these territories became marked out with property rights of access and exclusion. Schooling becomes a world of multiple territories, not all of which are rendered accessible to outsiders. As society divides up experience, so experience divides up society.

Power and the division of labour

The division of experience also has implications for the distribution of power in society. Experience is a form of cultural property (e.g. craft-specific knowledge) that is consigned from generation to generation. Yet, whatever its form, culturally relevant experience also provides learners with cultural leverage. But if such resources are differentially distributed, they can easily become linked to differences in cultural power. Eventually, powerful sections of a culture or community begin to exert their influence over other human beings. And, as they consolidate their power and authority, such groups not only enhance the upbringing of their own young, they also seek to intervene in the educational activities of the less powerful – their subordinates.

Calls for universal schooling in the sixteenth century illustrate these developments. Typically, they were related to the Reformation, a political project whose adherents – as its name suggests – sought to re-form (i.e. re-build) society around a new social agenda. The Catholic Church, which had exerted its own forms of authority for several centuries, was undermined by vigorous social, political and theological dissent, portrayed in Richard Tawney's *Religion and the Rise of Capitalism* (1942). Town-based merchants and wealthy artisans accrued sufficient economic and political advantage to threaten the economic and ideological power of the land-dependent aristocracy and the established church. Small merchants and artisans were the social upstarts of the Reformation drama; the

established Church and its rent- and tax-farming allies were the defenders of the faith; and the rural peasants were the innocent, if somewhat jostled, bystanders in this spectacle.

Reformers like Martin Luther (1483–1546), John Calvin (1509–1564) and John Knox (1505–1572) projected a new view of society, one that, so they claimed, included all social groups, not merely the ruling or aspiring elites. For instance, the key Scottish text of the day – the significantly titled *Book of Discipline* (1560) – argued that all children, irrespective of rank and gender, should be brought up in ‘learning and virtue’.

These arguments are sometimes hailed as the seedbed of common or comprehensive schooling. Certainly, all children were expected to receive formalized instruction under the aegis of the state and/or its allied church. But it is incorrect to assume that the call for everyone to go to school was the same as a call that everyone should go to the same school. It seems, in fact, that the schools of the sixteenth century differed considerably. Indeed, they consciously differentiated themselves according to whether they offered instruction through the medium of Latin – a distinction that served to separate the upper and lower ranks of society. Some post-Reformation schools, therefore, confirmed the social ascendancy of young members of political elites, while others merely served to secure the economic and cultural acquiescence of the remaining members of society – contrasting states of affairs illustrated in Gerald Strauss’s *Luther’s House of Learning: The Indoctrination of the Young in the German Reformation* (1978) and George Huppert’s *Public Schools in Renaissance France* (1984).

Power and social engineering

Central to the reformers’ vision, however, was the assumption that schooling could, in fact, serve as a social engineering device. Schooling was seen as a lever of massive social reform, a means of redirecting the whole of society. In an important sense, the educational initiatives of the Reformation, both Catholic and Protestant, were designed to interfere with the intergenerational transmission of experience. Parents were to be constrained from passing on their own experience, and universal schooling was the mechanism proposed to effect this social interruption.

A variety of political initiatives flowed from this view of social reform. For instance, the reformers recognized that the dissemination of their ideas required the recruitment of faithful teachers and preachers. Accordingly, universities were founded (e.g. Leiden, 1572) or reformed (e.g. Glasgow, 1577) to become staff colleges of Protestantism, just as new guilds of teachers were created to become missionaries for the Catholic

Reformation – the Jesuits and the Ursuline Sisters received papal recognition in 1544 and 1540 respectively.

Together, these developments in the provision of, and the provision for, schooling have led the sixteenth and seventeenth centuries to be remembered as the founding epoch of ‘modern’ (as opposed to ‘classical’ or ‘medieval’) schooling. Certainly, events of those centuries – not merely the Reformation – dramatically increased the profile of schooling. In many North European countries, schooling became a nationwide phenomenon, even if schools were not yet strongly networked or formalized into national systems of schooling (a later development).

The emergence of differentiation in schooling also had an important impact upon the literature of education. Previously, most educational writers had concerned themselves with the upbringing practices of the powerful sections of society. But, from the sixteenth century, a new genre of educational literature appeared: documents prepared by one section of society about the schooling (or disciplining) of their subordinates. Necessarily, this literature embraced a ‘top down’ view of schooling. The horizontal division of educational labour was visibly recast as a hierarchical or power-based division of labour.

Summary

In the early history of the human species, survival activities were probably accompanied by both social reciprocation and social differentiation. Nevertheless, gradual reallocation of cultural tasks in the interests of social efficiency seems to have foreshadowed important changes in social structure. A technical division of labour emerged which, in turn, laid the basis for the emergence of a social division of labour. Child rearing underwent a similar transition. As human beings began to take a self-conscious interest in enhancing the economic and cultural potential of young people, they not only turned socialization into education, they also began to reallocate the tasks of child rearing so that horizontal parity was exchanged for hierarchical control.

CHAPTER 3

Educational communication and cultural literacy

In the agricultural society the old man is the wise one; in the industrial society he is a has-been.

(Carlo Cipolla, historian, 1973)

The activities of socialization and acculturation are accomplished through the medium of human communication, a social process extensively documented in Raymond Williams's *Contact: Human Communication and its History* (1981). Through communication – a word which derives from a Latin root meaning to share – stored up human experience is distributed across the cultural networks that unite different groups of human beings. But how does this communication, sharing or transmission operate? And in what ways, if any, can human communication also be regarded as an educational activity?

In evolutionary terms, much of the information that passes among animals has little educational significance. Communication, therefore, is not the same as education. For instance, when animals transmit alarm or courtship signals to each other, their behaviour is driven more by biological instinct than by social learning. Typically, the arousal of the recipient is triggered by the arrival of a predator or a potential mate. The resultant reaction (e.g. blushing) is spontaneous. It is rarely motivated by a carefully pondered decision. Communication between transmitter and receiver arises simply because of their mutual presence. The in-coming animal might be deemed the source of the message. And the aroused animal might be deemed the receiver of the message. But have teaching and learning also occurred?

Teaching and learning are special forms of communication. They operate when communication is accompanied by heightened levels of consciousness among teachers and learners. They are shaped, that is, by the wishes, intentions and values of teachers and learners. Further, teaching and learning are also shaped (or constrained) by social rather than biological circumstances – the cultural assumptions, conventions and codes that surround, yet also separate, the teacher and the learner. Together, these aspirations and circumstances mean that teaching and learning occur

across a cultural medium. Moreover, many teachers and learners find this medium to be foggy or cloudy. It hinders satisfactory communication. Teaching and learning, therefore, are never easy. They always include an element of demystification.

Showing how, playing how and telling how

When animals communicate socially, they do so without the obvious assistance of speech. Human learning also arises from non-verbal communication. In such circumstances, adults serve as models; and learners gradually, if sometimes selectively, 'pick up' the appropriate behaviour through watching the demonstrator. Sometimes, such learning is neither intended nor expected by the model; sometimes, on the other hand, modelling is deliberately organized to assist the learner. Either way, learning derives from the process of showing how. Further, a notable feature of such teaching and learning is that it often takes place on the job: it is typical, for example, of the acculturation of craft and trade apprentices. Typically, too, teaching (or modelling) through showing how is a repetitive process. It continues – usually self-consciously on the part of the teacher – until the designated learners can faithfully copy the teacher's actions.

Homo sapiens seems to be unusual among members of the animal kingdom, in that it can also teach and learn in other ways. One of the most important forms of human teaching and learning is accomplished in off the job settings. Separated from life in this way, education begins to become a specialized and socially visible activity. Learners acquire the necessary experience off stage, under surrogate conditions. Central to this form of teaching and learning are the notions of 'rehearsal' and 'play'. Learning through play, therefore, is regarded as a rehearsal for later life. Learners, adults as well as children, gain confidence and competence in social and other activities without being exposed to unnecessary risks. Indeed, renaming play as 'simulation' has made it possible for adults to acquire, safely and inexpensively, the competences of airline pilots and space astronauts.

But, culturally and educationally, play is also important in two other respects. First, organized play can be used to cultivate life styles as well as specific skills. Through play (e.g. 'doctors and nurses'), children not only learn how to do things, they also begin to learn the cultural value and social meaning of such activities. In Britain, for instance, the nineteenth-century schooling of middle- and upper-class boys placed considerable stress on competitive games as a means of inculcating values such as 'fair play', 'manliness' and 'gentlemanly conduct'. Sporting competence – the acquisition of specific skills – was secondary to the inculcation of the

social and political values discussed in J.A. Mangan's *Athleticism in the Victorian and Edwardian Public School* (1981) and *The Games Ethic and Imperialism* (1985). Meanwhile, the female counterparts of such school-boys enjoyed (or struggled against) a different kind of secondary learning – inculcation of the domestic values and social attributes discussed in Sara Delamont and Lorna Duffin's *The Nineteenth Century Woman: Her Cultural and Physical World* (1978). Indeed, such forms of secondary learning may be the most important aspect of learning through play.

The second feature of play is that an element of indeterminacy surrounds the transferability of off-the-job learning to on-the-job practice. If the off-stage context of play differs from the context of real life, the resultant learning may not be smoothly transferred to the real world. In the extreme case, the learner remains intellectually and socially in the play area, and at a cultural and emotional distance from everyday life. Hence, calls for schooling to move closer to the real world – and become *relevant* – are a call for schooling to abandon its historic role as a socially separate set of rehearsal rooms. The enhancement of relevance is not easily accomplished in the context of schooling.

Play is therefore a two-edged educational instrument. It may be culturally valuable as an agency of socialization and acculturation. But a price may have to be paid for the discrepancies that result from the learner's off-stage and on-stage performances. There is always a gap between teaching through play and teaching through life. Learning to climb on an indoor climbing wall is not the same as learning to climb on a dark, windswept, ice-covered mountain side. The institutionalized contexts of teaching and learning are rarely the same as the disorganized, and sometimes unfathomable, contexts that make up real life. Historically, then, the formalization of schooling introduced an element of slippage between school and life.

Such slippage can be regarded in two ways. On the one hand, it can be identified, disapprovingly, as an undesirable inefficiency in intergenerational transmission. Play is deemed to be merely a pale substitute for life. Yet, on the other hand, slippage can also be regarded approvingly – as when scientists and artists 'play around' with old ideas and come up with new and socially valuable notions, procedures and solutions. In such circumstances slippage turns the intention of cultural reproduction into a source of cultural production.

As well as the educational possibilities of play, the human species has also developed another source of off-the-job learning. Showing how is joined by telling how. Learners gain access to new forms of behaviour by being transported even further away from life – to a rehearsal room inside their heads. For instance, to teach an unfamiliar route, the teacher might conjure up a map inside the learners' heads and transport them verbally

along the desired pathway. The telling-how process is initiated and sustained by such linguistic openings as 'Imagine . . .' or 'Picture in your mind . . .' Such teaching and learning revolve around the manipulation of mental images. Historically, the development of telling how was crucial to the accelerated social evolution of the human species. Teaching and learning ceased to be hands-on (i.e. showing how) activities. They began to be conducted, in effect, through a sharing of minds.

By shifting teaching on to a cognitive plan, the scope for telling how became much greater than that for showing how. Experiences could be brought to mind more readily than they could be brought to hand. Over the centuries, however, the boundaries of human communication have constantly been redrawn. The emergence of telling how increased the potency of cultural transmission, deepening the forms of experience – abstract as well as concrete – that could be communicated through educational channels. Above all, it opened up forms of cultural transmission, from epic poetry to historical narrative. Indeed, as this line of argument indicates, the processes of telling how have many cultural and historical affinities with story telling.

The separation of telling how from showing how also had a structural consequence for education and schooling. Teachers emerged not only from those who were competent at showing how but also from those who were skilled in telling how. Teachers surfaced as a separate social category, via a distinction that survives in the aphorism 'those who can, do; those who can't, teach'.

Language and thought

The emergence of telling how was linked, inevitably, to the emergence of more abstract forms of language. The language of early humans was probably closely linked to the manipulation of the environment. It was a language of representation. It consciously mimicked and manipulated, through sounds and bodily gestures, socially significant objects and activities. Then as now, language activities were essential to collaborative aspects of human life (e.g. the collective hunting of large animals). And echoes of this early collaborative and communicative language survive in team games, like football and hockey, where participants pursue a wild or runaway ball until it is killed and put in the net through their efforts.

In general, language served as a tool, a means of increasing the reach, power and effectiveness of individuals and social groups. Gradually, however, the communication that accompanied everyday survival, like the sounds used to accomplish the kill in hunting, was generalized to other spheres of life. Language became decoupled from its originating

contexts. It took on a life of its own. In turn, social interaction took advantage of opportunities offered by this decoupling (or slippage): communication became connotative as well as denotative. A word could denote (i.e. stand for) something; and/or it could connote (i.e. carry additional meanings). Language, therefore, became a multi-message system, a medium suffused with uncertainty and imprecision. In the extreme, the literal (or denotative) meaning of a word or phrase can become completely masked by its accompanying connotations. Life can become a 'bowl of cherries' (or, conversely, a 'bed of nails'). Indeed, the development of human language and communication has advanced to such a degree that speech can also be ironic; that is, a statement can mean exactly the opposite of its literal meaning. It should be no surprise, therefore, that teaching and learning are complex communication activities.

Signs, symbols and cultural literacy

From this perspective, the most important feature of human communication is that it builds upon many layers of meaning. It is a subtle, finely woven medium whose meanings have to be extracted rather than received. Necessarily, transmitters of meaning (e.g. teachers) cannot guarantee the faithful or hi-fidelity dissemination of their messages – circumstances well documented in Terence Moore and Chris Carling's *The Limitations of Language* (1988). Language can be as much a source of social division as a tool of social unification. Symbol-laden communication may foster solidarity among insiders who grasp its meaning. But the complexities of communication may also intensify the barriers that exist between the insiders and outsiders of a culture. To those on the inside, culture-bound communication operates in an aura of sharing. Yet, to those on the outside, that same culture-bound communication evokes feelings of discomfort: outsiders may feel that the complexities of language will be used against them. Like the catalogue system of a large library, a cultural code can be a forbidding threshold to some and a welcoming gateway to others.

To enjoy the fruits of the cultural heritage of a social group, noviciates and outsiders must learn to read the signs and symbols of the hitherto alien culture. And full membership of a social group is achieved when newcomers begin to acquire two skills: the ability to receive (i.e. read) and the ability to transmit (i.e. write) the messages of a given cultural code. Necessarily, then, participating membership of a cultural group is closely tied up with culture-specific knowledge and with the acquisition of varying degrees of cultural literacy.

Cultural literacy may also be tied up with economic proficiency. To be

able to read weather signs is economically important within a fishing community, just as the ability to read market reports may be economically important in the stockbroker belt. In turn, economic intelligence serves as a cultural power base. Further, cultural literacy and economic power are also linked, in different ways, to the practices of socialization, acculturation, education and schooling. To those within a group, power is given through socialization and acculturation; to those who join the group, power is acquired (or shared) through education; and to those outside the group, power is (or can be) denied through schooling. In cultural terms, therefore, schooling may act against the empowerment of learners.

Cultural storage

Experiences happen only once. Yet, if they are to remain part of an individual's personal heritage they must be retained. But experience is rarely stored as itself. More often than not, it is retained in a codified form. For instance, human memory is based on the storage of chemical and electrical traces in the brain and nervous system. But humans also have an unrivalled capacity to store experience outside their bodies. Objects such as totem poles and stone circles are clear examples of culturally coded and socially stored information. They represent, in a shorthand yet memorable form, experiences that are revered, treasured and deemed worthy of recall. At best, they consolidate the past of a social group. Individuals also retain comparable objects (e.g. locks of hair, birthday books, concert programmes and school photographs). In one sense, such cultural and personal artefacts are part of life. Yet, they are also larger than life. As valued memorabilia, they are important personal and cultural markers. They testify to life's continuity, past, present and future.

Cultural storage, therefore, is a highly selective process. Yet, through time, the human species has greatly extended its storage capacity. Indeed, these two activities have converged. Much cultural storage in the twentieth century is little more than archival. Experiences are stored in the modern equivalent of charterhouses, to be recovered only under exceptional circumstances. Today, the human memory has become less of a storehouse of raw experience (i.e. memories) and more of a repository of instruments that can unlock experiences stored elsewhere (e.g. in the Yellow Pages). Powers of detailed recall, therefore, have declined in importance as symbols of cultural status and authority. Displaced from the sphere of economic production and political power, the display of detailed recall has survived on the margins of society, in the after-work world of cultural sideshows (e.g. pub games, music hall acts and television quiz shows).

Summary

Many accounts of schooling indicate its importance as a transmitter of culture. This chapter has suggested that cultural transmission is not an automatic, knock-on process but rather one that incorporates intellectual processes of encoding and decoding. These processes are fostered through acculturation. But they are also cultivated through education and schooling. Equally, they have also been dramatically affected by changes – also described as improvements – in the devices used for the storage and communication of experience. Nevertheless, there is another side to these historical transformations. The elaboration of human communication has also served to accentuate the gulf between doers and tellers, between insiders and outsiders and, in the realm of cultural power, between the haves and the have nots. People can be deprived of the nourishment of cultural literacy just as easily as they can be deprived of the sustenance of wild berries, fresh salmon and sun-dried grapes. At times, however, cultural literacy – access to cultural codebooks – has been extended to people outside the host culture. At other times, cultural literacy has been deliberately manipulated (e.g. via language policies) to reaffirm, if not reinforce, the gap that separates insiders from outsiders. Education and schooling, therefore, can be agencies of cultural manipulation just as much as they can be agencies of cultural transmission.

CHAPTER 4

Education and literacy

Here's freedom to him that would read,
Here's freedom to him that would write.

(Robert Burns, poet, 1792)

The concept of literacy was defined very broadly in the previous chapter. It referred to a person's ability to read and sometimes write down the cultural symbols of a society or social group. Essential to this argument was the difference between appearance and meaning or, to put it another way, between signs and symbols. Signs and symbols are both representational: they stand for something else. But a sign has a visual resemblance to the notion that it signifies, whereas a symbol, on the other hand, is always a codified message. This difference is demonstrated by the British road sign for a school. Today, schools are announced by means of a sign – a pictorial representation of a schoolgirl and schoolboy. Before the 1960s, however, schools were announced by means of a flaming Olympic torch, a symbol looking like a soft ice-cream that actually stood for the torch of learning.

