Dedication

To my three sons, Peter, David and Tom, and others of their generation, as they seek to build a more responsible, more sensitive and more self-sustaining world.
Tell me, and I forget  
Show me, and I remember  
Let me do, and I understand

After Confucius, China, 5th century BC

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“(Apprenticeship) was a system of education and job training by which important practical information was passed from one generation to the next; it was a mechanism by which youths could model themselves on socially approved adults... it provided safe passage from childhood to adulthood in psychological, social and economic ways.”

The Craft Apprentice  
W.J. Rorabaugh, 1988
Acknowledgements

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In the past four years I have been privileged to work extensively with hundred of headteachers on various training programmes over a number of days in England, Ireland and Canada, while I have addressed more than two hundred and fifty conferences of teachers and others across England, Wales, Scotland and Ireland. To all those I have worked with in Canada, the United States, Columbia, right across Europe and the Middle East; in Ghana, Nigeria, Tanzania, Namibia and South Africa; in Korea, Japan, Indonesia, Malaysia and Australia. I hope this book, while having a specifically English focus, will remind all of them of the lively discussions that we had under different skies and in different climates – but always about the same thing... empowering young people to become for ever better than ourselves.
Previous Publications

The Earth’s Changing Surface, 1975
with Michael Bradshaw and Anthony Gelsthorpe

The Iranians: How they Live and Work, 1977

Learning Makes Sense, 1994

The Child is Father of the Man: How Humans Learn and Why, 1999

The Unfinished Revolution: Learning, Human Behaviour, Community and Political Paradox, 2000
with Terry Ryan
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Preface

It’s strange the comments we remember from long ago.

In my case it was the sergeant major shouting at us young cadets as we struggled to understand the finer points of map reading. “If you don’t know where you’ve come from and you’ve no idea where you need to be then, lads, you’re well and truly lost.” To a soldier who had fought across North Africa and up the length of Italy, not knowing where you were meant you were in Big Trouble. Not being able to describe your present position meant no one could rescue you.

That’s a good metaphor for this book. If we don’t understand where our ideas about education have come from, and we’re not sure of the kind of society we should be trying to build, then we are literally and metaphorically lost. Be we parents, politicians, students or teachers, if we can’t locate where we are, we go off aimlessly wandering in circles, unable to connect with those who might be able to help us. Many people sense this is the case with the way we currently bring up children. After fifteen years of successive education reforms, and extensive legislation affecting all aspects of young people’s lives outside school, we urgently need a profound reappraisal of who we are as a people and what we expect from our culture. We need that clearer sense of direction as we struggle to provide young people with what they most need.

So just where have we come from? There is no doubt that the English are an amazingly inventive and creative people. They pioneered parliamentary democracy, led the world into, and out of, the first Industrial Revolution, and created in the nineteenth century the greatest Empire the world has ever known. From Shakespeare and Milton, to Isaac Newton, Adam Smith, Charles Darwin and Francis Crick, this relatively tiny island has made an enormous contribution to world culture and scientific thought, and made its language the lingua franca of international trade, diplomacy and science. The English, it seems, know how to use their brains well. The question is, how do they do it, given this is a society that for generations has ascribed a low status to technologists and academics, and an even lower one to schoolteachers. The pattern seems to have been set more than four hundred years ago by an Elizabethan classical schoolmaster, Roger Ascham who, in his book ‘The Scholemaster’ published in 1570 believed that experience was a poor teacher. He claimed that a student could learn more from books in a single month than he could from twenty months of learning on the job.

This tension between matters of the mind and those of the hand continues to distract the English as we struggle to find an appropriate balance for everything we believe should be involved in education. It’s my belief that Roger Ascham set up a false antithesis. Successful individuals, as with successful societies, need to be both thoughtful and practical. They need to dream big dreams, but to have their feet well grounded in reality. In the currency of education there are many issues to consider; as with a coin there are frequently two sides to each issue and often these represent contradictions – ‘heads you win, tails I lose’. Education is full of such apparent contradictions. The list is long; thinking and doing, formal instruction and informal experience, the classroom and the world outside, the home and the school, teachers and the influence of the child’s peer group, the objective and the subjective, analysis and synthesis.

As long as we keep these coins spinning we see the complimentary nature of every issue, but if we once allow the coins to fall flat then each will reveal only one side of a complex issue. In society’s urgent search for solutions we may be tempted to do just that, to over-simplify what is not so much a complex as a messy issue. For learning is essentially a messy process; it is never simply linear or indeed logical, and we trivialise children when we try to make it so.

In the past twenty years developments in biomedical technologies, in the understanding of how systems work and in evolutionary psychology, have started to show that who we are as individuals has been shaped in very specific ways by our evolutionary history. Until very recently the most significant of these antitheses was seen as being nature versus nurture, only recently reconfigured in the public mind by the scientist Matt Ridley, in his cleverly titled book ‘Nature via Nurture’. The clever substitution of ‘via’ for ‘versus’ puts a whole new complexion on the question of how children should be brought up. No longer is it a fruitless argument about the comparative values of school versus home, objective versus subjective, or even of the academic versus the non-academic. For years many of us have known that humans weren’t that dumb.
We know, probably intuitively, that we have each become who we are because our nature has been shaped – both consciously and subconsciously – by our culture and by the way we were brought up.

We now understand that thoughtfulness comes as much through our experience of dealing with such conflicting cultural expectations, as it does through the interaction of these with the individual characteristics we have each inherited from our ancestors. This makes a mockery of any belief that the home, or the school, alone can do it all. The educational agenda of the future has to be as much concerned with community issues, as it is with schools. Critically it is as much to do with the children of the wealthy as it is to do with children living in poverty. The former may have everything so well delivered to them in pre-packaged form they have no incentive to work things out for themselves, while the least privileged may be good at working things out but not have the means to do anything about it.

This interplay between culture and human nature, shaped by millions of years of evolution in the brain, is certainly fascinating stuff. More is being discovered every year, as a visit to any bookshop will show. The diversity of such knowledge however presents each of us with a problem. The more specialised these studies become the more difficult it is for the layman to draw together all the pieces of information and data. Rather than seeing things more clearly, we tend to flounder in the detail, and this is the problem I’ll address here.

I will do so first by looking at our rapidly growing understanding of the evolution of the human race, and of the mental predispositions that shape our behaviour. Then I will explore the way in which English culture has, over the past two hundred and fifty years, conditioned many of the assumptions we still make today about our social policies. This should help each of us to construct accurate ‘back bearings’; in other words to be more precise about where we each – as members of a specific culture – have come from. Very simply it should help us to know ourselves better.

So what of the front bearing and the way we should go? Just what kind of society are we educating people for, and do we anticipate that children will grow up to be the equivalent of either battery hens or free range chickens? I think it comes down, as it has from earliest times, to fundamental beliefs. “What is man that Thou art mindful of him?” questioned the Book of Proverbs thousands of years ago. As then, so now, the future is not inevitable, it’s very much what we decide to make of it for ourselves. The challenge should be even more real to our generation, one already in possession of the technology to clone human beings.

Morality, and with it a sense of purpose, comes out as the second key theme of this book. The beliefs that society in the past gradually formed in order to make sense of who we are, why we are here, and how such thoughts should influence the way we treat each other, are the oldest of mankind’s questions. The extent of our technical knowledge compels our generation to go many a step further than our forebears and, with all the wisdom and knowledge available to us, develop a philosophy that honours both our scientific as well as our spiritual natures. Old stories were reassuring but we want to argue with them. It’s simple really. The better we use our brain, the more we want to challenge the boundaries of an earlier generation’s knowledge. The very sciences that are helping us to understand ourselves better are becoming a source of inspiration for the reconfiguration of narratives that combine with a new sense of our commonality and mutual purpose. After more than one hundred and fifty years, theology and biology are beginning to talk to each other again. But will our model be that of the pilgrim constantly trying to improve himself or herself or that of a customer, always looking for the best bargain? Whichever it is it will profoundly influence the way we educate young people, and that in turn will shape our future culture.

Despite the magnitude of the task facing us I believe these to be immensely exciting times. That may of course sound like the ancient Chinese curse but knowing what we now know many of us believe we no longer have the moral authority to carry on in the way we used to. In a democracy that is a challenge to every one of us for, ultimately, politics does reflect what the people will tolerate. Without a vision, prophets both old and new tell us, we go around in circles for lack of a sense of direction – the Old Testament prophet Isaiah was more poetic; “without a vision the people perish”. Which way to move forward is the challenge that necessitates both individual and collective resolution. Of one thing we can be certain, there is no standing still – the maintenance of the status quo is not an option.