The modern school sign was introduced, presumably, to conform with cross-national standards. But it is an open question whether any legislation can make signs valid across cultural boundaries. Like the washing instructions on international clothes labels, international road signs are inevitably a source of cross-cultural confusion and within-culture humour. Their meanings are rarely unambiguous. No sign is purely representational or culture free. The gap between the sign itself and what it stands for, and between the writer and the reader of the sign, always offers scope for slippage of meaning.

Written language, like sign language, is also a message system that utilizes signs and symbols. Certain forms of writing (e.g. pictographic writing) are built as representation systems. Their meaning can be uncovered by appreciating the physical similarities between the written signs and the objects and notions that they stand for. Alphabetic writing – as used in this book – is based on a much more elaborate system of coding. It is a non-representational system of communication. There is no physical

connection between a text and what it signifies (or stands for). And, for this reason, alphabetic or alphanumeric literacy is comparable with cultural literacy. Likewise, alphanumeric literacy is not simply a set of decoding skills, it is also a political resource – an item of cultural property and an instrument of cultural power. Equally, the history of alphanumeric literacy is not simply about the spread of cultural power, it is also a history of the carefully managed distribution of cultural power. Literacy does not flow from person to person. Rather, it is consciously channelled to further social and political aspirations. In short, the history and politics of alphanumeric literacy cannot be separated.

Many writings on alphanumeric literacy fail to recognize the importance of this political dimension. As Harvey Graff has suggested in *The Labyrinths of Literacy* (1987), such writings subscribe to a 'literacy myth'. They take the view that literacy, like schooling, has only socially positive dimensions. They claim that its introduction and dissemination have been an unequivocal source of human improvement and human progress. Yet, the notion that literacy is all things to all people should be treated with caution. Certainly, the acquisition of alphanumeric literacy seems to have been associated with the rise of specific social groups. But it may also be true that the literacy myth is most enthusiastically celebrated – in literate media, of course – by those who have benefited from its powers.

The history of colonialism offers an illustration of the politics of literacy. As European armies conquered overseas territories, alphanumeric literacy, and the cultural messages that it carried, was deliberately substituted for indigenous form of communication. The conquered peoples were left stranded in a cultural vacuum. Their own languages and cultural codes ceased to have official currency and were replaced by cultural artefacts assiduously distributed and closely regulated by the colonial masters (e.g. through control of schooling and print-based mass media). The uneven distribution of alphanumeric literacy was, therefore, integral to the achievement and survival of political domination.

Nevertheless, the creation of a cultural vacuum, and its replacement with stunted forms of the dominant culture ran into the problem of human reactivity. Typically, subordinate groups reacted to the spread of alphanumeric literacy in two ways. Their political programmes called for the restoration and preservation of old cultural codes (e.g. traditional spoken and written languages). And their programmes also demanded institutional resources (e.g. schools and adult literacy programmes) which would give them full, rather than stunted, access to the codes and code-books of the politically dominant culture. Indeed, such calls for access to the 'really useful knowledge' of the dominant culture commonly arise in all kinds of divided societies. They are reported, for instance, in Frantz Fanon's analysis of colonialism, *The Wretched of the Earth* (1965). But they

also occur in social contexts divided by class and gender, as discussed in Brian Simon's *The Two Nations and the Educational Structure 1780–1870* (1960), and Nonita Glenday and Mary Price's *Reluctant Revolutionaries: A Century of Head Mistresses 1874–1974* (1974).

Overall, then, alphanumeric literacy can usefully be regarded as a cultural tool. It supplies power to its possessors and, like other tools, provides them with a means of escaping their immediate environment. Yet, as noted, literacy is not universally distributed. Indeed, to appreciate its historical significance, it is probably more important to consider the uneven cultural distribution of literacy than it is to understand the new powers made available to those who decoded its mysteries.

The mystery of alphanumeric literacy

As suggested, the mystery of alphanumeric literacy derives from the fact that it is a form of symbolic rather than representational communication. To learn to read and write is, therefore, to translate mystery into mastery. The power of alphabetic literacy, cogently outlined in Eric Havelock's *The Origins of Western Literacy* (1976), is associated with the fact that only 20–30 symbols are needed to represent the entire range of sounds and meanings used in different cultures. The handful of symbols used to create these high levels of generalizability stands in marked contrast to the thousands of characters necessary in Mandarin Chinese. The alphabet is a highly abstract codebook.

Early written scripts – like hieroglyphics – were based on the codification of ideas (e.g. 'horse', 'love', 'mother') and comprised a series of pictures. Alphabetic scripts have a completely different derivation. They are the codification of sounds, not ideas. The range of sounds used in spoken communication is built up from a small set of fundamental sounds (vowels) which are open to modification by the remaining letters of the alphabet (consonants). Thus, if a language is standardized phonetically, it can be read aloud as soon as the sounds of the letters and syllables have been learned. Russian and Swedish are two languages which come near to meeting this criterion. They can be competently read aloud with only a few hours' practice. But to read the sounds of a language is not the same as being able to read the meanings of a language.

How, then, does the alphabet convey meaning – its ultimate purpose? As the example of Swedish and Russian suggests, there are two processes entailed in extracting the meaning from an alphanumeric script. First, a pattern of sounds has to be derived from the letters; and, second, the resultant patterns of sound must be translated into units of meaning. This double-decoding is the basis of the so-called phonetic method of teaching reading. Children are trained to build up the sounds of words as a prelude

to extracting the meanings of words. Likewise, children and adults who have reading difficulties are often encouraged to 'read it aloud', so that they extract the meaning of sentences from sounds rather than from print. And one of the signs of skilful reading is that people can read silently without moving their lips. As readers gain in competence, therefore, the double-decoding processes merge. In effect, individuals 'read it aloud' inside their heads, simultaneously and effortlessly extracting the meanings coded in the sounds. As a result, the dual decoding tasks cease to be visible in the behaviour of a competent reader. Reading appears to be little more than a process of seeing, despite the maxim that 'there's more to seeing than meets the eye'.

How, then, is alphabetic writing related to alphabetic reading? Are the processes of writing merely the reverse of the processes of reading? Is writing merely the translation of thoughts into sounds which are then reduced to inscriptions on paper and other media? If so, did reading and writing gain simultaneous cultural currency? And were they disseminated in tandem? In fact, the historical record suggests otherwise. Within alphanumeric cultures, the skill of writing seems to have diffused much more slowly than the skill of reading. No doubt this delay had something to do with the fact that writing requires sophisticated manual skills and specialist, if not costly, writing materials. But writing also differs from reading in another important respect. Reading is a means of revisiting the accumulation of past experiences; whereas writing is also a means of organizing and distributing visions of the future. In short, writing – the power of the pen – goes beyond the power of reading, and is not its mirror image.

For these reasons the history of literacy is really two separate histories whose divergence and convergence can be illustrated by reference to four historically significant processes: (1) the rise of personal property; (2) the growth of trade with distant parts; (3) the emergence of the town as a manufacturing centre; and (4) the development of large-scale factory production.

Literacy and property

From the earliest times, inscribed signs, whether on tally sticks, parchment, vellum or paper, have been used to record or display the extent of the 'earthly possessions' of human beings. But possession is not the same as ownership. During the early Middle Ages, for instance, it was assumed that everything belonged to God and that, accordingly, humans merely possessed their material goods (which included their children). Land, for instance, was merely held by stewards or occupied by tenants. Likewise, rights of occupation, or tenancy, were based on oral testimony (i.e. word of mouth).

Over time, however, patterns of land transfer changed. Although transfer was usually based on intergenerational inheritance, land often passed to relative outsiders, especially in times of famine and epidemic. As Michael Clanchy has elegantly demonstrated in *From Memory to Written Record* (1979), medieval transfers of this kind were increasingly recorded in a written form. Moreover, matters became even more complicated after the twelfth century. Stewardship (or possession) of God's land gave way to more powerful forms of tenure based on outright (i.e. freehold) ownership.

Tenure documents, however, often enjoyed only limited circulation among the senior owners and stewards. Tenants' rights of inheritance were, therefore, rarely acknowledged or recorded. In times of dispute (e.g. the enclosure movement in England and the Highland clearances in Scotland), small-scale tenants could appeal only to oral tradition for their land rights, whereas owners had recourse to written documents to enforce their entitlements.

As God's most senior steward, the Church not only enjoyed the fruits of large land holdings, it also retained the services of skilled copyists. Groups of men and women – many of them housed in convents and monasteries – became, quite literally, the keepers of God's word. And, to this end, they made copies of theological documents that might otherwise have been lost in the turmoils that accompanied the fall of the Roman Empire (c. AD 500). Well-versed in a variety of transcribing techniques (e.g. the preparation of parchment), these copyists – *clerks* as well as *clerics* – also turned their hands to non-religious texts. These included not only *pagan* texts (e.g. writings by Aristotle), but also more earthly documents such as details of harvest yields and land stewardship.

The development of record keeping – an early account of harvest yields was prepared for the Bishop of Winchester in 1208 – also marked the emergence of a literate administrative strata in society (e.g. notaries, scribes, accountants and calligraphers). Above all, it fostered the expansion of the supply of readers and writers who serviced the documentary requirements of the powerful, and often non-literate, sections of society. For chivalrous medieval knights, possession of literacy was a cultural frill: their word was still their bond. Yet, for propertyless peasants, literacy was equally a social hindrance: their word had, in effect, become their bondage.

To this degree, writing in the Middle Ages was primarily a matter of record keeping, not communication. Documents were drawn up, endorsed with a signature or a signet, and lodged in places of safe storage (i.e. charterhouses) to be resurrected only in disputatious times. Cultural communication remained predominantly an oral activity. People did not send documents, they sent messengers, a practice which has survived into

the twentieth century. Important communications from the Catholic Church to its members are still carried from Rome by a papal *nuncio*, the Latin word for an announcer or messenger.

Literacy and trade

Towards the end of the Middle Ages, the character of European cultural literacy was affected by a cluster of new factors. A major stimulus was the discovery of classical texts which had been lost, displaced or misplaced in the social upheavals (e.g. colonization by the Huns, Vandals and the Ostrogoths) that accompanied the decline of the Roman Empire. Together with commentaries, these texts, which passed from Greek into Latin via Hebrew, Persian and Syrian, comprised a new and unexamined storehouse of human experience, a corpus, among other things, of biological, physical, medical, astronomical and mathematical knowledge.

Gradually, this new learning – sometimes known as Aristotelianism – spread out across Europe and, in all kinds of different ways, stimulated intellectual inquiry by memorable philosophers such as Albertus Magnus (?1195–1280), Thomas Aquinas (1225–1274) and William of Occam (1285–1349). The intellectual voyages undertaken by late medieval philosophers also stimulated the comparable intellectual journeying of Renaissance figures such as Leonardo da Vinci (1452–1519). Indeed, many of these Renaissance voyages were also tied up with an international search for raw materials (e.g. silver, gold and spices) financed by merchants from communities in the Low Countries and the Mediterranean (e.g. Rotterdam, Lisbon, Genoa, Venice). Columbus's journey across the Atlantic in 1492 was, therefore, as much a commercial voyage in search of new sources of colonial wealth as it was an intellectual exercise to clarify the geography of the world. Indeed, it was the wealth acquired by the merchants that supported the scientific explorers of the Renaissance. Necessarily, then, intellectual innovators of that period were more closely allied to the merchant classes than to the Church. Gradually, early scientists put aside the teachings of the Bible and appealed, instead, directly to the book of nature, a transition which led them to become known as natural philosophers. Not surprisingly, this shift of attention away from theological texts and their associated doctrines did not always meet the approval of the established Church – a state of affairs, like the trial of Galileo (1564–1642), extensively examined in Arthur Koestler's *The Sleepwalkers* (1964).

Around 1450, a further technical development, that of printing with movable type, heightened the transmission potential of writing. Most early printed books were devoted to traditional texts (e.g. the Bible) rather than to the more speculative – and secular – new knowledge. Eventually, however, the new literature of the Renaissance was readily

disseminated by means of the printing press, as chronicled in Lucien Febvre and Henri-Jean Martin's *The Coming of the Book* (1976). In turn, the primacy of oral knowledge and the dominance of the Catholic Church began to be undermined. Above all, printing made possible a revolution in self-instruction and, in the process, fostered the growth of personal libraries. Learners acquired greater access to texts and commentaries previously guarded by their teachers. Equally importantly, they also acquired access to an alternative literature, to pamphlets composed by religious and political heretics.

Besides recognizing the commercial utility of the printing press and the new learning, the merchants also distanced themselves from medieval forms of scholarship by placing less emphasis upon Latin. The language of the marketplace ceased to be the same as the longstanding language of the Church. It became, then as now, the vernacular of the most powerful merchants. In these and other respects, the merchants were an upstart social group. They did not fit easily into the hereditary aristocracy of the land or the ecclesiastical aristocracy of the Church. Powerful merchants, of course, could buy direct entry into polite society. But many others used a more indirect method. They deployed their economic power to acquire cultural power. And it was through these efforts that upstart social groups acquired (or cracked) the cultural codes of the dominant culture. Further, new social groups also began to transcend the dominant culture by constructing their own distinctive life styles or manners. Indeed, the importance of manners to the cultivation of life styles is acknowledged not only in the motto of Winchester School (founded 1382), *Manners Maketh Man*, but also in a vernacular acknowledgement heard in twentieth-century Glasgow, *Manners is a braw thing*.

In Britain schools have always played an important role in the establishment and refurbishment of life styles. During the Renaissance, for instance, St Paul's School was established in 1510 by the Mercers' (i.e. clothmakers) Company of London. Such an initiative – discussed in Joan Simon's *Education and Society in Tudor England* (1966) – was intended to create a new kind of adult, the Christian gentleman. St Paul's, which served as a model for the foundation of many later schools, was designed to provide a general (i.e. broad) education for privileged members of the laity. The products of such schools, equipped with accounting, law, and modern languages, were expected to make their way in civil as well as ecclesiastical society.

In creating their own schools and in developing a modern approach to the teaching of classics and other subjects, the merchants created a distinctive life style for themselves. Some of them made use of schools for this purpose. But many others also took advantage of an important educational boot-strapping device – the self-instructional improving text. These

texts were manuals of etiquette or manners that recounted the forms of social conduct sought by aspiring social groups. One of the earliest and most influential improving texts was written by Desiderius Erasmus (1466–1536), a merchant-sponsored scholar who hailed from the important trading centre of Rotterdam. Erasmus's manual – which gave the word civility to the English language – was called *On Civility in Children* and was first published in Latin in 1530. Aided by the new technology of printing, it achieved enormous circulation. It appeared in more than thirty editions in Erasmus's lifetime, and more than 130 multi-language editions by 1800. As reported in Norbert Elias's *The Civilising Process* (1978), it offered advice on propriety ('don't wipe your nose on your sleeve'); table etiquette ('it is not very decorous to offer something half-eaten to another person') and deportment ('do not expose without necessity the parts of the body to which nature has attached modesty').

From an educational perspective, improving texts are historically significant because they contain life style information that is not accessible through the normal channels of intergenerational acculturation. In short, improving texts are an important means whereby children acquired – and still acquire – life styles different from those of their parents. Improving texts achieve their social popularity, and shape their readers' life styles, to the extent that they contain information 'my parents/teachers never taught me'. Classic twentieth-century cookery books and child-care manuals, like Mrs Beeton's *Book of Household Management* (1859) and Benjamin Spock's *Baby and Child Care* (1946), achieved much of their popularity because new generations of middle-class parents were required to feed and rear their families without the support previously offered by trained cooks and nannies. Likewise, recent improving manuals have helped to shape the sexual manners of generations whose access to artificial contraception far surpasses that of their parents.

Improving texts, therefore, are social passports that enable outsiders to become insiders. Erasmus's *On Civility in Children* met the aspirations of a small but powerful social group anxious to become more literate in the cultures or moral codes of the dominant sections of society. At different times, too, these codes of manners became known by different keywords. If ascendant members of Renaissance society aspired to become *civilized*, their medieval knightly counterparts sought to appear *courteous*, and their nineteenth-century descendants hoped that they could pass as *cultured* citizens.

Literacy and urbanization

Manners are very close to morality. Hence the manners of the merchants – the way they ran their lives – were a crucial feature of their commercial

ethic. Nevertheless, the entrepreneurial code of 'buying cheap and selling dear', meant that merchants regularly ran into difficulties with the producers (from whom they bought) and with the consumers (to whom they sold). Indeed, it was heightened instances of this tension that, among other things, fuelled the Reformation in Western Europe. Broadly speaking, the social upheavals of the Reformation were a reaction against exploitation by merchants. It was prompted by the rural producers (i.e. successful peasants with a surplus to sell) and carried through with the aid of skilled artisans in urban areas who, as both sellers (of their own produce) and buyers (of the produce of others), were open to double exploitation by the merchants.

The economic upheavals of the Reformation also occurred in the wake of a period of colonial expansion (again the work of the merchants and their supporters). Political disputes over the control of ports and trading routes were fought out in the sixteenth century, leaving Britain, France, Spain and Holland in a state of economic disarray. Increased taxation, a burden which ultimately fell upon the peasants, and the introduction of less labour-intensive forms of agriculture (e.g. sheep rearing), drove people off the land and into the towns.

The traditional rulers (whose wealth was derived largely from holdings in land) and the monopolistic merchant dynasties could not contain the opposition that came from the small merchants, the peasants and the early members of the urban proletariat. The traditional fabric of society was undermined and alternative worldviews came to prominence. The viewpoint of the primary producers (peasants and artisans) was voiced most cogently by Martin Luther. His writings and preachings called for a return to simple values and a life uncorrupted by self-indulgence, idleness and authoritarian (i.e. hierarchical) forms of social and ecclesiastical organization. For Luther, social reform would re-establish a life of personal piety untrammelled by the intervening apparatus, institutions, and officials of the Church. To this extent, early Lutheranism was a personal religion. Its adherents reformed themselves by looking inwards to their thoughts, feelings and conduct. Furthermore, the faithful were offered personal access to God's teachings: Lutherans believed that everyone should be taught to read Bibles translated into the vernacular languages of Europe.

John Calvin, on the other hand, adopted an outward going, interventionist view of social reform. His ideas were part of an urban movement that, economically, combined the interests of small traders with those of the skilled artisans. Unlike Luther, for instance, Calvin articulated the view – popular with traders – that the granting of credit and the charging of reasonable interest rates were acceptable forms of commercial practice. Calvinism became a much more organized, formalized and institu-

tionalized religion. If inner faith was the key tenet of Lutheranism, outward discipline was its Calvinist counterpart. And if the family was the basic unit of Lutheranism, the organizational unit of Calvinism was the community or congregation.

Calvinist teachings, therefore, paid attention to two complementary issues. First, they focused on the individual, stressing the Christian importance of personal responsibility, personal discipline and personal asceticism. And second, they focused on the organization of society, emphasizing that it should be uniformly refashioned according to God's biblical prescriptions. Together, these political arguments – discussed in John Morgan's *Godly Learning: Puritan Attitudes Towards Reason, Learning and Education* (1986) and Richard Tawney's *Religion and the Rise of Capitalism* (1942) – shaped Calvinist theories of literacy and education as well as a Calvinist theory of politics and government. Indeed, these various theories fed off each other.

Together, Calvinism and Lutheranism profited greatly from Gutenberg's invention. The provision of multiple copies of God's word in a language that the faithful could understand – discussed, for instance, in Frank Davies's *Teaching Reading in Early England* (1973) – gave the Protestant communities in Britain, France, Holland, Switzerland and elsewhere an interest in schooling – and reading – that marked them out from Catholic communities. Nevertheless, their investment in schooling and reading also had a more complex social consequence. Reading is a generalizable skill. To be able to read the Bible is also to be able to read other writings about society, social conduct and social change. In promoting reading, therefore, Protestant authorities also gave the faithful access to heretical notions. Accordingly, the promotion of heresy was an inevitable consequence of the promotion of Protestantism. It is no accident, therefore, that the history of the Protestant Church is a turbulent chronicle of theological dissent and congregational secession.

Literacy and industrialization

The various movements in trade, industry and urbanization that came together in the sixteenth and seventeenth centuries took on a new character in the following century. Water-powered machines took over significant areas of manual and domestic production. Workshops that, previously, had formed part of domestic dwellings were transformed into much larger productive units or manufactories. By the nineteenth century, the development of steam-powered versions of earlier machines, and the creation of railway and steamship networks, brought distant parts of the world into closer communion and greater interdependency. Before the nineteenth century, the fortunes of nations had waxed and waned

with the success or failure of their staple agricultural produce (e.g. wheat or wool). By the beginning of the nineteenth century, however, the economic fortunes of trading states began to be linked more closely to the booms and slumps of factory production than to the ups and downs of agricultural husbandry.

The economic innovations of the Industrial Revolution stimulated important changes in the circumstances of many people drawn to work in factories. For instance, the labour requirements of large-volume factory production took workers away from their domestic settings. Many children worked as diminutive and nimble adjuncts to manufacturing machinery. Housing ghettos were the result of large-scale migration towards centres of employment. And, not least, the release of workers in times of slump created factory communities sporadically full of young, able-bodied and, as important, disgruntled adults.

In turn, these demographic processes disrupted earlier patterns of domestic and community life. The employment of adults outside the home left many children unattended. Child employment meant that many children failed to enjoy the disciplines of schooling. Migration inserted people from agricultural backgrounds into the machine-driven rhythms of factory life. And unemployment imported poverty and social unrest into factory-based communities.

New kinds of schools – and other institutions – were established to compensate for these factory-related developments. Infant schools, for instance, were established to allow mothers of young children to work during periods of labour shortage. And Sunday and evening schools were organized for children who otherwise worked full-time during daylight hours. Despite their different names – factory schools, Sunday schools, evening schools, infant schools – all these educational institutions were designed to accommodate the consequences of industrialization. In short, they came between working-class children and their parents and, in the process, they interrupted (or replaced) earlier patterns of parent-child acculturation.

The new schools of the Industrial Revolution adopted a new social agenda. They sought not only to inculcate virtue – as had been the case since the Reformation – they also aimed to remould their pupils to fit in with the needs of the Industrial Revolution. Schools, for instance, began to place much greater emphasis on continuous and regular attendance. And, having secured or rescued their charges, school superintendents developed elaborate pedagogies to ensure that all children remained busy at their allotted tasks. Some reformers held that rote methods were no longer adequate to the new circumstances surrounding the Industrial Revolution. They believed that schoolchildren should understand as well as remember their lessons. In effect, they proposed that schooling should

be organized around a new and more powerful discipline, one that would mean the same to schooling as the machine meant to factory production.

Two developments flowed from this reconceptualization of schooling. First, much greater attention began to be given to the education, training and competence of elementary school teachers. Rote methods (or catechesis) were given much less attention and, instead, teachers were expected to become accomplished in more intellectual methods of instruction. They were expected not merely to inspect the contents of pupils' minds (e.g. by hearing memorized lessons), but also to exercise the minds of their charges (e.g. by questioning them on their lessons). The second development, promoted alongside the spread of elementary instruction, was a major expansion of the school curriculum. Children began to be taught through secular (i.e. worldly) as well as religious topics (a fact well-documented in the facsimile pages appended to G.S. Chalmers's *Reading Easy 1800–50*, 1976). It was assumed that if children knew how the world worked, they would be more ready to accept their allotted, if unnatural, place in the scheme of things. But, as in the case of teaching Protestants to read, the secularization of the elementary school curriculum also broadened the intellectual horizons of learners in new and unplanned directions. Indeed, one of the outgrowths of nineteenth-century elementary schooling was a wide range of educational institutions (e.g. libraries, Sunday schools, evening classes) founded by, and for, members of the working class.

Another educational consequence of the Industrial Revolution was that writing began to enter the core curriculum of schooling. But this curriculum innovation did not meet with unqualified approval. Some people argued that writing – a business skill – should not be taught in Sunday schools (i.e. on the Lord's day). Others claimed that it would promote crime ('if you teach them to write, they will learn to forge'). And many more commentators tacitly assumed that the acquisition of writing skills would elevate children above their proper station in life. Nevertheless, there was a powerful educational lobby that recognized the importance of writing skills to the administration of the factory system. In a manner reminiscent of the Middle Ages, the factory system was also associated with a separation of ownership from possession (or occupation). When the manager of a factory was also the owner, management was by word of mouth. But as expansion began to be financed through partnerships and multiple shareholdings, owner-managers began to be replaced by hired managers who, by analogy, merely occupied their factories. In turn, management became a specialist occupation. As intermediaries between employers and employees, managers were expected to keep records and compile written records for their employers. Likewise, they were also required to act upon written documents emanating from their suppliers and

clients. In such tasks, managers were assisted by male clerks who, by necessity, were expected to have achieved greater levels of written literacy than their parents. The army of clerks expanded with industrialization. And schools made an equivalent effort to supply such personnel.

Just as the dissemination of reading skills was assisted by the technology of printing, so the spread of writing in commercial institutions also received a comparable technological stimulus. The traditional barrier to the spread of handwriting was the cost of quills, penknives and paper. But the invention of the mass-produced and low-cost steel-nibbed pen in the 1830s ushered in a new era of writing, and new forms of writing (i.e. copybook handwriting).

As noted earlier, there is a close relationship between property ownership and the creation of written records, and between writing skills and forms of accounting. Indeed, many reports produced by factory managers included details of production, summaries of wage costs and details of factory maintenance. For this reason, writing and practical arithmetic were often taught in schools as a joint skill known, in Scotland if not elsewhere, as 'casting accounts'. The teaching of arithmetic, therefore, was directly linked to the production of bills and receipts, which is why problems of the kind 'If 54 men build a house in 90 days, how many men can do the same in 50 days?' (*The Compendium of Arithmetic*, 1824) figured so largely in the schoolbooks of the nineteenth and twentieth centuries. In earlier centuries, arithmetical knowhow was a craft skill, restricted to specialist occupations (e.g. surveying); and often taught as a separate school subject (e.g. 'mensuration'). But the factory system and the associated spread of wage labour drew more and more people into the cash nexus and into the day-to-day use of arithmetical knowledge. To this extent, there is a closer historical association between writing and arithmetic (and their entry into the school curriculum) than there is between writing and reading.

Summary

Literacy is an extension of the species-wide powers of speech and thought. In effect, the refinement of literacy (e.g. the invention of alphanumeric symbols) has enabled human beings to 'speak' and 'think' in new ways. Nevertheless, the spread of literacy has been a two-edged process. For some human beings, it has been a source of social emancipation yet, for others, it has seemed more of an agency of social control. Thus, the history of literacy is not only the history of the spread of a set of technical skills but also the history of changing access to cultural resources. Those who aspired to retain the *status quo* sought to harness, if not control, literacy through censorship, licensing of approved printers, and the taxa-

tion of publications. But this was rarely sufficient. People who had been taught through authorized texts simultaneously acquired tools which gave them access to politically contentious works like Thomas Paine's *Rights of Man* (1791) and Mary Wollstonecraft's *Vindication of the Right of Woman* (1792). And many of those, like Robert Burns, who were inspired by such unauthorized texts extolled the benefits of self-instruction. Using an appropriate metaphor, E.P. Thompson points out in *The Making of the English Working Class* (1968) that despite the conformism of official schooling, 'the towns, and even the villages, hummed with the energy of the autodidact'. Again, education could not easily be accommodated within the framework of schooling.

CHAPTER 5

Teaching, curriculum and learning

Domestic education is the institution of nature; public education, the contrivance of man.

(Adam Smith, economist, 1759)

By comparison with other animals, human beings have a large measure of choice in the rearing of their young. And the exercise of such choice, coupled with the existence of alternatives, accounts for the cultural diversity of *Homo sapiens*. Human education, like human upbringing, also entails the exercise of cultural choice. To educate someone, therefore, is to reconsider and redirect their cultural and economic fortunes. In short, education turns them into someone else. And responsibility for such redirection largely rests with learners and their teachers.

Schooling is comparable to education and upbringing. It, too, is an option-laden intervention in the lives of human beings. But it differs from education and upbringing in so far as less responsibility and fewer choices are made available to teachers and learners. Instead, cultural power and responsibility remain with outside agencies, notably the Church and the State. To this degree, schooling is about the management, even the manipulation, of the choices of teachers and learners. And school curricula are one of the key political devices used to accomplish this management and manipulation.

Curriculum

Biological evolution occurs when a species repeatedly samples its changing gene pool. Equally, social evolution is built around successive samplings of the changing heritage of human experience. In neither case, however, does evolution occur randomly (or by 'blind chance'). Like the selection of a mating partner, the selection – or sampling – of past experience is influenced by many external factors. For these reasons, then, a curriculum is a social artefact. It is configured according to those elements of a cultural heritage that are deemed worthy of transmitting or communicating to a new generation of learners. To this extent, a curriculum

draws upon the past but is shaped according to the future. Above all, it embodies a vision of the future, of the world that is to come.

But a curriculum is more than a vision; it is also a cultural tool. And, like all tools, a curriculum is shaped by its users, both those who wield it and those whose lives are managed – or steered – according to its prescriptions. Moreover, as a power tool, a curriculum is more likely to reflect the cultural selections, values and aspirations of powerful social groups than the cultural assumptions and aspirations of powerless groups.

From an historical perspective, school curricula, and the visions that they embody, are fragile and fluid. Curricula may embody visions or blueprints of the future. But their relationship with the future is always problematic. An ideal curriculum is both a blueprint for the future and, as important, a set of procedures for realizing such goals. But many curricula, however, are far from ideal. Destinations may be specified without including an indication of the routes to be followed. And routes may be presented as compass bearings that point across otherwise uncharted terrain.

To this extent, curriculum design, construction and implementation is a multifaceted production process. New curricula usually meet the light of day as rough-hewn outlines. Thereafter, they are repeatedly re-fashioned by curriculum committees, government inspectors, textbook publishers, etc. Indeed, the curriculum introduced into a school may bear little resemblance to the curriculum produced on the drawing board of its originators. The prolongation of curriculum construction can be regarded from two contrasting angles. One view is that the gradual distortion of a curriculum vision is a retrograde process: the eventual activities steered by the curriculum are merely a shadow of the intended curriculum. The contrary view, however, is that the prolongation of curriculum production should be regarded as a strengthening activity. The curriculum starts out as a shadow but is gradually transformed into a tried and tested artefact.

Whatever its value, the production process – from raw to fully fashioned curricula – has been on the agenda of schooling for several centuries. It has changed substantially over the same timespan. Today, most forms of schooling operate with fully fashioned curricula. But this was not always the case. In the Middle Ages, for instance, university teachers worked with relatively raw materials. Experience was selected without much thought being given to the form in which it should be organized or transmitted. In Glasgow, for instance, the university's teachers met on the opening day of the academic year to decide which source texts (e.g. works by Aristotle) they would use. Thereafter, they gave public readings and commentaries on their chosen works (the word *lecture*, like the word *lesson*, comes from the Latin verb 'to read'). As this

suggests, there was no prescribed – or universally agreed – order in which texts were to be read by the teachers and studied by the learners. Above all, very little of the teaching presumed the existence of a set programme or course. Instead, student learning was a pick and mix affair. Students came and went according to their own circumstances. Many of them migrated from university to university (i.e. from teacher to teacher) to accommodate their intellectual, social and political interests.

Gradually, however, the raw material of university teaching was subjected to increasing formalization before it reached the hands and minds of teachers and learners. Indeed, the rise to prominence of the word ‘curriculum’ in the late sixteenth century is one indication of this re-organization. As suggested by its origins – the Latin word for a course or track used in athletic competitions – a curriculum embodies a route or journey undertaken to reach a destination. Its etymology suggests above all that a curriculum prescribes a sequence or *course* of learning. Pre-curriculum texts did not, it seems, refer to the sequential aspects of teaching and learning. Instead, they denoted the structuring of a student’s studies by reference to terms like *reges* (rule), *leges* (law) and *disciplina* (discipline). Nevertheless, sequential terms like *ordo* (order) began to appear in the University of Paris in the early part of the sixteenth century. They formed part of a major revision of the University’s practices that came to be known as the *Modus et Ordo Parisiensis*. And, in turn, these organizational innovations served as blueprints for the post-Renaissance reform of other universities.

The midwife of the educational term curriculum was probably the much older phrase *curriculum vitae*. If *curriculum vitae* is a course of life, a *curriculum scholae* became, by analogy, a course of school. Further, the educational annexation of the curriculum notion also seems to have been associated with two other suppositions. First, it began to be assumed that learning should follow a clearly defined sequence (i.e. a course); and second, that such courses should be rounded and coherent entities. In other words, curricula were to be well ordered, both in the sense of sequence (as in the phrase ‘order of events’) and in the sense of structure (as in the phrase ‘an ordered society’).

The connection between curriculum and ordered (or formalized) schooling can also be related to the fact that some of the earliest uses of the term curriculum appear in the records of two Calvinist institutions – Leiden and Glasgow universities. As already indicated, Calvinist theology placed great emphasis on social discipline, and upon the right of church officials to intervene in the lives of the faithful. As John Calvin preached in 1539, ‘the body of the church, to cohere, must be bound together by discipline as by sinews’. Very probably, these notions extended to educational institutions run by Calvinists. Thus, the concept of curriculum may

have held the same sense of order in Calvinist theories of schooling as the concept of discipline held in Calvinist theories of social administration.

The connection between curriculum and Calvinism deserves further examination. Curriculum may have made early appearances in Calvinist circles, but the latter half of the fifteenth century was an era when all educational institutions – Catholic as well as Protestant – were engaged in reorganization and reform. It is no accident, therefore, that a manual designed for Jesuit schools, the *Ratio Studiorum* (a title that can be translated as scheme, programme, order or logic of studies), was published in 1599, less than thirty years after the appearance of the term curriculum.

The meanings attached to *curriculum* and *ratio* also relate to another organizational innovation. The term ‘system’ came to prominence in the seventeenth century, at a time when much attention was paid to the movement and configuration of the sun and its adjacent planets. The appearance of the term ‘curriculum’ was, therefore, not only part of the ordering of schooling, it was also part of the systematization of schooling. To this extent, a curriculum is a unified system of interconnected elements. Just as a harmony was ascribed to the movement of the planetary spheres, so it is likely that a comparable harmony was sought in the interconnectedness of the elements (or subjects) of a curriculum.

Nevertheless, the subsequent history of the curriculum idea has paid only partial attention to the unity and coherence of curricula. There has been a permanent tension between the breaking down of curricula into smaller units (e.g. subjects, lessons) and the building up of curricula to preserve their overall integrity. Typically, curricula have been reorganized to make them more accessible to learners. Thus, the wholeness of human experience is broken down into a series of separate intellectual units (e.g. subjects), separate texts (or textbooks), and separate units of instruction (e.g. lessons). But the formalization or systematization of schooling may have served only to widen the gap between learners and the cumulated wisdom of their forebears.

It is not unreasonable to claim, therefore, that medieval students, who lived in the pre-curriculum age, were intellectually much closer to Aristotle than their twentieth-century counterparts who are expected to rely on selective, if not watered-down, versions of Aristotle’s writings. The fashioning and fragmentation of a curriculum is, therefore, a double-edged process, a thesis forcefully propounded with reference to Renaissance and Reformation schooling in Anthony Grafton and Lisa Jardine’s *From Humanism to the Humanities* (1986). Students who read original sources were exposed directly to the values of humanism; whereas students who were taught via separate subjects (viz. the humanist curriculum) may merely have been exposed to the latter-day values of the curriculum builders or the sixteenth century. Such systematization of a

curriculum may increase the marketability of schooling (e.g. by producing attractive learning materials). But, as a consequence, it may also yield adults who have been schooled (or textbooked) rather than citizens who have been educated.

The recent history of school curricula in the United States and the United Kingdom further illustrates this tension. In the early days of the curriculum notion, teachers took their students through an entire course or programme of study. Gradually, however, single-subject teachers – who taught the same topic year after year – were introduced into schools and colleges. Single-subject teachers may, perhaps, have been instrumental in enhancing the quality of individual parts of the course, but their rise to prominence also had the complementary consequence of reducing the overall coherence of the course. Curricula became fragmented, dispersed aggregates of subjects rather than unified programmes of study.

The twentieth century has seen further curricular fragmentation. The introduction of curriculum options (or electives) has recast the notion of a curriculum, not as a course but as a branching tree. By selecting options, each student takes a different learning route. More recently, the curriculum tree has itself suffered major surgery. Today, many programmes offered in schools and colleges are little more than piles of pre-cut timber, relabelled as modular curricula. At best such educational offerings are courses in a culinary, not a curriculum, sense. But what would John Calvin have made of these curricula? What, and where, are the sinews – or over-arching concepts – that hold them together? Indeed, the interrelationships between the units of a modular course are probably as much a mystery to the teachers of the separate units as they are to the students who seek a coherent path through the advertised programme.

If a curriculum is more than the sum of its parts, it comprises not only a range of individual units but also the interrelationships and interactions that hold the units together. A curriculum, therefore, is an ordered or structured entity. It is more than a cluster of educational topics, just as a house is more than a pile of bricks. If an educational programme can be reduced to a list of topics or subjects, there is good historical and etymological grounds for labelling it as a syllabus rather than as a curriculum. The word syllabus, related to the term syllable, is most readily translated as ‘table of contents’.