This book is intentionally written in a way that combines the anecdotal with the theoretical and the profound. The origins of this book go back a long way. As a child I was encouraged to work things out for myself, and my thinking was eclectic from the start. I am an unrepentant hoarder, and from childhood have kept a diary, and drawers full of trivia. My interests never fitted easily into the
subject disciplines of school but I was fortunate to have the same Sixth Form teacher for both History and English. His digressions into religion, philosophy or sport took each of us pupils into a fascinating world of interconnections. Later, as a teacher, I kept endless day books full of matters that interested me and which now, years later, provide a fascinating individual commentary on the more official interpretations of the history of those time. To the frustration of my family I have endless boxes of old papers and reports that I’m constantly told I will never look at again. I am an inveterate collector of books, and shamelessly scribble all over their margins. I take numerous cuttings from newspapers, and make copious notes of endless meetings because I fear that my memory might let me down.

Now, years later, I’ve opened up these old boxes, and reread many of those scribbled margin notes. To them I’ve added the family diaries, and the fascinating comments made by our sons as we watched them start also to make sense of their world. These are the foundations on which this book is built. In its treatment of how culture influences the development of learning this book is pre-eminently about the English, both in our own country and as we exported these assumptions to other nations. It’s a dull mind that is not influenced by travel, and I have travelled enough to make me question so many of the assumptions my fellow countrymen take for granted. Such travels have helped me draw on research findings from around the world, and my contemplation of the future projects an ethic that could be classified as a universal, self-sustaining, ecological spirituality.

I’ve divided the book into four parts - the distant past; the recent past; the here and now, and our possible future. An introduction gives an overview of the entire argument, and a postscript draws the strands together. The book takes as its structural precedent the advice of an old preacher asked by a novice on how to deliver an effective sermon; “First of all you tell ‘em what you’re going to tell ‘em; then you tell ‘em; and then you tell ‘em what you’ve told ‘em.” Perhaps T.S. Eliot’s lines in the poem ‘Little Gidding’ offer a more poetic insight? - “We shall not cease from our exploration / and the end of all our exploring / will be to arrive where we started / and to know the place for the first time.”
Introduction

I was once a teacher. First at Manchester Grammar School where I taught Geography and Religious Studies, then as Headmaster of the old Alleyne’s Grammar School in Stevenage at the time it became a comprehensive school. My interest in young people has never been constrained simply by the walls of a classroom; as a geographer I led a number of expeditions to the most remote of Hebridean islands and to different parts of Europe, and made seven trips with Sixth Formers to study the life of the nomads in the mountains of Iran and in eastern Turkey. This meant that as a young teacher, I had numerous opportunities to observe that other peoples’ ways of educating their young were very different to our own. Studying these cultures made me even more interested in why we in the British Isles do things so very differently to people in other lands. Just how is it, I wondered, that within a single species we humans can behave in such varied ways?

I resigned as headmaster when I was in my mid-forties and for the next ten years ran the educational charity, Education 2000, whose aims included engaging local communities in better supporting young people, and exploring the use of computers in the learning process. The idea that computers might challenge conventional forms of classroom-based instruction and that in the world of ubiquitous electronic communications, school and community would have to work much more closely together, were novel concepts in the early 1980s. We received a steady flow of politicians and policy makers and I was invited twice to Downing Street to explain what might be the implication of applying these concepts nationwide. I was invited to speak to many groups of influential people who were not necessarily involved in education. Then, in 1995, I moved to Washington DC to establish The Twenty-First Century Learning Initiative (The Initiative), an organisation that would draw together the most significant findings from recent research into how humans learn, and then recommend what this might mean for the restructuring of schools, and communities.

As this work has developed I’ve been invited to address hundreds of conferences in some forty countries around the world. I’ve had to find a way of telling a complex story in a straightforward way, and make it appropriate to different cultural perspectives. Such an extensive lecturing schedule has given me a unique opportunity to meet tens of thousands of parents, teachers, students, administrators, politicians, policy-makers and numerous journalists all interested in the same thing - how best to educate children.