In an important sense, a curriculum is a carefully selected and carefully structured storehouse of experience. The contents of the storehouse are chosen for their capacity to shape learners in particular ways. And the contents of the storehouse are arranged according to the sequencing that best achieves the reshaping of learners. Ultimately, however, the shaping potential of a curriculum can be realized only through teaching and learning.

Teaching and learning

Teaching and learning can be envisaged, respectively, as the unpacking and repacking of a curriculum storehouse. To teach, therefore, is to bring stored up experience to life in such a way that it can be grasped by the learner. The teacher's task is to unlock the potential of the curriculum whereas the learners' task is to reshape themselves in the light of the curriculum's potential. Unlike the learner, however, teachers conventionally have prior knowledge of the contents and layout of the storehouse. Typically, too, teachers have prior access to the cultural codebooks that govern the preservation (or codification) of human experience. Teaching and learning, therefore, are rather more than the handing on of experience. They are more complex activities. Teachers not only have to unpack the curriculum storehouse, they also have to translate experience into a form that is accessible to learners. Likewise, learning can only be accomplished if learners can find ways to link their own prior experience to the experiences offered by their teachers.

Although teaching was a recognized occupation in the Middle Ages, it was hardly a 'trade' or 'calling'. It was more of a transient activity than a permanent occupation. It was, for instance, an adjunct to monastic duties, or it was a task allocated to people forced (e.g. by physical injury) to abandon their chosen occupations. As a socially distinct activity, teaching presumably emerged when human beings gave thought to the collective and corporate reorganization of their economic and cultural activities. In turn, certain adults were charged with giving their time and attention to the communication of skills and knowledge. In classical Greece, this task often fell to slaves known as pedagogues. But, by the Middle Ages, teachers and teaching were closely bound up with the preparation of church officials and with the dissemination of craft skills through schemes of apprenticeship.

As described in O.J. Dunlop and R.D. Denman's *English Apprenticeship and Child Labour: A History* (1912), apprenticeship is a much older institution than schooling. Nevertheless, schools and schooling grew out of the organization and regulation of apprenticeship. Features of this transition can be seen, for instance, in the emergence of the oldest surviving universities – Paris and Bologna. From around AD 1150, students travelled from all over Europe to sit at the feet of lawyers (in Bologna) and theologians (in Paris). As foreigners, the students in Bologna were denied rights and privileges available to the established residents (or citizens) of that city. Accordingly, the visiting scholars banded together in the interests of self-preservation. The University of Bologna began life, therefore, as a guild of scholars. In Paris, by contrast, it was the teachers who banded together. They organized

among themselves largely to counterbalance the power of the cathedral chancellor (who was also the local tax collector).

In essence, the universities of Bologna and Paris were like medieval guilds, or modern trade unions. As discussed in A.B. Cobban's *The Medieval Universities* (1975), they comprised people who shared an occupational identity and who, in turn, drew up their own rules, laws and statutes of incorporation. In Bologna, for instance, completion of an approved programme of studies became the basis for admittance into the local guild of lawyer-teachers. But admission was not a matter of open entry. Rather, it was carefully regulated by the established guild masters. As elsewhere, there was no guarantee that every apprentice would become a master. Many students, therefore, did not complete their studies. Instead, they merely attended lectures (e.g. on civil law) that met their practical concerns. The attraction of Bologna derived from the fact that local jurists (legal experts) were famous for the justifications they supplied for the transference of God's property into forms of outright – or freehold – ownership. Indeed, many students were sent to Bologna by land holders who wished to acquire the cultural power promised by such specialist knowledge.

The transition from apprentice to student took a new turn in the thirteenth century when Bologna obtained the right, ultimately from the Pope, to grant a new form of teaching licence. The *jus ubique docendi* (the right everywhere to teach), was not only valid in the territory supervised by the Archbishop of Bologna but also throughout the Papal domain. This papal privilege transformed the teaching at Bologna. Henceforth, the numbers of graduating students no longer need bear any relationship to the vacancies in the local guild. Equally, the prospect of being granted a *jus ubique docendi* gave Bologna students an incentive to complete approved programmes of study. Rapidly, therefore, universities began to take on their modern form. They began to function primarily as institutions of teaching rather than as institutions of apprenticeship.

Above all, universities became centres for the teaching of the liberal arts. These comprised a range of philosophical and logical techniques that, it was claimed, could be used to scrutinize – or extract the meaning – from past, present and future texts. The liberal arts, therefore, were a training in learning skills, a state of affairs reflected in the fact that the word art is the Latin equivalent of the Greek word for technique. An arts degree became regarded as a necessary prerequisite for entry into the higher realms of meaning (i.e. the faculties of theology, medicine, canon law and civil law). Indeed, this assumption has survived until the twentieth century: admission to schools of medicine and law in the United States is still based upon successful completion of a lower degree, often from a liberal arts college.

Typically, university teaching revolved around two kinds of lectures. The most important were 'ordinary' lectures which usually took place in the morning, and were given by one of the 'masters' of the university. Ordinary lectures comprised line by line exposition of an approved text, together with exploration of problems in the text. Students were expected to absorb the meanings, if not memorize the words, of such texts. 'Extraordinary' lectures – also known as 'cursory' lectures – were given in the afternoon by relatively junior members of the guild of teachers (e.g. 'bachelors'). They comprised paraphrases of the official texts and were, in effect, repetitions of the ordinary lectures.

Papal creation of the *jus ubique docendi* not only endorsed the teaching function of the universities, it also fostered a standardization of courses. As other centres of learning sought to achieve a comparable status, they adopted the constitutions of Paris and/or Bologna, and recruited teachers who had studied in those cities. Further, teachers from the older universities also set up on their own, offering private instruction in the liberal arts. Among other things, these private teachers prepared students for direct entry to the higher faculties. And, since they offered instruction in Latin – also known as 'grammar' – these teachers created the earliest grammar schools. Indeed, the preparatory function of grammar schools in respect of higher studies retained a measure of cultural currency until the twentieth century.

Additional standardization of courses, texts and teaching occurred in the Reformation, largely for political reasons. As noted earlier, Lutheran and Calvinist reformers aimed to put vernacular versions of God's word into the hands of every believer. Nevertheless, the preparation of suitable translations proved highly controversial. One of the earliest Protestant versions of the Bible, printed by William Tyndale in 1526, was a sell out in Britain, despite being publicly burned at the behest of the church authorities. They held that Tyndale's 'errors' of translation, made widely accessible by the technology of printing, would spread unwanted heresy among the common people. In fact, of course, the heresies proclaimed by the new Bibles were deliberate. As the reformers translated (or recoded) the ideas of the original texts, they played down certain allusions and emphasized others. For instance, Tyndale used the words 'congregation', 'elder' and 'knowledge' where the orthodox view would have preferred 'church', 'priest', and 'confession'.

Eventually, however, cultural and economic power resolved these disputes. Heretical printers were gradually brought under control, while favoured printers were granted monopolies in the production of approved and standardized texts. In Britain, the first official church primer appeared in 1534, the first *Book of Common Prayer* in 1549, the authorized *Bible* in 1611 and the *Shorter Catechism* in 1643.

Since the sixteenth century, the control of book production has remained a key element in the formalization and control of school instruction. The Society for the Propagation of Christian Knowledge (founded 1698) and the Sunday School Union (founded 1803) were deliberately established for the purpose of disseminating approved literature. Their efforts proved highly successful. Aided by subsidies and large print runs, they could sell religious and moral texts to elementary schools for half the price of competing texts.

The nineteenth century saw further formalization of teaching and learning. Approved texts began to be replaced by sets of 'graded' readers (e.g. the McGuffey elementary school readers published in the USA from the 1830s). In many ways, therefore, the craft production of schoolbooks became a highly mechanized and highly profitable branch of industry, an historical outcome discussed in Michael Apple's *Teachers and Texts* (1986). In the twentieth century, the production of graded texts has been combined with the preparation of student worksheets, filmstrips, teachers' guides, audio tapes, laboratory manuals, etc. If the late twentieth century is the age of the convenience food, it is also the era of the convenience curriculum.

Necessarily, then, the production of fully fashioned curricula has been a key process in the systematization of schooling. In their most elaborate form fully fashioned curricula are scarcely distinguishable from self-instructional programmes. They, too, are designed (or vernacularized) to give students personal access to the cultural prescriptions stored in the curriculum storehouse. Nevertheless, the production of such curricula, like the standardization of the Protestant Bible, tends to create a closed orthodoxy. As the curriculum is refined, so the possibilities of intervention by teachers and learners are reduced. In the extreme, teachers are envisaged as little more than curriculum minders. They are no longer encouraged to enter into, or comment upon, the curriculum storehouse. They are relocated in a subordinate position, as curriculum doorkeepers, curriculum customs officers and curriculum security guards.

Summary

Current educational theory tends to define curriculum as the 'what' of education; and teaching and learning, jointly as the 'how' of education. This chapter has been critical of such a strong separation. It suggests that there is a much closer relationship between the ways in which curricula are constructed and the pedagogic openings that they offer to teachers and learners. Every curriculum can be structured in many ways, each with a different educational potential. And, by the same token, the potential of every curriculum can be released in many ways (e.g. via lectures or

seminars) and grasped in many ways (e.g. by rote learning or guided discovery). The bulk of schooling may revolve around only three basic processes – teaching, curriculum and learning; but these activities can express themselves in an infinity of different ways.

CHAPTER 6

Schooling and society

The school of experience is no school at all, not because no one learns in it, but because no one teaches.

(B.F. Skinner, psychologist, 1968)

Schools have changed since their early association with leisure. Over the centuries they have become more formalized and, in the process, schooling has broken away from other economic and cultural activities. This formalization has been associated with the division of labour. Communal experience was not only divided into different categories (e.g. subjects, faculties, disciplines), it was transmitted or communicated by groups of socially distinct teachers to groups of socially distinct learners. And if a person's curriculum of life was originally envisaged as a ladder leading to heavenly salvation, it was gradually recast as a branching tree or a journey that took each learner to a different location in the secular order of things.

Throughout its history, therefore, schooling has been intimately linked to the wider structuring of society. Indeed, the organization of schooling and the structuring of society have close linguistic connections. Until the start of the Industrial Revolution (i.e. towards the end of the eighteenth century), the word *class* generally referred to a cohort of learners brought together for educational purposes. By 1820, however, class had taken on a new meaning. It began to refer to other groupings, most notably in the formulation 'working classes'. That is, older forms of educational thinking provided social theorists with new ways of conceptualizing the social world. In effect, the shaping of society took its cue from the shaping of schooling, not the other way around.

In the long run, of course, the trade in ideas is a two-way process. The realms of schooling, family life, the church, the military and factory production have repeatedly exchanged their images, terminology and practices. Sometimes, too, notions have travelled backwards and forwards between two specific institutions. For instance, early forms of schooling echoed family life. Gradually, however, schooling grew in cultural significance, cultural potency and cultural domination. By the late twentieth century, the ideological hegemony of schooling has become so great that

many parents bring up their children according to strictures, or forms of discipline, that are more reminiscent of schooling than of the accumulated wisdom of family life.

Social change and schooling

As this suggests, schooling is never untouched by the broader fabric of society. But what, then, is the relationship between schooling and society? Should schools be regarded simply as a mirror or echo of society? Should they be treated as progressive institutions ahead of the rest of society? Or should they be presumed to take a conservative social role, preserving valued and stabilizing notions from yesteryear? Certainly, many schools operate to conserve pre-existing forms of life; and many accounts of schooling give priority to this aspect. But it may also be worth while to recognize that schooling is equally a transformative institution. Two related propositions – already outlined – support this argument: first, that schooling is a social tool, an instrument for changing human life styles; and second, that curricula can be agents of social production as much as they are agents of social reproduction.

Such a view of the transformative role of schooling was, as noted, very important in the Reformation. But it perhaps reached its height during the Enlightenment, a period of history that immediately preceded (and overlapped with) the Industrial Revolution. From an educational perspective, the Enlightenment is notable for two political ideas; that the human condition could be greatly improved; and that such improvement would be assured if the law-like behaviour of the physical world could be extended to the social world. In many respects, therefore, the intellectual ferment of the Enlightenment was generated by a search for the natural laws that underpinned the organization of society. Indeed, the term ‘social science’ first appeared towards the end of the Enlightenment, in the 1790s.

Enlightenment thinkers were motivated by a belief that God had passed responsibility for the organization of society to human beings. God’s influence, however, was not entirely discounted. Adam Smith, for example, wrote of the ‘invisible hand’ that steered society. Nevertheless, the general tenor of Enlightenment thought was that, henceforth, the human species could begin to control its own destiny. Enlightenment perspectives, therefore, were intensely human centred. They paid less attention to the possibilities of human salvation and more attention to the science of human progress.

Towards the end of the eighteenth century, society was regarded as a hierarchical entity. Everyone had a natural and static place in the social order. Such a view, advanced largely by those near the top of the hierarchy, sought to justify the *status quo*. But, just as the Renaissance had

seen the rise of merchant dynasties, so the eighteenth century witnessed the emergence of another historically important social grouping.

This comprised men and women who had acquired great wealth from a form of production – the factory system – that lay outside the normal orbit of the Merchant and Trades Guilds. Like the merchants before them, the factory owners were not readily welcomed into the existing elites. As before, some bought or married their way into positions of cultural power. But others took a more difficult route. They fought a battle of ideas, armed with notions gained from the teachings of Enlightenment social theorists, of whom Adam Smith (1723–1790) serves as a notable example.

Adam Smith's *The Wealth of Nations* was published in 1776. It was a text about the organization of society. For its preparation, Smith drew upon many of the ideas that circulated among the commercial and industrial classes of Glasgow and the west of Scotland. Smith advanced two economic propositions that were crucial to the new entrepreneurs: first, that the interests of the political state would be better served by policies of economic liberty (or free trade) than by the granting of commercial monopolies (restraint on trading); and second, that there was no contradiction between the self-interested pursuit of gain and the interests of society at large. Further, Smith implied that governments who followed these prescriptions would be acting more naturally (i.e. would be more in tune with the laws of nature) than governments who retained older economic assumptions.

In the thirty years before its publication, Smith had presented the ideas of *The Wealth of Nations* to a variety of audiences. In effect, these lectures projected a vision of the world that was yet to come. Nevertheless, these lectures resonated with the cultural assumptions of Smith's listeners, many of whom came from commercial backgrounds. Smith's teachings, therefore, served as improving devices. As discussed in R.H. Campbell and A.S. Skinner's *Adam Smith* (1985), they prepared his audiences for entry into new life styles and new social contexts. Given the fact that *The Wealth of Nations* was also translated into French, German and Danish during Smith's lifetime, it helped to articulate and consolidate a new outlook or worldview among aspiring members of future political and economic elites. The new industrialists, therefore, acquired an intellectual power that catalysed and greatly enhanced their economic power. In combination, these resources projected many of them into important positions of political power and cultural authority.

Like other European and American thinkers of the same era, Adam Smith played down the notion that the organization of society was beyond humankind's control. He pointed, instead, to the transformative potential of social (e.g. environmental) and personal (i.e. psychological) resources. Indeed, one of the most famous passages in *The Wealth of*

Nations was a direct challenge to those who held a static and immutable view of society. The ‘difference of natural talents’, Smith wrote, ‘is much less than we are aware of’. Thus, the ‘difference between a philosopher and a common street porter’ arises ‘not so much from nature’ as from ‘habit, custom and education’. And, in the same period, too, the French philosopher Claude Adrien Helvetius (1715–1771) found a more concise way of saying the same thing: ‘education can do everything’.

Such Enlightenment rationales, documented in Merryan Williams’s *Revolutions 1775–1830* (1971), were widely circulated. The ideas of Smith, for instance, not only entered the corridors of political and economic power, they also achieved extensive circulation through the schoolmasters and ministers who also attended his lectures. In turn, the popularity of notions about human potential and human freedom of action brought a new dimension to discussions about the organization of schooling. What was the purpose of schooling? Was it to produce pious and deferent adults? Or was schooling to be organized with the aim of releasing the newly identified intellectual talents of human beings?

There was another dimension to this Enlightenment debate about the relationship between schooling and society. How was the new-found potential of education and schooling to be channelled? In particular, how could the notion of human potential be accommodated with Enlightenment assumptions about human freedom? Was schooling to release the slumbering intellectual powers of young people, or was its purpose to integrate young people into the values of the state? Is schooling to promote learning? Or is it merely to promote approved forms of knowledge, approved cultural dispositions and approved cultural values?

During the eighteenth century, such issues were powerfully raised in two books written by Jean Jacques Rousseau (1712–1778). In *Emile* (1762), a book about upbringing, Rousseau argued that children were born in a natural or innocent state and that upbringing should be based upon the preservation and nurturance of a child’s natural propensities. *Emile*, therefore, was an eloquent critique of earlier forms of schooling which, Rousseau claimed, were based on the ‘crushing force of social conventions’. Accordingly, Rousseau believed that schooling, as well as upbringing, should be based unilaterally upon nature, albeit a nature already authored by God. ‘Forced to combat either nature or society’ he wrote in *Emile*, ‘you must make your choice between the man and the citizen, you cannot train both’.

The other side of this argument – the status of citizenship – was pursued by Rousseau in *The Social Contract*, also published in 1762. Central to this book was a discussion of the conflict between the rights of the individual and the social responsibilities of citizenship. What, then, is the freedom and autonomy of the individual? Are citizens merely subordinates of the state? Is

citizenship restricted to males, leaving females in a natural state of subordination and subjection? Or is it possible to resolve the interests of the state with those of the autonomous citizen?

Natural upbringing *versus* schooling for citizenship is an educational issue that has remained alive since Rousseau's time. Compare, for instance, two statements about the social functions of schooling. This first appears in John Holt's *How Children Fail* (1969): 'Schools should be places where children learn what they most want to know, instead of what we think they ought to know'. The second statement is the opening sentence of *Effective Secondary Schools* (1988) a discussion document produced by the Scottish Education Department: 'An effective secondary school is one in which pupils learn, to the limits of their capabilities, *what is deemed appropriate*, taking into account their personal needs and preferences' (added emphasis). The difference between these statements is perfectly consistent with the difference between education and schooling outlined earlier in this book. But what might Helvetius have made of the Scottish reference to limited 'capabilities'? And what might Rousseau have made of the emphasis upon 'appropriate' learning?

Differentiation and the allocation of pedagogic resources

Besides affecting the purpose of education and schooling, Enlightenment thought also had a major impact upon modes of instruction. In Glasgow, for instance, professors began to give extempore presentations (instead of dictating from prepared lectures); and students were encouraged to question their teachers immediately after the lectures. Two features of these new methods are historically noteworthy: first, that it was acceptable and legitimate for teachers to deviate from the recommended texts; and, second, that relatively junior learners might enter into dialogue with their teachers.

These new practices of the late eighteenth century were a direct expression of the political, social and psychological sentiments of the Enlightenment, when knowledge and ideas became more open to human scrutiny. Indeed, 'open-mindedness' would probably have been an alien, if not heretical, notion before the Enlightenment. During the Enlightenment, therefore, universities began to change their social role. University authorities gave less attention to the dissemination of God's unchanging and unchallenged word and instead began to see themselves as centres for the exploration and analysis of God's Kingdom. Put another way, universities began to be identified as research institutions for the pursuit of knowledge, a social purpose which, for instance, lay behind the establishment of Berlin University in 1809.

The traditional lecture (or reading) also underwent important changes

as part of the Enlightenment reconceptualization of knowledge and learning. Teaching by means of tutorials and seminars began to appear in university circles, as described, for instance, in Ian Watt's article on 'The seminar' (1964). The term seminar comes from a Latin word meaning seedbed. Seminars, pioneered in Germany (e.g. at Halle University), embodied the notion that university teaching and inquiry should be based on the criticism rather than the memorization of texts. Indeed, such notions of pedagogic autonomy also spawned the concept of academic freedom for teachers and learners which, like many other aspects of Enlightenment thought, still continues to haunt the worlds of twentieth-century education and schooling.

Seminar instruction, like tutorial teaching, represented a major change in the organization of instruction. But it did not merely embody new ideas about teaching and learning; it also reflected changing notions about the allocation of pedagogic resources. Then, as now, one of the main differences between lectures and tutorials was their respective student/teacher ratios. In a crude sense, then, the new thinking of the Enlightenment constituted a call for smaller teaching groups. But the adoption of smaller groups was hindered by two factors. Population increases at the time of the Industrial Revolution placed increased consumer pressure on the universities. Adam Smith's Glasgow University lectures had been attended by tens of students, whereas those of his successors were attended by hundreds of students. The increased fee income generated by new students could as easily be devoted to enhancing the earnings of the regular teacher as it could be used to reduce class sizes by employing more teachers.

Practices surrounding the distribution of teaching resources continue to be the subject of debate, and differences in teacher allocation continue to characterize different sectors of schooling. Current British student/teacher ratios are roughly as follows:

University	10:1
Secondary school	15:1
Primary school	20:1

Among other things, these figures confirm the fact that different sectors of the school system, and the different learners that they accommodate, are valued differently by those who distribute pedagogic resources. Yet, as suggested, the difference between small-group and large-group teaching is more than a matter of class size. It is also intimately related to different conceptions of teaching and learning.

In one sense there is no difference between large and small groups. It is as easy to lecture to a class of five students as it is to lecture to a hall of five

hundred students. The converse, however, does not apply. A seminar or tutorial with 500 students is a contradiction in terms. Nevertheless, as class sizes decrease, certain possibilities arise. A change in the quantity of learners can be translated into changes in the quality of teaching. By comparison with large-group teaching, small-group teaching has the potential, above all, of enhancing the decoding efforts and activities of teachers and learners. A seminar or tutorial, therefore, can easily operate as an arena of guided *self-instruction*. Through dialogue with other members of the group (itself a form of self-instruction), learners find their own pathways through the curriculum storehouse. Moreover, given that the essential feature of a seminar is communication rather than transmission, there is no requirement that it contain a designated teacher (or transmitter).

These different emphases derive from the fact that seminars and lectures have different social roots. Ultimately, small-group teaching had its origins in the apprenticeship system. Learners were inducted into the mysteries of a craft on the presumption, above all, that they would eventually take over the master's position. Large group teaching, on the other hand, resonates with a different pedagogic precedent – expository forms of preaching. Within such a (pre-Reformation) preaching framework, there is no expectation that learners will eventually take the place of their teachers. Put another way, large-group teaching (i.e. lecturing) takes place across social boundaries whereas small group teaching takes place within social boundaries. In short, if a lecture is a 'them and us' situation, a seminar is governed more by a rationale of 'you and me'.

Medieval lecturing rested on the assumption that God's truth was to be found in the words of texts endorsed by church authorities. These texts were sacrosanct. If students or teachers questioned the authority of official texts, they left themselves open to the charge of heresy. In short, criticism represented a challenge to God's word. Necessarily, then, pre-Enlightenment pedagogic practices tended to promote social conformity and intellectual deference among teachers and learners alike. Nevertheless, many medieval teachers (e.g. Abelard, Thomas Aquinas) appear in history books because they did, indeed, break with tradition. Their fame derives from their efforts to reinterpret rather than to reproduce God's word. In effect, their commentaries constituted debates or dialogues with the official texts. They sought to extract, or clarify, the true meanings buried in God's word. And, in an important sense, their fame rests on the fact that, in their attempts at clarification, they produced rather than reproduced God's word.

The medieval university disputation is a further instance of a dialogic approach to the clarification of ideas. One party to the dispute proposed a thesis (e.g. 'There are eternal laws on earth'), and then repeatedly defended it against intellectual challenges mounted by other students or

teachers (e.g. 'Every law applies to someone. No one, except God, has existed since eternity. Therefore no earthly law is eternal.'). Many of these disputations, however, were probably dialogic only in a formal sense. Students followed well-worn pathways. Disputations were scripts to be recalled and followed rather than methods to be selected and applied. Nevertheless, disputations were the hurdles that students tackled as they advanced through their studies. Proficiency in disputations, for instance, was one of the criteria for elevating 'bachelors' to the status of 'masters'. In the process, aspiring studies made a gradual transition from the outside to the inside of the university guild, from the ranks of 'them' to the realms of 'us'. And as students surmounted these intellectual hurdles and social divides, so the teacher–pupil relationships changed. Successful university students, like successful medieval apprentices, were taken into the immediate circle and confidence of their teachers. Not only did they learn from their teachers, they also began to think and behave like their teachers. Entering a guild was just as much a matter of adopting a life style as it was a matter of clearing intellectual hurdles.

But, as noted, not all students entered the teachers' guild. Many remained in a 'them' and 'us' relationship with their teachers. For this latter group, the lectures were, quite literally, instruments of indoctrination. Coming also from the Latin root *doceo* (I teach), indoctrination was indistinguishable from the practice of teaching. In the twentieth century, however, teaching and indoctrination are often evaluated differently. In part, this differentiation arises because the notion of indoctrination is suffused with medieval assumptions about the reproduction of received texts, whereas teaching is regarded more in the light of post-Enlightenment suppositions about the social and intellectual autonomy of learners and teachers.

Books and pedagogy

Although pedagogic variation is largely related to the distribution and allocation of human resources, other supplies are just as important. As noted in an earlier chapter, the increased provision of books in the immediate post-Gutenberg era heralded an important pedagogic revolution. Self-education was the central feature of this revolution. Nevertheless, two hundred years passed before book production acknowledged the existence of a mass reading public – a social development creatively discussed in Raymond Williams's *The Long Revolution* (1985). Lending libraries, for instance, did not appear until the eighteenth century. Likewise, university libraries were only gradually opened to undergraduates, previously being restricted to professors.

The importance of libraries to learning was reflected in the fact that, for

the first time, university teachers could expect their students to engage in wider reading. Their lectures could, therefore, become 'reflections on' rather than 'repetitions of' contemporary texts. If the widespread use of books in universities dates from the beginning of the nineteenth century (aided, no doubt, by the gradual spread of steam printing after about 1815), a comparable influx of books into British primary schools did not occur until after the Second World War. A relative shortage of books tends to tilt pedagogic control towards the teacher (as was the case in the Middle Ages). Nevertheless, as books become available, students can follow their own interests and deviate from the approved curriculum, as happened in the Reformation. In more recent times, the replacement of identical class sets of texts with class libraries has also offered comparable curricular opportunities.

The provision of books opens up a welter of curriculum pathways. It broadens – or perhaps dissipates – the potency of approved curricula. Indeed, the provision of pupil texts as part of a curriculum may serve contradictory purposes. It may seek to keep the student on course (in both senses); but it may also provide teachers and learners with encouragement and opportunities to deviate from the approved curriculum. There is always the risk that something written as a textbook is read as something else.

Summary

One way to express the unity of teaching, curriculum and learning is to gather them together under the label pedagogy. Thus, to talk of the pedagogy of Hillhead Primary School, Eton College, Bologna University and the Bank Street School of Motoring is to refer, in each case, to a unique constellation of interrelated teaching, curriculum and learning activities. Every pedagogy is a form of life. And like other cultural and economic activities, every pedagogy is historically located. Above all, it is an expression of the wider circumstances – past, present and future – that nurture its day-to-day transactions.

In a sense, pedagogies are the mainsprings of schooling. They can serve, variously, as agents of social reproduction or as levers of social production. They can be in the vanguard of social change; or they can merely serve to protect the *status quo*. But pedagogies are not merely built around a vision of the future. They are also founded upon the investment of material and ideological resources. In the twentieth century, the state investment of economic and cultural capital (e.g. the recruitment and training of teachers) has struggled, not always successfully, to keep up with the growth of mass schooling and the rise of human expectations. The University of East Anglia (Norwich), for instance, was consciously founded in the

1960s as a seminar-based rather than a lecture-based university. But small-group teaching is more than a matter of investment. It also embodies and expresses new kinds of social relationships, new cultural alignments among teachers and learners, and new ways of conceptualizing indoctrination, education and schooling. It, too, is a comment upon the relationship between schooling and society.

CHAPTER 7

On becoming educated

‘What would you have your son taught?’ I asked an intelligent carpenter. ‘Reading, writing, cyphering, drawing, algebra, Euclid – anything that he can learn until he knows his trade.’ ‘But’, I said, ‘What can be the use of such knowledge to your son if he means to be a working man?’ To which the man answered with an air of considerable dignity, ‘How do I know, Sir, what my son may become?’

(Education Commissioner, England, 1861)

In earlier chapters it was argued, first, that a curriculum is a structured set of experiences that are brought to life through the active engagement of teachers and learners; and, second, that patterns of teaching and learning are subject to the shaping influence of ideological and material constraints. This chapter takes a closer look at the realization and shaping processes that lie at the heart of teaching and learning.

Just as teaching takes different forms (e.g. ‘showing how’ and ‘telling how’) so learning can also be analysed in terms of different processes. For the sake of this discussion, learning is envisaged as an intellectual journey. To have learned something is to have moved progressively from a starting point, through a period of intellectual upheaval, to a finishing point. The starting point is reached when, for any given experience, the learner has achieved a state of readiness; the intervening journey comprises the assimilation of experience; and the finishing point is reached when the learner has achieved a state of understanding.

Readiness

Readiness is closely linked to the psychological concept of attention. Learners demonstrate attention when they are able to discriminate between the relevant and irrelevant demands of a task. Some forms of attention are innate and instinctive (e.g. the breast-seeking behaviour of new-born infants). But attention can also be cultivated. Indeed, the establishment of learner readiness has always been an important part of teaching.

A British radio programme called *Listen With Mother* is widely remembered for a famous example of readiness cultivation. The narrator of the

programme's story introduced it with the invitation: 'Are you sitting comfortably? . . . [pause] . . . Then, I'll begin'. After a few episodes this formula was abandoned, only to be quickly reinstated after protests from the adult audience of the programme. They were quick to remind the producer that the programme had dispensed with one of its key pedagogic elements. Ultimately, these introductory remarks became a radio catchphrase, remembered and used by story tellers long after *Listen With Mother* had disappeared from the airwaves. Indeed, such rhetorical devices for encouraging, if not disciplining, the readiness of the listener are a deeply rooted element in story telling. Like the classic English language device, 'Once upon a time . . .', they both set the scene and settle the learner.

The concept of learning readiness can also be examined by reference to the word docility. Docile also comes from the Latin root *doceo* (I teach). Strictly speaking, therefore, a docile child is a teachable child, someone who exhibits a readiness to learn. This sense of docility, for example, can be found in the Scottish Calvinists' *Book of Discipline* (1560). It laid down that children who showed the 'spirit of docility' were to be 'charged to continue their study'. A docile child, therefore, was an intellectually promising child. However, by the time of the Industrial Revolution – 250 years later – the word docile seems to have lost its spirit. A docile child had become a 'tractable' (i.e. compliant) or 'biddable' (i.e. commandable) child; a person who has been tamed, if not acculturated, to the rhythms and routines of factory production.

The Protestant reformers, for their part, had assumed that docility was an innate attribute – a gift bestowed by God. Yet, many of the arguments of the Industrial Revolution (as discussed in Harold Silver's *The Concept of Popular Education* (1965)) took the opposite position. They assumed that docility was an acquired rather than an innate propensity. And, in such a post-Enlightenment climate, they charged schooling with the task of promoting docility. For instance, Robert Owen of New Lanark cotton mill – a pioneer of the Industrial Revolution in Britain – proposed in 1812 that the inculcation of docility should take precedence over other goals of teaching. In a speech to factory owners and their supporters, he argued that 'The children [of the poor] must learn the habits of obedience, order, regularity, industry and constant attention, which are to them of more importance than merely learning to read, write and account'.

Unlike the sentiments of the *Book of Discipline*, Owen's strictures were directed towards a specific sector of society – the children of the labouring classes. Readiness, therefore, was recast as a class-biased notion. The teachability of middle-class children was identified in terms of their spirit and keenness, whereas the teachability of working-class children was identified with their passivity and deference.

States of readiness, or attention to learning, can also be communicated by body language. In so far as readiness is equated with keenness, it can be communicated by looking a social superior straight in the eye. On the other hand, readiness as passivity can be demonstrated by looking downwards (i.e. in a deferential direction). Equally, the body language of readiness may be gender linked as well as class related. Schoolgirls and schoolboys may be expected to demonstrate keenness in different ways (e.g. by different modes of eye contact). Likewise, the bodily dispositions or forms of attention associated with readiness may be deliberately cultivated (e.g. through assertiveness training for women) to help learners cross over cultural boundaries or break down cultural barriers. Nevertheless, attempts to cross social boundaries also carry social and cultural risks. Whenever working-class, female or black students display white, male, middle-class keenness, they are always vulnerable to the accusation of being forward, uppity, cheeky and above their true station.

Assimilation

The assimilation of experience relates to the absorption of knowledge, skills and dispositions. As part of their intellectual journey, learners go over the ground of the relevant stored up experience. Gradually, they begin to grasp the contents of the curriculum storehouse and, more important, are able to appreciate its organization and packaging. Further, they are also able to integrate elements of the curriculum storehouse into their own biographies. In an important sense, therefore, the experience of other people's lives becomes part of their own lives. Accordingly, learning is rather more than an accumulation process. The human mind and body do not act as a sponge: rather, learning is an active process. Typically, learners have to unpack, unlearn or disregard prior experiences before they can acquire new experiences. The human mind, therefore, is in a constant state of reorganization, upheaval, even turmoil. Indeed, the physiological and emotional consequences of these mental interruptions, dislocations and disturbances help to account for the fact that human beings are so different from other animals.

Overall, learning is a complex and poorly understood process. It can be described variously in terms, for example, of acquisition, accumulation, absorption, assimilation or appropriation. Accordingly, there is no more consensus about the workings of the mind than there is about the origins of the human species. Similarly, there is no agreement about how the mind may best be filled, stimulated, engaged, challenged, cultivated, etc. Necessarily, then, teaching is a highly problematic human activity. There is a world of difference between how teaching is conducted and how teaching should be conducted. The pedagogic maxim, 'There are no right

ways to teach, only wrong ways' may be the only assumption shared by all educationists.

Historically, the promotion of assimilation learning entails taking learners repeatedly over the same terrain (e.g. a catechism). Repeated practice – exercise of the learner's mind and body – is a key activity. Learners are deemed to have successfully assimilated the designated experience when they can reproduce it (e.g. in the form of memorized facts and procedures). Assimilation pedagogies, therefore, shape the capacity of individuals to obey orders and to follow instructions. Thereafter, human rule-following propensities can be put to the service of institutions (e.g. bureaucracies) that value such human capacities. Assimilation learning, therefore, is the educational foundation of social reproduction.

Understanding

The third element in the intellectual journey of learning – the achievement of understanding – seems to be uniquely human. Somehow, human beings acquire the capacity to reach beyond the realm of recipe knowledge. They begin to stand in a new relationship to the curriculum storehouse. Persons with understanding have a heightened awareness of themselves and their circumstances. But, as important, they have a grasp of the relationship between themselves and their circumstances; and they can command sufficient power to change this relationship. Understanding, therefore, is the mother of invention.

Accordingly, pedagogies designed to promote understanding underwrite social production (i.e. social change). In the history of schooling, such pedagogies have been conducted primarily for the leadership strata of society. They prepare learners for all eventualities, even those that cannot be envisaged. If the test of assimilation learning is the regurgitation of secondhand knowledge, the acquisition of understanding is marked by a capacity to go beyond the information given.

This perspective upon teaching for leadership can be illustrated by reference to the work of the sixteenth-century Italian philosopher, Niccolò Machiavelli (1469–1527). Before Machiavelli's time, human affairs were assumed to be entirely under the control of two forces: God and chance. Machiavelli rejected this view and held, instead, that human destiny was also affected by a third force – the free will of human beings. Moreover, if human beings could take advantage of this third option, they could play a part in shaping their own futures. This celebration of human potential also had another consequence. It is one of the reasons why the Renaissance acquired an alternative title – the age of humanism. In an important historical sense, therefore, to understand a situation is to be in a position to take command of the future.

However, Machiavelli's analysis of human history raised a problem for subsequent humanists. If human affairs are not entirely determined by God or by chance, how are they to be regulated by Renaissance state officials? Was government to be left to the arbitrary exercise of the free will of unelected rulers and their political servants? Or was there a set of ethical principles, a code of conduct, that might be followed by all wise rulers? Without such a moral code to regulate their conduct, state officials would be no different from the despotic rulers of earlier times. How, then, could they claim to be humanists?

Machiavelli's allusions to the intellectual and moral attributes of state officials became an important element in the creation of the Christian gentleman. Humanist schooling, for instance, gave much attention to the examination of texts (e.g. by Cicero) which, in turn, modelled the values and principles deemed suitable to the proper pursuit of statecraft. Thus, Renaissance schooling of the kind offered at St Paul's School did not teach a set of skills so much as an outlook on life that stressed the importance of 'prudence', 'character', 'judgement' and 'virtue'. Guided by such forms of understanding, rulers were expected to invent political, diplomatic and, sometimes, military solutions to the dilemmas they faced.