Inevitably my work is frequently pressurised, with different conferences and conversations coming one after another. As I lecture so I try hard to listen to what people tell me about their local circumstances. More and more I’ve come to understand that the Western world is not simply dealing with a crisis in education, but rather with a crisis of education. We are no longer sure why we’re doing certain things, and what we expect them to achieve. An education system that evolved in response to a specific historic situation may now be a totally inappropriate way of educating young people faced with a different set of circumstances. In reality I think we are dealing with a crisis in our understanding of ourselves, and our roles as members of different communities, every bit as much as we need to be concerned about what and how teachers teach. It’s so much bigger than what happens in school. Streets that are unsafe for children to play around are as much a measure of a failed education system as they are of worn out classrooms and burnt out teachers, I have said on countless occasions. It’s a powerful point.

Wherever I go people agree. They nod in acknowledgement that education involves more than schooling. But how to change this eludes them. Schools and schoolteachers can be told what to do, and be paid accordingly, but how is something as nebulous as the community – made up of countless individuals each doing their own thing – to be mobilised to be more supportive of young people in non-formal ways? This book is partly a response to such a question. Like the Greek philosophers, it does not give direct examples of what can be done - that would never appeal to thoughtful people who are more than capable of working out a suitable response for themselves. Chapter One simply recounts the events of a single week in late July 2002, when I had been invited to spend three days in Venice talking about how humans learn with a group of relatively young, international entrepreneurs. The conference gave me an opportunity to draw together ideas about creativity, learning, human nature, economics, adolescence, community and the tensions between living to work and
working to live. Midway through I had to return to address a meeting of teachers in the south of England, and then later spent time amidst the thousand year old buildings on the island of Torcello in the Venetian lagoon, two very different events but both helped to deepen the significance of my discussions with the entrepreneurs. Weighing heavily on my mind throughout were the words of the former President of the Czech Republic, Vaclav Havel; “Education is the ability to perceive the hidden connections between phenomena.”

Looking back at England from a distance as I travelled between these conferences has made those hidden connections seem far more obvious. That is what this book seeks to do – make the connections clearer to everyone. In chapters two to ten I explore various aspects of our perceived history and culture; in chapters eleven to sixteen I investigate fascinating developments in the sciences which put neurobiological flesh onto the philosophic wisdom of old, and in the latter chapters I take the reader into the political maelstrom of the past decade and a half. “At last I can make sense of it all”, a friend said as she concluded her reading of the manuscript. “It may not be a pretty story but now I’ve got a much better idea of what needs to be done.” If the book works in this way for many people it will have done its job.
Chapter One

A WEEK IN VENICE

Hidden amongst mature maple trees in a Venetian side street, the Quattro Fontane is an idyllic location for a conference. For a week in the late summer of 2002 the hotel was to play host to a small conference of highly successful business people, members of the elite Young Presidents Organisation, people it would be easy to classify as outstanding examples of the entrepreneurial culture fostered by the free market policies of the past twenty years.

They included the owner of a software company, a venture capitalist, an accountant, a lawyer, a cardboard box manufacturer, a blender of exclusive cigars, a property developer, the owner of a fruit and vegetable agribusiness, and import/export dealers. They came from across Europe and the near East, one came from the United States, another from India. They brought their children, toddlers and pre-schoolers, noisy nine and ten year olds, and adolescent daughters.

They were undoubtedly successful, but they were neither brash, nor falsely confident. Maybe it was Venice casting its spell that made them more interested in accompanying their children to the beach, or the shops lining the Rialto Bridge, than in maintaining mobile phone conversations with their offices. These were largely thoughtful people, I reflected after our first meeting, people who would probably have some good stories to tell.

Knowing that I would have an attentive audience was good news for, as the summer was wearing on, the weariness of teachers at the various conferences I had been addressing was starting to get to me. This weariness was that deep down ‘I’ve given everything I’ve got, and it’s still not enough’ kind of tiredness, and it was infectious. Many could hardly muster even a wan smile on a sunny afternoon, they were that worn out. Children, too, were tired. Not the exhaustion that comes from having saturated yourself in the excitement of a project that fascinates you, but the tiredness of mechanically pushing yourself to master ever more material devised by someone else.

I needed my own enthusiasm rekindled. In England, it seemed, the excitement of learning was being squeezed out of youngsters. Writing in The Times in early June 2002, Libby Purves graphically described how such a continuous ‘noses to the grindstone’ approach to education inhibits the proper growth of children’s minds: ‘The class of 2002 in England and Wales are now officially the most intensively tested generation ever. Altogether the culture of testing rather than education runs from nursery to university. What began as a reasonable idea - 'let’s check on what’s going on here' - has grown into a monster. If you are forever doing formal tests and waiting for someone to give you marks, then you never learn the skills for assessing yourself and measuring your own knowledge and ability against genuine, outside challenges. The constant neurotic focus on grades stops teachers from encouraging connections and fostering creative flexibility.’

The more commentators speculated on how rapidly examination standards were rising in English schools, the more vigorous was the assault on the examiners for having let standards fall. A society uncertain about just what it is that it wants out of life finds it easier to blame the system for not inspiring the young to be more dynamic, compassionate, entrepreneurial and imaginative than it does to question its own values and sense of direction.

To a large extent schools reflect the society that created them, so to blame schools for a rising tide of mediocrity is simply to confuse the symptoms with the disease. A wise American, Ernest Boyer of the Carnegie Foundation, observed twenty years ago that, ‘Schools can rise no higher than the expectations of the community that surrounds them.’ Addressing the Directors of Education for the English local education authorities at their conference earlier that month, I had said “That’s the nub of our problem as well. We have forgotten to ask ourselves every day, of every programme we embark upon, the age old riddle ‘do we work to live, or live to work?’ Getting that balance right is hard; maintaining it as factors change is even harder, but to ignore it is to sell our children short’.

It was precisely this balance that the members of the Young Presidents Organisation meeting in Venice were looking for, both for themselves and for their children. “Tell them about the origins of creativity and enterprise”, Sabrina, the conference organiser, had said, “talk about Venice and its once massive trading empire. Most importantly, tell them something about an appropriate education for their own children; ‘the children of the successful’ as they often define them. It’s an issue that causes all of them deep soul searching.” I was in-
trigued. I had often envied academic historians and archaeologists being paid attractive sums of money to accompany a Swan Hellenic cruise through the islands of Greece, or biology graduates engaged to conduct tourists to the Great Barrier Reef, but until then I knew of no way schoolteachers could make the theory of learning fascinating to wealthy people on holiday.

As I got to know the delegates over the course of a few days it became abundantly clear that they were successful primarily because they were essentially curious people. Their interest in how they and their children could channel their curiosity in constructive ways defined who they were. Learning was essential to their way of life, and novelty fascinated them. It wasn’t the money that drove them. “I once got a company up to being really successful”, one of them commented, “I lose interest. I have to move on to something else. It’s the challenge of possible failure that keeps me ever alert to new ideas. I’m always on the look out for new ways of doing things”.

Few of them came from wealthy families, and as children they had been encouraged by their parents and other adults, to start doing things for themselves, and taking responsibility for their own money. Several of them had newspaper rounds as children, one had worked at a stall in the bazaar, and another had worked in his parents shop. They were people who realised that struggle had been good for them. Practical people, as well as curious, they relished well articulated theory backed up with good examples.

I told them about my friend Ernest Hall, a highly successful entrepreneur, born in a small industrial town near Manchester, England in 1930. Both his parents had known long periods of unemployment in the textile trade, and had constantly struggled to maintain their family in a two up, two down, back to back house characterised so well in the TV series, ‘Coronation Street’. One afternoon, when Ernest was eight, his teacher played a recording of Apollo’s Lyre to the class. Ernest was spellbound; here was a form of beauty to transform his life. His family struggled to obtain an old piano, and Ernest taught himself to play. By the age of twelve he was playing so well that his parents urged him to leave school and earn his living by playing the piano in pubs. “No”, said the young Ernest, “I love music too much to trivialise it. I’ll make enough money to play the piano properly”.

And that is exactly what he did. For many years he worked in the textile industry enjoying great success, and continued practising the piano. By his early fifties he had bought the closed-down Dean Clough Mills in Halifax and created an amazing complex that today provides employment for more than three thousand people in an array of hi-tech and start-up businesses, yet also reserves a quarter of its floor area for art galleries, drama studios, concert halls, and exhibition spaces. This complex vividly demonstrates Ernest’s belief that living, learning and working - beauty and economic productivity - are all deeply interconnected.