Since Machiavelli, then, the training and education of civic officials has been based as much upon the inculcation of ethical deportment as upon the transmission of technical knowhow. In the nineteenth century, the application of such notions also spread to discussions of professionalism. In 1867, for instance, the philosopher John Stuart Mill echoed Machiavelli in his Rectorial Address to the students of St. Andrews University: 'What professionals . . . should carry away with them from a university is not professional knowledge but that which should direct the use of their professional knowledge.'

This humanist perspective on a university education is one of the reasons why arts degrees played such an important role in the training of professionals and state officials, even if the arts studied in the nineteenth century differed dramatically from the liberal arts taught in medieval universities. Nevertheless, there is an equally important sense in which both medieval and nineteenth-century students acquired a series of techniques (or arts). Confronted by uncertainty – the archetypal problem of colonial administrators and foreign missionaries – university-trained professionals could always draw upon a toolbox of ethical prescriptions (e.g. 'keep calm', 'moderation in all things', 'stiff upper lip', 'think of England'), even if such maxims could not tell them exactly what to do. Overall, then, education for understanding prepares people to make prudent judgements, or to deploy practical wisdom, in the face of new and unanticipated circumstances. Certainly, the training of professionals, then and now, has largely been concerned to solve the political problem posed

by Machiavelli. It is designed to induct noviciates into a particular ethic of self-regulation. And, above all, professional training provides them with a practical framework to harness (in both senses) their powers of free will and understanding.

Learning by degrees

The model outlined above suggests that there is a general correspondence between the social and pedagogic divisions in society: that different kinds of teaching and learning serve different social purposes and different social constituencies. Viewed over time, such correspondences are constantly challenged and disrupted as new social groupings struggle to achieve cultural and economic ascendancy. Moreover, there is no guarantee that a pedagogy designed to promote recipe learning will serve such ends when it reaches the hands of teachers and learners (who may hold contrasting views).

Nevertheless, fossilized evidence of these social and pedagogic correspondences is preserved in the surviving categories of the guild system (i.e. apprentice, journeyman, master) and in the different types of degree awarded by universities (bachelor, master, doctor). The status of apprentice (i.e. learner) is equivalent to the status of a bachelor (i.e. undergraduate). To qualify for this status, candidates must demonstrate an aptitude or readiness to learn. They are expected to show, therefore, that they have acquired a suitable spirit of docility. And, typically, this readiness is vouched for in testimonials (verbal or written) offered to the admissions officers of the guild or university.

Having completed a designated period as a bachelor or apprentice, candidates are examined to establish that they have acquired (or assimilated) appropriate skills. Thereafter, they are eligible for admission to the status of master or to the privileges of a journeyman. With such privileges, they are entitled to practise their arts and crafts.

Finally, several years in practice are necessary before masters and journeymen can graduate to become university doctors and guild masters. At this stage, they acquire the right to teach as well as to practise their arts – note, again, the association between doctor and *doceo*. In university settings, therefore, doctors are permitted to supervise and examine research students; and in guild settings, masters have the right to recruit their own apprentices. By this stage in their intellectual journey, university doctors and craft masters are assumed to have a complete grasp, or understanding, of the mysteries (or ethics) of their craft.

States of readiness, therefore, are identified with general aptitudes rather than with specific skills. Learners are expected to have acquired an appropriate outlook on work, itself part of their general outlook on life.

Until the twentieth century, for instance, selection of apprentices and university students was based as much upon the civility, docility or character of applicants as it was upon identifiable and measurable competences or examination grades, if any. Indeed, the selection of entrants to the unskilled sector of the labour market is still governed largely by the apparent docility of candidates (e.g. their record of school attendance and timekeeping), despite the spread of examination-linked curricula for such school learners.

Assimilation learning differs from readiness learning in that it focuses upon competence as well as character. The learner is expected to absorb and regurgitate a range of skills and/or a corpus of knowledge. But from another perspective readiness and assimilation pedagogies are very similar. In both cases, the learner is very much under the direct authority of the teacher.

But teacher–learner relationships change fundamentally at the post-graduate or journeyman level. The acquisition of understanding is marked by the learner’s ability to go beyond the teacher. Typically, learners are expected to be productive rather than reproductive. Their work, for instance, is expected to demonstrate imagination, originality and initiative. And regurgitation is neither expected nor rewarded. But what pedagogies promote productivity? And how do they differ from pedagogies of reproductivity? Productivity, like understanding, is a humanist outlook on life. It celebrates the ability of human beings to transform themselves and their surroundings. Historically, it was memorably demonstrated in the creativity shown by Renaissance thinkers, artists, inventors and architects. In late twentieth-century terms, however, the relationship between understanding and productivity (or invention) is more likely to be harnessed to the notion of enterprise than to the exercise of virtue. Much effort has been made in recent years to give students an enterprise-based outlook on life. But what are the acceptable limits of enterprise? How, in Renaissance terms, can enterprise remain humane and within the bounds of civility? Or will the enterprise culture of the twentieth-century revisit the realms of despotism eschewed by Machiavelli?

Summary

The forms of schooling associated with instilling docility and imparting information are, to use a Renaissance term, pedagogies of the ‘closed fist’. Their aspiration is to fashion and sustain a conforming social order; and their methods include pedagogic techniques to bring dissident/uncivilized students into line. Such pedagogies treat knowledge as unambiguous, learners as passive objects, and teachers as licensed carriers of ‘the

word'. The medieval lecture – based on a cut and dried presentation – was the archetypal form of this pedagogy.

But there is another form of lecture, also with medieval precedents. This is constituted in a form that gives the learner access to the thought process of the teacher: the teacher thinks aloud, outlining arguments (e.g. relating to the frontiers of knowledge) rather than summarizing conclusions (i.e. the truisms of knowledge). Necessarily, however, lecturers who adopt this mode of teaching – the pedagogy of the 'open hand' – become socially vulnerable. By medieval standards they undermine established authority by discussing and questioning the boundaries of their own competence and knowledge. Very often, too, the separation of teacher from learners is disturbed (e.g. when the lecturer stops and solicits assistance from the students). In such circumstances, there is always a risk that discussion – as if among equals – will break out! The gulf between teacher and learner is bridged. Communication (i.e. sharing) occurs and the social context of the lecture is changed irreparably. Indeed, by analogy with the maxim 'give someone a fish and you feed them for a day; teach someone to fish and you feed them for life', the pedagogies of the closed fist and open hand are as far from each other as docility is from doctoring.

CHAPTER 8

Schooling and the economic order

A boy who had just left school was asked by his former headmaster what he thought of the new buildings. 'It could be all marble, Sir', he replied, 'but it would still be a bloody school'.

(British Government Report, 1963)

Recent arguments in this book have focused preferentially on the cultural domain; that is, on the relationship between cultural power, pedagogy and schooling. But the cultural domain is only part of a way of life. Matters of economic sustenance and survival are also important.

The connection between education, schooling and the economic system can be imagined in at least two ways. First, education and schooling can be regarded as preparatory to the economic activity of adults. For instance, they equip people for entry into the labour market; or they prepare adults to service the labour market (e.g. as mothers and housekeepers). To this extent, education and schooling are institutions of consumption rather than production. They are a drain on the exchequer; and they protect young children from the risk of over-exploitation.

The second perspective on education and schooling regards them more as centres of production than as institutions of consumption. They play a substantial role in producing and reproducing every new generation of adults. They are just as much part of a society's economic domain as its craft workshops or production lines. The language of education and schooling also reflects these assumptions about cultural production and reproduction. Teachers are 're-tooled'; curricula are 'delivered'; minds are 'equipped'; and 'raw' students are refashioned into socially accomplished citizens. Indeed, some learners even end up in a 'finishing' school.

This chapter, then, reflects upon education and schooling in the light of the second of these characterizations. It builds upon two assumptions: first, that education and schooling are productive processes; and second, that the organization of schooling can be examined with the same conceptual frameworks used to analyse other forms of production.

The labour process

Consider the following educational settings: a teacher and a learner sitting at opposite ends of a log, a Reformation catechism class, and an air-conditioned classroom filled with a network of microcomputers. Each is a work setting. None the less, each also embraces a different cultural and material milieu, and the forms of teaching and learning associated with these settings can be distinguished from each other. One way of highlighting these differences is to claim that each entails a different labour process. A labour process is not merely the physical activities of work. It also incorporates the context of such labour – the workers' tools, the organization of the workplace settings and, not least, the ways in which workers interact with other human beings (e.g. their cultural superiors, equals and subordinates).

Here is another illustration of teaching as a labour process. Until the 1980s, corporal punishment was extensively used in Scottish schools. Teachers curbed, coerced and kidded their pupils with the aid of a leather strap colloquially known as the belt. Threatened or actual use of the belt was an integral part of the labour process of many teachers. In a narrow sense, the labour process of belting is indicated in two prescriptions handed down from teacher to teacher (1) 'This is how you hold it' and (2) 'This is how you bring it down'. But such labour did not take place in isolation. Its cultural and educational significance cannot be appreciated in narrow, muscular terms. Corporal punishment was part of a much more extensive pedagogic machinery. And to understand corporal punishment or any other pedagogic activity, it is necessary to appreciate the origins, composition and workings of the wider machinery of schooling. Thus, the labour process that comprised the work of Socrates was not the same as that of a Renaissance teacher's in St Paul's School, nor was it the same as the work of a nineteenth-century elementary school teacher. In short, teaching is never a culture free activity nor, indeed, can teaching methods be unthinkingly exported across cultural boundaries.

As in other forms of production, a labour process typically revolves around four elements: (1) a worker; (2) a raw material; (3) instruments or tools for shaping the raw material; and (4) a vision or blueprint that steers the labour process in the direction of its intended outcomes. The raw material of schooling and education is not an inert substance like cast iron but, rather, a highly reactive substance – learners imbued with varying degrees of 'spirit'. It is this reactivity that helps to give education and schooling their distinctive flavours. It certainly provides much of the dynamism – and many of the labour relations problems – of the daily life of schooling.

Forms of schooling can therefore be studied in terms of static attributes

– the different components of the educational machine. Or forms of schooling can be examined in terms of their dynamics – the power relationships that also govern the machine’s working. To attend to the labour processes of schooling is to attend, preferentially, to the dynamics of schooling. It is to ask such questions as: are the aspirations of teachers and learners subordinate to the political will of the curriculum? Under what circumstances can a teacher over-ride the authority of the curriculum? And what powers, if any, are conceded to the learner? Moreover, in so far as these power relationships have changed over time, there is an important sense in which the history of schooling is also the history of changes in the labour processes of schooling.

Tutoring as handicraft production

One of the earliest forms of educational labour can be described as tutoring. It accompanied the institutionalization of earlier practices of socialization and acculturation. Typically, tutoring was conducted by a family member or by a specialist servant (tutor, nanny, governess). And the tutoring activities were directly negotiated between the tutor and the family. Likewise, the blueprint for the tutoring was also derived from tutor–family negotiation. This kind of tutoring, therefore, was akin to small-scale, handicraft production. Just as the medieval tailor was hired to make up the owner’s cloth, so the medieval tutor was engaged to shape up the owner’s sons and daughters.

As this suggests, tutoring typically took place within the family circle. And, since its activities were negotiable, each product was (or could be) fashioned according to a different blueprint. Tutoring, therefore, was a form of one off, fee-based production. It still survives in tailoring; but it remains relatively rare in education. Twentieth-century piano teachers or home-visiting mathematics tutors might qualify as handicraft producers, but only if their curricula are negotiated pupil by pupil. If, on the other hand, the visiting tutor is employed to assist learners through a course of externally derived graded lessons, their work differs fundamentally from that of the jobbing tailor or Victorian nanny.

Domestic production

Tutoring began to appear more like schooling in the late Middle Ages. Tutors did not hawk their wares from door to door but set up shop in rented premises or in their own homes (hence the adjective ‘domestic’). In turn, they offered their services simultaneously to several families – often members of the same occupational group or religious sect. By

comparison with medieval tutors, schoolteachers who adopted the domestic system tended to offer a fixed product for sale. They advertised themselves, and organized their teaching with reference to identified subjects and texts. Like tailors who produced garments for sale rather than at the behest of an individual client, such schoolteachers operated within a market economy. Unlike tutors, they did not create one off examples of their work, but, instead, produced multiple copies to a reasonably standardized pattern and at a reasonably fixed price. The domestic system, therefore, was the forerunner of mass (or commodity) production in schooling.

In Britain, private schools of this kind were particularly prominent in the seventeenth and eighteenth centuries, and are the subject of J.W.A. Smith's *The Birth of Modern Education* (1954); and Nicholas Hans's *New Trends in Education in the Eighteenth Century* (1951). Very often, such schools offered instruction in reading and, to a lesser degree, the rudiments of writing. Furthermore, many of them also offered more specialized subjects (e.g. algebra and fencing). Like all small businesses, however, such schools were relatively ephemeral features of the educational landscape. Nevertheless, such schools and their schoolteachers achieved national prominence in Britain and elsewhere for two specific reasons. First, they appealed to religious sects who wished their children to be educated in so-called 'dissenting academies' rather than in schools under the aegis of the established church. And second, they appealed to parents who, in the age of the scientific revolution, wished their children to receive tuition in subjects (e.g. natural philosophy) not offered by the established grammar schools. Some of these new subjects were marketable (e.g. navigation) for economic reasons; whereas others (e.g. dancing, elocution, French) gave young men and women cultural credentials that were the passport to more prestigious social circles. Indeed, boys might attend an established grammar school and also attend private 'schools' for extra subjects, just as twentieth-century girls and boys might combine regular school attendance with classes at a dancing, music or theatre school. Indeed, the viability of small private-schools was assisted by the fact that, very often, they worked in tandem with more established schools.

Although schools run on the domestic system can legitimately be classified as private schools, they were not necessarily restricted to wealthy families. On the contrary, many private-school teachers deliberately appealed to an impecunious audience by undercutting the fees of the established schools. As reported in Phil Gardner's significantly titled *The Lost Elementary Schools of Victorian England* (1984) such private schools retained their popularity among nineteenth-century parents who were suspicious of the motives that had prompted the provision of state schooling. Like

seventeenth-century dissenters they, too, preferred to retain a greater measure of control over the upbringing of their children.

Schooling and batch production

In time, however, many private schools became 'lost' because they were rapidly hidden beneath a network of state-supported schools. In many ways, too, the network of state schools gradually became a system of schooling. If each private school had its own machinery and curriculum, state schools were increasingly expected to follow a standardized pattern – one that shaped both the administration and organization of the system. As documented in Malcolm Seaborne's *The English School: Its Architecture and Organization 1370–1870* (1971), teachers were expected to follow a curriculum prescribed by church and state authorities. Driven by the same forces, a new administrative stratum – male 'foremen' and 'managers' of schooling – emerged as schools grew in size and as women were recruited to fill the junior teaching positions. The most important pedagogic (or labour process) change in the nineteenth century, however, was the introduction of batch processing of learners. This development, closely related to the emergence of multi-teacher schools, culminated in the 1870s with the emergence of class teaching. In schools of sufficient size, children were moved through the curriculum in batches, a technique that came to be known as 'lockstep' teaching in the USA.

Through these reforms, the state rather than the teacher became the operator of schooling. In turn, teachers ceased to control the educational machine. Instead, they became more like cogs in its inner workings. Like the pupils in Calvinist schools, they too were subjected to an external discipline or drive system. Teachers neither owned their schools nor devised their own curricula, as they had done in the private schools of the seventeenth and eighteenth centuries. Likewise, parents ceased to retain overall control of the upbringing of their children. The dominant pedagogy of schooling became relatively mechanical, arbitrary and impersonal. Indeed, by the latter half of the nineteenth century, schooling had reached levels of systematization only dreamed about in the seventeenth century.

Continuous production

By the First World War, however, the batch mode of mass production was increasingly criticized as socially inefficient. It was claimed, for instance, that lockstep teaching paid insufficient attention to the peculiarities of the raw material that passed through the workings of the school system. Accordingly, it was proposed that greater attention to the

individual child would inevitably improve the social efficiency of schooling. In effect, it was assumed that every child had a set of specific educational needs that could only be met through the differentiation (or individualization) of the school curriculum. In these terms, the philosophy of continuous production has close affinities with child-centred views of schooling.

In factories and schools, therefore, considerable attention was given to the reorganization of production. The most visible symbol of the new movement was the development of moving production lines by the Ford Motor Company (USA) in its Detroit factories shortly before World War One. The moving production line was an attempt to merge and maximize the joint production potential of machines and workers. Twentieth-century pedagogic reorganizations can be seen in a similar light and are the focus of Raymond Callahan's *Education and the Cult of Efficiency* (1962). Perhaps the most visible effect of the reorganization of educational production has been the changes that have occurred in the layout of schoolrooms. Desks have not only been unbolted from the floor, they have been rearranged (or replaced) in clusters rather than in rows of working surfaces.

The key educational presumption behind continuous production is that children should be allowed to work through a sequential and linear curriculum – itself a production line – at their own pace. But the individualization of schooling can also take other forms. For instance, a branching (or differentiated) curriculum may offer a range of pre-set routes to different categories of learners. From an historical perspective, however, the most significant variant of individualization occurs when the prescribed curriculum is discarded entirely. Instead, learners are encouraged to forge their own pathways or, to use a more fashionable phrase, follow their own interests through the storehouse of human experience.

Inevitably, the last view of child-driven production rests uneasily with the batch-processing presumption that children should follow school curricula devised, driven and controlled by the state. Taking their cue from Rousseau, many twentieth-century educationists have resolved this tension between the state and the child in favour of the latter. As documented, for instance, in Richard Selleck's *English Primary Education and the Progressives 1914–1939* (1972), many of them are remembered through the private schools they founded and maintained beyond the reach of state supervision. Nevertheless, attempts to sustain child-centred forms of schooling have also survived within the system of state-maintained schools. Modular curricula, for instance, are sometimes claimed to be more responsive to the variable interests of children. It is assumed that, if sufficient modules are provided, learners will be able to follow their interests and find a personalized pathway through the curriculum.

Yet it remains an open question whether a modular curriculum can, in fact, offer sufficient choices to learners.

Equally, it is not always clear that a modularized curriculum can also meet other canons of child-centredness. For instance, it is sometimes assumed that an individualized curriculum (e.g. a modularized curriculum) is also a personalized curriculum. But there is no necessary connection between individualization and personalization. There is always the danger that an individualized curriculum will treat the learner as a cipher rather than as a person. Pedagogies can be highly individualized, but they can also be highly depersonalized. To this extent an individualized curriculum may be scarcely distinguishable from the depersonalized curricula associated with lockstep teaching.