To celebrate his sixty-fifth birthday Ernest fulfilled a lifetime dream. He performed Bartok’s First, Second and Third Piano Concertos, accompanied by Sinfonia of Leeds, and his CDs today sell alongside those of the great pianists. Ernest passionately believes in the potential of all young people to develop their particular abilities, I explained to my audience. Ernest once told me, “I discovered my interest before the crushing routines of my little school would have reduced me to a mere cog in a machine. Ability is not innate. It exists like a shadow of ourselves when we are willing to stand in front of a bright light. We must say to every child ‘You are special, you are unique; but to develop your genius you have to work at it and stick with it year after year’.”

These men and women in Venice liked that story for they too had disciplined themselves both to think broadly and to act intentionally. They were dreamers but they were also doers. This was exactly what they wanted for their own children; the ability to unite thinking with doing.

* * *

As a teacher, my passion - something bigger and more profound than the often trivial routines of my profession - has always been my fascination with people, and their amazing diversity of skills and talents. I find young people, especially adolescents, endlessly fascinating (as well as frustrating!) and it has been their constant questioning of me that has made me the person I am. Adolescence holds up a critical mirror to the self-assurance of middle age. My wife and I have three sons and it is every bit as a father, rather than just a teacher and a researcher, that I have written this book.

I resigned my headship back in 1985 when our sons were seven, four and two, believing that bureaucracy and muddled thinking (particularly at the secondary school level) were undermining real education. To see bored teenagers behaving as if the world owed them a living seemed to me to be condemnation of the way we were treating young people. It was not that the teachers weren’t trying their best. It seemed that what we were defin-
ing as our best simply held no interest for them. Many times I’ve reminded audiences that there is nowhere in the Western world where young people between the ages of five and eighteen spend more than twenty per cent of their waking hours in a classroom. More than three-quarters of children’s waking hours are lived outside school. It’s the child who comes to school eager to find answers to problems that fascinate them outside the school, who makes the most of formal education; it’s not the other way round. Communities that fail to provide challenging opportunities to fire children’s imaginations fail just as much as unstimulating schools do.

By the mid 1990s, a couple of years after my first book ‘Learning Makes Sense’ had been published, the policies being implemented by the English government in the name of educational reform were running in a very different direction to those that I understood the research to be advocating. Schools were being required to take on more and more of what earlier had been done by either the home or the community. Teachers - unprepared and under-resourced for such tasks - were being swamped with ever-heavier rulebooks prescribing in minute detail what they were expected to do. The more they were called on to follow other people’s instructions, the less they felt they had to think things through for themselves. This inevitably destroyed their sense of being professionals.

In early 1996, shortly after I had moved to Washington to set up the Initiative, I was invited back to London to discuss my ideas with the Policy Unit in Downing Street. I was grilled by three senior civil servants. “Surely”, Dominic Morris, the Prime Minister’s adviser said, “so many of our educational problems have their origins in the progressive child-centred learning policies of the 1960s?” Carefully I laid out my case, and spoke about recent neurobiological, cognitive and psychological research on human learning, and what this implied for effective learning programmes. More than an hour later Morris moved to close the meeting. “I can’t really fault your argument; educationally you are probably right, and ethically this sounds correct, but it’s all based on having a ready supply of good teachers. We don’t think we have these so we’ve decided instead to go for a system so well designed, and so efficient, that it is virtually teacher-proof.”

I was horrified. At a policy level, education was becoming an ever more tightly defined commodity that, it was being assumed, could be delivered to a centrally mandated pro forma. Senior educators and administrators were becoming known as ‘education service managers’. That scared me. Managers, by definition, manage what someone else has set up. As Peter Drucker, the American management guru once commented, “Managers do things right; leaders do the right things”. “What the world desperately needs” said Dee Hock the inventor of VISA told one of our conferences, “is leadership; sadly what it gets is scientific management”.

Increasingly the Initiative’s work was showing that if education was about investing in the unique skills of the individual to be creative and clear thinking, then it was the priority given to secondary education over the primary years that was creating the problem. In resource terms we had an upside down system; with the largest classes being for the youngest children, many simply failed to keep up from the very start. Smaller classes in secondary schools – historically an attempt to compensate for what earlier had not happened in the junior schools – over-emphasise the role of the teacher and discourage the adolescent from showing any initiative to manage their own learning. It was this ‘system fault’ that was creating all the problems. Such an analysis rocked the boat. Managers saw it as an assault on the status quo, and tried to dismiss such an argument as naïve.