Historically, one of the most important manifestations of continuous educational production was the establishment of the Open University, a distance-learning institution started in Britain in the late 1960s. The organization of the Open University is based on the assumption that students work at home (i.e. individually); that they follow a pre-packaged modular curriculum largely at their own pace; and that their learning activities are regulated largely through a policy of continuous assessment. As in the factory system, there is an elaborate division of labour in the Open University between, for instance, those who encode the curricula (course teams); those who distribute the curricula (course managers), and those who decode the curricula (course tutors). Indeed, the machinery of the Open University also includes counsellors who, rather like personnel managers, tackle the industrial relations (or learning relations) problems that are thrown up by the workings of the entire system.

The Open University is, therefore, a very sophisticated machine. As a production line, it needs constant fine tuning, maintenance and renewal. When working, it is an enormous, efficient and accessible knowledge factory. But the systematization built into the machinery of the Open University is also its Achilles' heel. There is very little tolerance of error in the system. As with any moving production line, one small disruption (e.g. a postal strike) brings chaos. Moreover, Open University learners have very little control over the workings of the system. At times, no doubt, they feel they are the smallest of cogs in the largest of machines. In times of crisis, techno-deference – passivity and patience in the face of mechanical malfunction – is probably the only thing that they learn.

Beyond the factory system

As described above, the pedagogies of handicraft, domestic, batch and continuous production followed each other in chronological time. But each new form did not eradicate its predecessors. Rather, later forms

emerged and bedded down alongside earlier forms. New forms of schooling, therefore, arose in specific circumstances and did not necessarily spread effacing all earlier forms of schooling. For instance, batch production emerged in urban areas, leaving echoes of domestic production (e.g. one-teacher schools) to survive in rural areas, documented in Jon Wyand's photographic essay, *Village Schools* (1980). Likewise, echoes of handicraft production survive in well-endowed institutions, like Oxford and Cambridge universities, which still pay a measure of homage to personalized tutorial teaching.

Schooling, therefore, takes many forms. It is not a unified productive process. Rather, it comprises a range of activities that, among other things, arose in different historical circumstances. As time passes, new activities come into prominence as others fade into obscurity. By the twentieth century, schooling may have become a unified and state-led system. But, throughout its history, it has never been a static institution. In recent years, for instance, there has been a dramatic change in the layout, furnishing and refurbishing of schools. Open-plan designs, tannoy systems, telephones, television and photocopiers are now commonplace. Likewise, information technology – based on microprocessors, compact discs and video machinery – presages the same kind of revolution that print technology triggered after 1450. If Gutenberg's innovative system of production underpinned the educational upheavals of the Renaissance and the Reformation, what kind of upheavals are foreshadowed for the twenty-first century?

Summary

Like other human labour processes, education and schooling are goal-directed activities. They are conscious interventions in human affairs. They seek to transform the relationships that exist among human beings; and, as important, they seek to transform the relationships that exist between human beings and their natural and social environments. The form of such interventions varies from social context to social context and from historical epoch to historical epoch. Lectures, tutorials, seminars, practical work, library work, and so on, are not simply different styles of work – or styles of teaching and learning – they also embody different social and educational relationships.

A further reason for examining education and schooling in terms of labour processes is to explore their changing power relationships. In some settings, the labour (or pedagogic) processes of schooling are structured around a social divide that is as pronounced at the end of the interaction as it is at the outset. In other cases, a social division is presumed at the outset, but the pedagogy is designed and organized to reduce the

separation of the teacher from the learner. And, in the final case, no social separation is presumed – the labour process is merely directed towards the redistribution (communication or sharing) of experience among persons of equivalent social, moral and intellectual standing. At the risk of oversimplification, these social relationships are exemplified, respectively, in lecturing (where the learner remains silent), in small-group instruction (where the learner is able to ask questions) and in research seminars (where the learner's questions are as frequent as the teacher's).

Finally, this chapter has tried to illuminate some of the social and historical differences between education and schooling, differences which, in certain respects, are akin to the differentiation between work as a physical and mental endeavour, and wage labour as a paid and regulated form of social life. Schooling was invented to control and to redirect earlier educational practices, just as the factory system was devised to control and redirect the fortunes of domestic producers. In both settings considerable attention is given to management, monitoring and control. Moreover, these administrative activities have coalesced into elaborate and highly sophisticated systems of production. Ultimately, the purpose of these systems is to contain, if not control, the reactivity of the human beings who work within their boundaries. Under such circumstances – sometimes described as Fordism – workers of all kinds have become subject to such high levels of external intervention, regulation and control that, in a profound sense, many of them no longer know what they are doing. Despite the early claims of scientific management, the productive efficiency of workers declines, along with their job satisfaction. In the light of these criticisms, considerable attention has been given, more recently, to the task of developing new systems of production – sometimes described as *post-Fordism* – that channel, rather than contain, human reactivity. It seems likely that the organization and management of large schools will receive the same kind of scrutiny as the organization and management of large factories. It is perhaps no accident that, since the early 1980s, proposals for the reform of the labour processes of schooling have often emanated from production-related agencies like the Organization for Economic Cooperation and Development (OECD) and, in Britain, from the government departments that embrace employment, trade and industry.

CHAPTER 9

Tools and pedagogic power

When the historians of education do equal and exact justice to all who have contributed toward educational progress, they will devote several pages to those revolutionists who invented steel pens and blackboards.

(V.T. Thayer, educationist, 1928)

The previous chapter analysed teaching and learning as forms of educational production. It assumed that educational production embraces more than the day-to-day labour of individual teachers and learners. It is a social and historically located process built around the coordination and harmonization of cultural goals, raw materials and various amounts and combinations of human labour. Extending the analysis of educational production, this chapter considers the tools of the teacher's and learner's trade.

As discussed earlier, tools serve to extend and amplify the mental and muscular power of human beings. In the early history of the human species, they contributed to the domestication of the natural environment and, since that time, they have also played a part in the shaping and organization of the social environment. In human history, therefore, tools have served two purposes. They have helped to keep the natural environment at bay and they have helped to bring forth (or produce) new social, cultural and economic environments. In short, tools both preserve and transform the life styles of human beings.

Educational tools can be regarded in a similar light. If our ancestors taught with their bare hands, contemporary education and schooling are high-technology institutions. They are awash with resources (e.g. books, pencils, blackboards, photographs, tape recordings) which, it is assumed, play an important part in educational production. But what is the educational purpose of these resources? In what sense are they educational tools? What is being preserved or transformed with the aid of such tools? And how has the leverage of such tools affected the power relationships of teachers and learners?

An educational tool may be home-made; or it may be part of a standard tool kit. It may be raw; or it may be fully fashioned. Further, a tool must, in some sense, be wielded by someone. A piece of wood is not auto-

matically an educational tool. It only becomes an element of the production process when teachers or learners realize that it can be used to draw a straight line, to measure distances, or to stabilize a wobbling projector. A tool, therefore, may serve educational production in a variety of ways. Despite Thayer's observation, the adoption of steel pens and blackboards should not be seen as an automatic guarantee of educational advancement. Like most cultural artefacts, educational tools can be harnessed to a range of different social purposes and be deployed by a range of different social interests. A piece of wood can also be used as a tool of bodily chastisement. Indeed, the repeated retooling of schooling is as likely to reflect changes in pedagogic power as it is to prefigure linear advances in educational progress.

Pedagogic tools and educational change

Just as social change can be misread as social progress, it is also a common misconception that social change is prompted solely by technical innovation. Social histories, for instance, have been written around the invention and dissemination of the water mill, the bridle, movable type, the steam engine and artificial modes of contraception. Such histories, however, are often an overstatement of the argument that new technology automatically causes social change. In fact, there is a much more complex relationship between the invention of a tool and its incorporation into a production process. The history of school blackboards provides an illustration. Wall-mounted writing surfaces seem to have been invented by the middle of the seventeenth century; but they remained a relative novelty until the middle of the nineteenth century. Their full-scale introduction into the practices of schooling seems to have been contingent upon two post-Enlightenment developments: the replacement of teacher lecturing with extempore, question and answer teaching; and, the emergence of batch production methods of schooling. Together, these pedagogic reconceptualizations stimulated the use and widespread adoption of large display surfaces that could be seen by an entire class (or batch) of pupils sitting in rows.

By the end of the nineteenth century, these class-teaching methods were sometimes described as Socratic teaching, in honour of the questioning pedagogy attributed to the Greek philosopher. Socrates' methods, however, had little to do with class teaching. His dialogic pedagogy – built around the probing of learners' answers – was, in fact, a form of tutoring rarely conducted with more than one or two learners. Equally, Socrates' students were drawn from the ruling strata of Athenian society, not from the lower orders. In its original form, too, Socratic teaching sought to promote understanding, whereas nineteenth-century class

teaching sought to exercise the memories rather than the minds of elementary school children. Socrates' teaching and class teaching were, therefore, radically different forms of educational production.

Class teaching came to prominence in the era of industrialization. The circumstances that prompted its introduction left their mark upon the activities of both pupils and teachers. On the one hand, children were expected to behave as an equalized class rather than as a group of individuals; and, on the other hand, teachers were expected to hold all the reins of pedagogic power. As an equalized batch, children were expected to focus their attention and vision upon relatively distant objects (i.e. the teacher and the blackboard). And, by analogy with machines that simultaneously powered banks of cotton spindles, teachers were expected to keep the simultaneous attention and maintain the motivation of rows of children.

Like comparable realignments of power in factory production, the advent of class teaching changed the productive capacities and rhythms of schooling. For example, larger class sizes increased the throughput of schools. Extension of the periods of time that the teacher commanded the attention of learners increased the potency of schooling. And increasing school enrolments without a comparable increase in the number of teachers enhanced the cost efficiency of schooling. Overall, therefore, the advent of class teaching was accompanied by many positive claims about its power and efficiency. Its introduction certainly served to lubricate the machinery of mass schooling. But, despite attempts to claim class teaching as Socratic teaching, it is an open question whether the pedagogic changes brought about through class teaching can also be described in terms of educational progress. It does not follow, for instance, that a tool in the service of a teacher or the state is also a tool in the service of the learner.

Similarly, it does not follow that the educational potential of a tool is always realized by the pedagogic context of its deployment. Late twentieth-century tools with educational potential include photocopiers, reference books, viewdata channels on television, and data archives stored on compact disks. But these devices may, in fact, be used merely to mimic older pedagogic procedures, as when an overhead projector is used as a blackboard or a microcomputer is used as an electronic catechist. Innovation without change is the outcome. Earlier relationships between teachers, learners and stored up experience are reaffirmed, not recast.

As this suggests, the full potential of educational tools may be released only through changes in the balance of pedagogic power. But such realignments are not easily accomplished. Schooling is a deeply rooted social edifice, bedded down with vast amounts of cultural hardcore. As discussed earlier, its ideological foundations, and its organizational structures, still owe much to medieval conceptions of indoctrination, Renaissance notions of

civility, and nineteenth-century assumptions about the over-riding authority of the state. Equally, the conduct of schooling also owes much to views of professionalism, themselves forged through nineteenth- and twentieth-century struggles that took place between successive governments and various professional associations and trade unions of teachers.

Debates about teacher professionalism are also debates about the tools of the teacher's trade. Many disputes, therefore, have been conducted around proposals that teachers should be given greater command of the machinery of schooling and greater control over the selection and organization of curricula. But teacher professionalism or, more accurately, teacher autonomy, can also be construed in a different way: in terms of teacher individualism, teacher privatism and the freedom of teachers from outside interference. This latter view of autonomy regards teachers as craft workers who, like their seventeenth- and eighteenth-century forebears, occupy their own workshops and offer a specialist service to their clients. From this pre-industrial viewpoint, teaching is envisaged as a tool-based activity. Yet, as noted, by the nineteenth century teaching had become more like factory production. In these terms, nineteenth-century teaching was more of a technological than a tool-based activity. The elementary-school teacher had become less of a tool-user and more of an element in the inner workings of the machinery of schooling. Thus, debates about professionalism and autonomy need to be repeatedly updated. For instance, nineteenth-century views of professionalism assumed that professions were the sole preserve of male workers. They were like the Renaissance assumption that virtue (*vir* is the Latin for man) was an exclusively male characteristic. What, then, are the models and forms of professionalism appropriate to a twentieth-century occupation that is numerically, if not organizationally, dominated by women? And what forms of educational retooling would be adequate to the currently gendered status of schoolteaching?

Tools, technology and power

The changing circumstances of schooling have been closely linked to different forms of human autonomy and power. Indeed, technology and technological thinking have been central to the exertion of human power. Since the seventeenth century, important sections of the human species have been politically motivated by a vision of the human domination over nature. With the aid of science, the human species would elevate itself above the rest of nature and, at long last, would receive due compensation for the biblical fall of Adam and Eve. Nevertheless, human ascendancy was to be accomplished at nature's expense, by a shift in the ecological balance of power.

Gradually, this vision of the emancipatory potential of science spread to other areas of human concern, notably the organization of society. By the eighteenth century, it was believed that, in principle, the law-like behaviour of society could be deciphered in the same way that Newton had begun to unravel the law-like operations of the natural world. Indeed, it was this view of society's working that fuelled the rise of the social sciences. In turn, the belief that science and rationality would rule the world created a technocratic perspective on the governance of human life. It was assumed that, with the aid of the social sciences, society could make unimagined economic and cultural advances. Spiritual salvation would be replaced by human progress.

Such conceptions of the social sciences raised a major political and organizational issue. How was the leverage of the social sciences to be exerted? Would it be used for the benefit of all human beings? Or would there be an uneven distribution of social power? And at whose expense? Initially, 'them and us' conceptions of society were often invoked to reconcile the interests of those who found themselves at opposite ends of the balance of power. For example, women and non-white persons were always vulnerable to the claim that they were naturally inferior to white males. In this respect, and many others, the fruits of the scientific revolution were used both for and against the interests of human beings, outcomes documented, for instance, in Bridget Hill's *Eighteenth Century Women: An Anthology* (1984) and Peter Fryer's *Staying Power: The History of Black People in Britain* (1984). Eventually, however, arguments about natural inferiority, and the attendant denial of full citizenship, became less fashionable in political circles. It was assumed, for instance, that the benefits of the Industrial Revolution could more than offset the differences observed among human beings. Hence, differences between human and near-human forms of life were recast as differences between members of the same human species.

Nevertheless, the retooling of production in the eighteenth and nineteenth centuries did not always meet the aspirations and predictions of social philosophers and politicians. The post-Enlightenment spread of the free market produced unwanted social consequences: poverty, unemployment and disease. Gradually, it was argued and accepted that the state should intervene to offset these social problems, a movement examined, with much else, in Peter Gordon and John White's *Philosophers as Educational Reformers* (1979). The creation of the welfare state was the outcome of this reconceptualization of the role of the state. Essentially, the welfare state was designed and constructed as a state-powered and state-regulated instrument of social redistribution. But it was also a child of the social sciences, a system of social engineering run according to ideas supplied by the scientific as well as the landed and industrial aristocracies.

Schooling became an important arm of the welfare state. It was conceived both as a redistributive and transformative political instrument. As a redistributive technology, schooling attracted many teachers and educationists who had a comparable political outlook. They subscribed, for instance, to 'you and me' pedagogic philosophies and espoused, therefore, a commitment to social justice and the equality of opportunity. Yet many of the costs of the welfare state were met from profits repatriated from elsewhere in the British Empire. In other words, many Britons who sheltered under the umbrella of the welfare state received their protection at the expense of overseas citizens of the Empire.

But as the sun set on the British Empire, and as Britain lost its privileged position in world trade, the coffers of the welfare state began to run low. Since the late 1960s, the redistributive function of the welfare state has been trimmed back, largely through cuts in state expenditure on welfare. In schooling and elsewhere, a 'them and us' version of the welfare state has emerged. The welfare state has become more of an institution of political containment than a vehicle for economic redistribution and social transformation. But, whatever its priorities, the welfare state has remained a social technology – an artefact of power and social control.

In many ways, too, the natural sciences have reached a similar crisis. The prospect, raised in the seventeenth century, of humankind's domination over nature has led, nearly four hundred years later, to a recognition that the natural world is an overexploited, if not endangered, species. In the wake of the Chernobyl disaster, itself technologically and technocratically-driven, human progress has become a questionable concept. Human progress is held to be neither inevitable nor necessarily desirable. In an important historical turn around, technology, techno-thinking and, above all, techno-power have become a problem, not a solution, for the human species. Indeed, as the twenty-first century approaches, the word 'progress' is beginning to be about as unfashionable as its predecessor, 'salvation'.

Human beings as tools

Slavery represented a degradation (i.e. downgrading) of human beings. Deprived of their human rights, slaves could be grouped with non-human animals. In Roman times, for instance, an agricultural slave was designated an *instrumentum vocale* (speaking tool), one grade away from a livestock animal (an *instrumentum semi-vocale*), and two grades away from an agricultural implement (an *instrumental mutum*). Within such an etymological framework, slaves were recognized as tools of production. But how,

exactly, do human beings fit into the production process? How, for instance, do they provide leverage? And what is the object of their leverage?

One approach to this problem is to regard the teacher as the tool of the learner. The teacher, therefore, is an extension of the learner, someone who provides the learner with leverage upon the curriculum. But teachers are special kinds of tools. They not only speak, they also think. Hence, as thinking tools, teachers can operate in two ways. They can make judgements about which elements, if any, of the curriculum are within reach of the learner (who is also a thinking tool). And they can serve as bridging devices – links between the learning potential of students and the teaching potential of the curriculum.

In an educational context, the teacher-as-tool is placed at the disposal of the learner. But teachers also serve as tools in another sense, one that is more characteristic of schooling than education. Since the Reformation, if not before, many teachers have been coopted by the political state, a status exemplified in the title of Martin Lawn's *Servants of the State* (1987). In turn, the labour of many teachers is incorporated into a machinery – the school system – which is relatively remote from individual learners. But where does this leave the lives and works of schoolteachers? Are they tools of the state or are they tools of the learner? Above all, how do they resolve their personal aspirations as educators with their political responsibilities as schoolteachers?