By highlighting such a systemic fault the Initiative’s analysis explained why remedial, compensatory provision for those who had earlier failed in primary education was like closing the stable door after the horse had already bolted. In reality many young people never caught up. In a much publicised Policy Paper released in January 1999, the Initiative recommended a progressive re-allocation of funds so that in future the smallest classes would be in the children’s youngest years, while as they grew older the role of the teacher would become more that of guiding their learning than act-

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*1 ‘Education service managers’; in 2002 the Society of Education Officers (SEO) which had represented the chief education officers of England and Wales, combined with other educational staff associations to call themselves ConFed. the ‘Confederation of Senior Education Service Managers’. That would appear to be a trivialisation of the role that Chief Education Officers had always assumed had been theirs prior to that date. Earlier such people had seen themselves very much as ‘directors’ of their own systems, answerable pre-eminently to local democratic control.
ing as instructor. Increasingly it was argued that as the child matured, each would become ever more involved in and responsible for their own learning. “Now I get it”, said a Canadian at a conference in Toronto, “If this were to happen it would be the children who were tired at the end of term, and not the teachers. What a powerful transformation that would be!”

* * *

Managing step by step change is something which graduates of business management courses (as were most of my audience in Venice) believe themselves to be well qualified to implement, but radical system-wide change requiring significant shifts in people’s everyday perception is infinitely more difficult to achieve. Such changes are invariably about belief systems, rather than the immediacy of an accountant’s bottom line. They frequently involve leaps in the dark, triggered by the need to survive so under the night sky of a warm Italian evening. I told those young entrepreneurs about the inauspicious origins of Venice fifteen hundred years before. The conditions the Venetians found themselves in seemed to have developed amongst them certain characteristics which, within a few centuries, had turned them from mud-bank dwellers into the greatest trading empire the world had ever known, and made its naval arsenal into the greatest industrial complex in the world of the fifteenth century. “Who in their senses would have built more than a fishing hut on the malarial, malodorous shoals of the sandbanks of the Venetian lagoon?” I quoted an eminent writer on Venice, who had gone on to answer his own question by saying “Those who have no choice”.⁹

In the years following the collapse of the Roman Empire, I told my audience, the tribes inhabiting the fertile plain to the north of the lagoon had three choices; they could either fight the invading Huns to the death, accept defeat and almost inevitable slavery, or sink away to a point beyond the defined fringes of possible habitation, to the mud banks out in the lagoon. Here, in a place no-one in their right minds would ever dream of going to, they could - if they used their wits - build a way of life for themselves quite unlike any previously known in Europe. The more inventive its people became, I continued, the more opportunities they saw to improvise and to do things no one else had thought of. Eventually these mud-bank-dwellers controlled the trade of the then known Western world. They lived on their wits.¹⁰

“Necessity really is the mother of invention”, one of these twenty-first century entrepreneurs told me later that evening. “What you said about the early Venetians having virtually no choice if they wanted to survive just about sums me up.” He explained that his parents had only little money, and if he hadn’t had a dream of his own he would have ended up working on an assembly line in someone else’s factory. “To be successful I had to be innovative”; he said, “I had to think straight.” “I noticed that some people got so stuck with their first good idea, that they stopped looking around for the next opportunity. I’ve kept on searching. I look for discontinuities. That’s where there is often confusion, and in confusion, people are often desperate for new ideas. People are calling this the boundary between order and chaos, where old systems are breaking up and new ones are starting to form. That’s where the action is! That’s where I want to be!”

“I could tell a story that makes that point,” said another, and went on to describe a high tech company that was established in London in the early 1990s. Within the first couple of years it had been amazingly successful, and the directors gave a celebratory dinner for twenty of the key staff. At the end of the meal one of the team suggested that it would be interesting to hear what the qualifications were that each had needed to hold down their present job. They went around the table; it was a star-studded team indeed, with much post-doctoral experience. It came to the Chairman’s turn, and there was a moment’s silence: “I left school at sixteen with no qualifications” the Chairman said without a note of apology, “I had to learn to survive by listening to other people, joining their ideas together in ways no one else had thought about. I’ve learnt to do that better than anyone else. I’ve learnt to use my wits to see the big picture – and that’s why I’m the one employing you!”