Summary

This chapter has examined the significance of tools in the organization of education and schooling. It suggests that, as elsewhere, tools offer leverage in the processes of education and schooling. But it has also suggested that such leverage does not necessarily yield advantage to the learner or even the teacher. In general, then, the successful introduction of a new educational tool – human or material – does more than merely enhance or increase learning. It has much wider social ramifications. It affects not only the power relationships between the learner and stored up human experience, but also the power relationships among teachers and learners. The provision of elaborately designed desks may have furnished nineteenth-century learners with a writing surface; but it also provided teachers with a device for putting learners in their place. Tools may be levers in the learning process; but they are also pawns in a pedagogic power game. Further, all technologies (in industry) and pedagogies (in schooling) incorporate a human as well as a material dimension. And, in recognition of this human presence, every pedagogy is more accurately described as a socio-technology. Ultimately, therefore, its impact is contingent upon the docility or reactivity of those – teachers as well as learners – whose lives it seeks to reshape.

CHAPTER 10

A time and a place to learn

No method's more sure at moments to take hold
Of the best feelings of mankind . . .
Than that all-softening, overpower'ring knell
the tocsin of the soul – the dinner bell.

(George Byron, poet, c.1819)

Schooling emerged as the processes of education became institutionalized. It gradually became a partitioned social activity, separate from the rest of life. Throughout its history, then, schooling has occupied distinct spatial settings and has been allocated distinct periods of social time. Indeed, as schooling sought to mimic the natural order of things in the seventeenth century, it adopted the organizational axiom that everything has its proper time and place.

This attention to the regulation of schooling also derived from the work of René Descartes (1596–1650) and Isaac Newton (1642–1727). Among other things, they popularized the view that the workings or machinery of nature and, later, civil society, could be exposed to rational investigation, logical understanding and conscious improvement. It was popularly assumed, therefore, that schooling would run smoothly and efficiently if all its elements could be suitably positioned in time and space. Indeed, such was the persuasive power of these notions that schooling was envisaged not merely as a machine but also as a friction free and self-regulating machine.

A place to learn

The notion that learning might be place specific is much older than the Scientific Revolution. The earliest schools were simply settings occupied by individual teachers and their disciples. As the teacher moved, so did the school. In its early usage, therefore, a school was not so much a place or building as a group of people. Moreover, this distinction survives in the phrase 'school of thought'. In this respect, school is like the word 'church' a term of comparable double meaning. A church can refer to a congrega-

tion of people (e.g. the church of Rome) or it can denote a more permanent structure (e.g. St Peter's, Rome). Early schools of learners, like early ecclesiastical congregations, were noted for their geographic mobility. Sometimes, however, a school or a congregation settled in one place and became known by its location. The School of Chartres, a cathedral town about eighty kilometres south-west of Paris, originated in this way. Its label, however, can be misleading. It does not necessarily follow that specialist school buildings were erected in Chartres. Nor does it mean that the School had a permanent and enduring existence. In fact, the School of Chartres waxed and waned in popularity as, for instance, its teachers migrated to live and work elsewhere (e.g. in Paris).

The early meaning of the word 'school', and its association with notable teachers, survived for centuries. Schools, that is, did not settle down until well into the Middle Ages, a fact reflected in the chronological starting point of Malcolm Seaborne's *The English School: Its Architecture and Organization 1370–1870* (1971). The establishment of relatively permanent and static schools seems to have accompanied the attraction of teachers to specific settings. From the twelfth century, for instance, cathedral churches (which were also the regional administrative centres of the Church) were expected to support teachers who assisted in the training of parish priests. Such teachers often became associated with specific locations in the cathedral precincts (e.g. a side chapel). Nevertheless, such schools were still known by their locations than by their association with architecturally distinct buildings.

By the Renaissance, however, teachers and teaching began to be tied down by additional factors. For instance, schools began to break away from the direct control of the Church. They were established in specific locations (e.g. market halls), often with monies left by local benefactors. Indeed, the fact that such legacies paid for a teacher's stipend often meant that they were known as free schools, even if the schoolteacher still charged fees! Sometimes, too, benefactors endowed funds for the erection of school buildings and left instructions about the topics to be taught and the procedures to be used by the teachers. Historically, however, such schools were exceptional, both numerally and socially. They catered for a small sector of the population and, typically as grammar schools, were closer to the universities than to the forms of domestic one-teacher schooling that served the rest of the population. Nevertheless, school buildings began to grow in size in the latter part of the nineteenth century. Schools that, previously, were based on a single schoolroom were amalgamated into multi-room, multi-storey, multi-teacher schools built with the latest innovations in structural engineering, heating, ventilation and illumination.

The multi-room school was to the single schoolroom as the factory was

to the workshop. As noted earlier it embodied a new form of production. Each classroom was, in effect, a separate machine room. But how were the different machine shops to be coordinated? How were children to be allocated to their classrooms? How were they to be promoted from class to class? And were learners to be promoted (i.e. processed) as individuals or as batches?

Educationists struggled with these problems over several decades, just as a similar set of problems engaged the designers and managers of industrial production. One notable solution was the removal of classroom walls to create open-plan schools. Open-plan schooling solved the production difficulties associated with the box-like architecture and batch-based processing of classroom schools. Through its espousal of aspects of continuous production, open-plan schooling could be seen as an invention that allowed individual learners to progress at their own rate. From an industrial perspective, then, open-plan designs are to schooling as the moving production line is to industry.

But attention to learners' needs also points to another dimension of the open-plan story. The erection of open-plan schools was also prompted by a contrasting educational consideration, one that represented a conscious retreat from factory thinking. Many open-plan school designs reflect planners' intentions to make schools more like homes than factories. Areas of the school are carpeted; cosy quiet areas are provided for pupil privacy; and home bases are included where children can gather together in communal activities. In historical terms, therefore, open-plan schooling can be seen as an historical compromise – a convergence of different, even opposing, social rationales. Indeed, the fact that every open-plan design is a compromise may account for their notable variety.

Nevertheless, how do children (rather than architects) regard themselves in open-plan schools? Do they feel at work? Or are they at home? Are they working? Or are they playing?

Childhood: a time for work or play?

Before the Renaissance and Reformation, childhood did not exist. The transition from a state of dependence to the responsibilities of adulthood was very rapid. In this respect, human beings differed little from other animal species. As the centuries passed, however, the human species prolonged the period of infant-to-adult transition; and child rearing became a focus of social attention. Schooling, for instance, is one of the products of that attention, an institution designed to occupy young people during their transition from infancy to adulthood.

According to the pioneering arguments in Philippe Ariès's *Centuries of Childhood: A Social History of Family Life* (1962), childhood originally

emerged after the thirteenth century. Children were previously portrayed (e.g. in paintings) as scaled down adults. Released from activities necessary to social survival, children in wealthy families began to occupy other social roles. For instance, they served as family playthings; and were sheltered and coddled rather like family pets. In a sense, too, children became symbols of family property and wealth, decorative elements of the household, polished and gilded by their tutors.

In time, however, children from less elevated backgrounds began to display the leisure attributes of childhood. In the sixteenth century, for instance, children from craft families took to the streets in search of enjoyment and recreation. Nevertheless, this substitution of child pleasure for child labour did not always receive universal approval. Then, as now, children who engaged in active forms of leisure were liable to be labelled as idle. Moreover, idleness was often held to be a form of sin. Accordingly, such children were to be censured rather than coddled; they were to be house-trained rather than gilded; and they were to be returned to work rather than equipped for play. In short, their sinfulness was to be exorcised through the medium of social discipline.

By the eighteenth-century Enlightenment, however, a new view of childhood emerged. It began to be claimed, for instance, that all children were born in a natural (i.e. innocent) state and that their subsequent fall owed more to the neglect of society than to a weakening of God's grace. The classic statement of this viewpoint appears as the opening lines of Rousseau's *Emile* (1762): 'God makes all things good; and man meddles with them and they become evil'. As noted earlier, Rousseau's protestations about the innocence of childhood, and about the value of natural (i.e. non-interventionist) upbringing were an important contribution to the canons of child-centred education.

Famous exponents of Rousseau's rationale include Johann Pestalozzi (1746–1827) and Friedrich Froebel (1782–1852). In Froebel's thinking, and in the language of natural upbringing, children were to be nurtured rather than decorated. They were to be trained, but as plants rather than as soldiers. Indeed, the word kindergarten (child garden) derives from Froebel and his followers. Froebel's essential assumption was that children need space and freedom to develop according to their true nature. Certainly, there was a strong biological element in the arguments of Rousseau and his followers. Child rearing, like horticulture, was the unfolding of a design already encrypted in the initial state of the organism.

Appeals to the inner nature of children have also survived in the writings of psychoanalytical theorists like Anna Freud, Melanie Klein and Susan Isaacs. There are many variants of psychoanalytic thought, but most protagonists adhere to the view that education and schooling should provide children with physical space, material resources (e.g. playthings)

and intellectual freedom to resolve their early (if not innate) emotional and intellectual difficulties. Indeed, psychoanalytic theory has offered strong support for free play in schools for very young children. It is assumed, for instance, that good play is a psychoanalytic ground-clearing prelude to good learning.

Nevertheless, the ghosts of John Calvin and John Knox also police the social freedoms made available to young children. Today, therefore, discussions of childhood and schooling are driven by different views of childhood and, as important, different class-based conceptions of childhood. Since the Second World War, for instance, these different views of childhood have informed discussion of the relative merits of playgroups and nursery schools.

The playgroup movement initially arose as a self-help movement closely associated with the professional and middle classes. Playgroups were intended to service the early – and natural – upbringing of members of those classes. Playgroup parents, therefore, were the linear descendants of the coddlers of the late Middle Ages and of the many upper-class adults attracted to Rousseau's and Froebel's ideas in the eighteenth and nineteenth centuries. The nursery school movement, on the other hand, began by paying much less attention to natural upbringing. It stressed the disciplinary value of organized activities, not the emancipatory (or therapeutic) potential of play. Its aim was more to civilize than to nurture young children. Moreover, nursery schooling typically adopted an interventionist stance. It was more likely to receive state funding, and to be organized by one social group for the children of another social group (i.e. the working class).

But cross-fertilization has occurred. Many playgroups were established in working-class housing schemes and many nursery schools have adopted the rationales surrounding children's play. Nevertheless, this recent attention to pre-schooling is also a response to the world of work rather than to the world of play: the extension of school provision for young children has been seen as a means of increasing female participation in the labour market. It seems quite likely, therefore, that pre-schooling in the twenty-first century will be driven as much by the artificial rhythms of work as by the natural rhythms of child development.

A time to learn

The nineteenth- and twentieth-century development of pre-schooling can be seen as an extension of the length of state-sponsored schooling. For many children, therefore, the time to learn (or, more accurately, the time to be schooled) starts earlier in their lives and finishes later. But there are

also other ways in which the 'time to learn' has changed since the invention of schooling.

Like the rest of life, schooling originally followed a solar timetable. Most activities, that is, were organized between dawn and dusk. Under solar influence, schooling also followed an agricultural rhythm. For instance, children began school early in the morning and returned home for their breakfast during a morning interval. It seems, too, that the agricultural timetable also influenced the structure of the school year. In Britain, if not elsewhere, the school year was conventionally divided into four quarters; and the quarter days (e.g. Lammas, Candlemas) were occasions when rents were paid, servants were hired, and school fees given to schoolteachers.

Schooling seems to have been conducted throughout the year. Yet even if a school was open all the year, it does not follow that pupil attendance was equally an all-year phenomenon. Typically, children attended school until they could read – a course of study that might last only a few months. Similarly, it was by no means unusual for one set of fees to be used by more than one child. Robert Burns and his brother, for instance, attended on alternate days. School attendance also responded to the agricultural year in other ways. For instance, the demands of harvest-time lowered summer attendance, while a poor income from the harvest could reduce winter attendances.

The introduction of summer holidays of more than two weeks seems to have been a fairly late development. It may, in fact, have been associated with nineteenth-century attempts to increase and prolong school attendance. In effect, longer school holidays at harvest-time was the social price paid to compensate for the increased school retention of child labour during the remainder of the year.

British institutions of higher education have also conventionally followed a quarterly pattern, as demonstrated in the quarter names (e.g. Lammas, Whitsun, Michaelmas) used to label university terms. In Glasgow, for instance, the summer quarter remained an important period of university life until at least the end of the eighteenth century. Students left the university precinct at the end of May taking with them academic tasks to be completed over the summer. And they returned to Glasgow in September for the annual diet of examinations.

During the first part of the nineteenth century, however, Glasgow University examinations underwent two changes (as they did elsewhere). For centuries, examinations had been conducted orally, with the students being examined one at a time. Expansion, however, put pressure upon these arrangements. In Glasgow, for instance, it became difficult to examine several hundred students in the latter part of September. Pressure was eased by moving examinations to May and June and by introducing written examinations which could be taken simultaneously by batches of

students. Together, such innovations reshaped the academic year into a form that has survived to the present day.

Arguably, British higher education still follows an agricultural rather than an industrial pattern of production. Each year, a crop of students is harvested and a new crop is planted. And each year, too, there is a fallow quarter which allows for the recovery and refurbishment of the university's plant and personnel. To this extent, universities have lagged behind industry, which began to abandon seasonal and diurnal rhythms of work at the beginning of the nineteenth century. Steam power could, in principle, be maintained all the year round and, unlike water power, was not dependent upon variations in rainfall. Further, the introduction of artificial gas lighting also assisted all-day production by reducing the incidence of factory fires triggered by unattended candles.

In the twentieth century, however, certain new universities have tried to make a break with agricultural rhythms (e.g. by abandoning quarterly forms of organization). The Open University is the most notable example. Unlike most other institutions of higher education, its annual cycle begins in February rather than October and the student year continues without a break until October. The Open University vacation (October–January) exists not so much to rest the students but, as before, to provide sufficient opportunities for the harvesting of one generation of students and the replanting of the following generation.

The practice of annual harvesting suggests that continuous production has rarely been implemented in British higher education. Nevertheless, there is a sense in which continuous production has made a backdoor entrance in recent years. Most notably, its ideals have been expressed through the introduction of continuous assessment, and by the associated decline of written examinations. Student effort is evaluated constantly, not merely on the basis of a single outcome. The introduction of continuous assessment can be regarded as an attempt to introduce an industrial discipline (i.e. a new drive system) into an agricultural enterprise. Given this convergence of agricultural and factory rationales, certain forms of late twentieth-century schooling (e.g. cubicle-based learning stations and all-night opening of libraries) are the educational equivalent of factory farming. A social rhythm ultimately derived from the daily and seasonal patterns of the earth's orbit has, in part, given way to a greenhouse educational tempo – one that is consciously shaped and continuously monitored through a new pedagogic discipline.

Summary

The patterns of education and schooling that have emerged and persisted over the ages can be understood as attempts to intervene in the natural (or

innocent) processes of child rearing and socialization. Such patterns have unfolded through the gradual differentiation of the tasks of upbringing. In an important sense, changes in the institutionalized fabric of schooling derive from attempts to impose new rhythms on the lives of human beings. For these reasons, schooling is not a natural process shared with other animals. Rather, it is a social activity that has been created, in effect, for unnatural purposes – to efface the animality of *Homo sapiens*.

CHAPTER 11

Epilogue

Teach your children well . . .
And feed them on your dreams.

(Graham Nash, Troubadour, 1974)

The human species has an unusual history. Humanity exists in its present form because it broke away from nature. It began to communicate, accumulate and transform its experience through social rather than biological mechanisms. In the process, it acquired a measure of economic, cultural and intellectual autonomy.

In an important sense, too, the human species has evolved eugenically rather than naturally. The social practices of infanticide, castration, sterilization, contraception and abstinence have interrupted biological (or Darwinian) evolution. In their turn, such intervention practices have also changed substantially. Most notably, humankind has recently begun to rewrite the codebook of life – the chromosome. Social engineering has been joined by the cultural and political practices of genetic engineering. What, therefore, do these interruptions and interventions mean for the future of education and schooling? Earlier chapters, for instance, have suggested that schooling has had a beginning and a middle. But will it also come to an end? Or is schooling an endless institution?

The endless view of schooling dates back to the Scientific Revolution. Teaching and learning began to be claimed as sequential and linear activities; and these claims were underpinned by Cartesian and Newtonian assumptions about re-establishing, for perpetuity, the natural order of things. But how do notions about the order of teaching and learning resonate with post-Newtonian conceptions of knowledge? How has Einstein's relativity theory informed the organization of twentieth-century curricula? And have contemporary versions of chaos theory any pedagogic relevance? Will schooling shortly find a place and purpose for the carefully planned chaotic lesson?

These questions are not easily answered. Indeed, it is unlikely that any useful purpose is served by trying to answer them. Nevertheless, they are important to this book because they affirm that, in R.S. Peters's terms,

education is, indeed, a chancy business. If the educational record remains open ended and unfinished, so must this book.

In fact, this book also aspires to be unfinished in two additional senses. First, few of the chapters are fully fashioned. Instead, attempts have been made to acknowledge the rawness of their disparate ideas and assumptions. But has it, in fact, been possible to do textual justice to the debates, disagreements and discoveries that currently exercise students of early humankind? Likewise, has it been possible to honour the historical sensitivity – and semantic diversity – of the term *curriculum*? Above all, is it possible to render an account that is both unfinished and accessible?

Second, this book is also intended to be open ended in so far as certain tensions are deliberately left unresolved. Under what circumstances, if any, is it possible to reconcile the ‘needs’ of the learner with the ‘needs’ of the state? Similarly, should tax-funded institutions of teacher training focus upon the skills and competences of teaching or should they, by contrast, address a different set of practices – schoolteaching? Or can they do both?

This last issue – the relationship between teaching and schoolteaching – is one of the most important themes in this book. Yet, paradoxically, it is rarely examined in the educational literature. Indeed, many texts that occupy the education shelves of libraries even fail to acknowledge the possibility of its existence. By default, they seem to presume that schooling is for horses, not humans. As a consequence, such texts not only mask the diversity and complexity of pedagogic practice, they also mask the minds of those schoolteachers whose practice they seek to influence. Very often, too, they promote doubt and confusion among intending teachers. Having read extensively about the mysteries of education, novice teachers rapidly find that schooling is something else. Not surprisingly, many of them begin to question whether they can survive as teachers in a world of schoolteachers.

Perhaps this book will only add to their alienation. Throughout, it implies that, in its post-Enlightenment sense, education cannot readily be reconciled with pre-Enlightenment conceptions of schooling. At the same time, however, this book has also identified and explored a contrasting possibility. If nothing else, the history of schooling is an eloquent testimony to the self-conscious and reactivity of human beings. Moreover, it was the reactivity of human beings – learners as well as teachers – that helped to turn education into schooling, and teaching into schoolteaching. For the same reason, therefore, human beings retain the capacity to challenge and reverse these processes. Who knows, therefore, what education and schooling might become?

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