I told them in response how the early Venetians had institutionalised their own entrepreneurial activity. For example in a maritime adventure requiring both capital and physical risk a deal would be struck between the adventurer and the Venetian investor. The investor from his palace on the Grand Canal would put up three-quarters of the capital, but the profits of the venture would ultimately be split equally with the adventurer whose capital investment had only been a third of his. This system was called Colleganza, and ensured a continuous recycling of capital in ways that encouraged each younger generation to develop ever more innovative and entrepreneurial skills. Frequently the investor would send his own young sons as seamen on such voyages, to learn the business first
hand. It was risky, of course, for often they died on the voyage, or simply disappeared. “It was what Peter the Great did in Russia”, I said, “as did the merchant venturers of Bristol and London; it was how Christopher Columbus funded his exploration of America”, and how John Cabot reached the Hudson Bay.

“But it’s not what we do with our children”, interjected one man with obvious passion. “We spend large sums of money to have our sons educated in expensive private schools where they will, no doubt, learn the theory of risk-taking and the growth and decline of great empires, but at a personal level they don’t really understand this. They don’t actually feel what risk is about. My parents never gave me anything like enough pocket money for all the kinds of things I wanted to do, so to finance my own interests I worked for ten hours every Saturday on a market stall. My son doesn’t understand this. He goes to an expensive private preparatory school, where I suspect other boys would look down on any one of their mates whose parents they thought were too poor to give them plenty of spending money.”

All this talk about learning, and its direct linkage to earning capacity, worried several in the group. One mother admitted that she was afraid of too much wealth. For her the ability to go on producing “stuff” was destroying society. “It seems to me”, she said, “that too much money stands in the way of happiness. There is more laughter on the streets of Soweto, with all the horrible problems that they have to contend with, than is to be found on Wall Street.” She quoted the statistic that in England ten times as many twenty-five year olds were affected by clinical depression in the year 2000 than had been in 1950. “That should cause us to question the way of life we are buying ourselves into”, she concluded forcefully.

A fellow Englishman nodded his head most vigorously in agreement. “What I’m really interested in is what you’re going to say about how we educate our own children. When I first came to Venice as a student I had to hitchhike, and all I could afford was to stay in a youth hostel, and I survived on bread and fruit. But Venice vastly excited me, and I spent hours tramping its streets and piazzas. Now, years later, I can afford to bring my own children to see what excited me. But they don’t seem anything like as interested in all this as I was. They’re so worldly wise that they are more interested in playing computer games than in looking out of the aircraft window as we flew across the Alps. We tried very hard not to spoil our children, but they seem just to take it all in their stride without asking questions. They probably know more than I did at their age, but I’m doubtful about their ability to be inventive, or to improvise. They are growing up in a culture where they expect everything to be delivered on a plate. They don’t understand how all the bits come together.”

This tension between time spent earning a living, and time available to give children a good home life, came up many times. Like other parents these men and women were fearful that their work lives were leaving their family lives impoverished. As a teacher I have always recognised the enormous benefits to a child of a strong family, but I have to admit to being slow in recognising the social and economic reasons why many young parents were now finding it so difficult to create a caring and stimulating life for their children, independent of school. Like others in the early 1980s I argued forcefully that schools had to equip children to be adaptable, flexible workers in the swiftly changing new economy. As the switched-on headmaster popular with businessmen, I was even invited to give the opening speech to the Confederation of British Industry’s annual conference in 1987. I think I was right in the connection I made there between the lack of personal enterprise expected of children in school and the parlous state of the economy but, not being an economist, I was slow to recognise that these new boom conditions, which measured their success in terms of ever-greater profitability to the shareholders, would have any concern for the well being of employees or employees’ relatives. Indeed success and profitability in the new economy was directly linked to holding down labour costs, as low skilled jobs were increasingly exported to third world countries. A booming economy was good for trade, and especially for investors, but it came at a cost to family life that many of us were slow to recognise.

The equation plays out like this; in parallel with the new economic liberalisation, bio-medical technologies were quickly increasing life expectancy levels, a development that was hailed as a good thing. However this increased longevity made pension fund managers (the largest of the players on the Stock Market) desperate to generate ever more profit from their portfolios by investing most heavily in those companies that were successful in holding down labour costs, especially low skilled labour costs. In economic terms that sounded fine until I realised that low skilled workers were often young parents. The kind of home life I had been accustomed to seeing amongst the middle and working classes of my youth was rapidly disappearing because, in real terms, these were the people
who had to struggle harder and harder to make a living by working longer hours. Gradually I started
to make the connection between what was happening
to parents in the workplace and why primary
teachers were in such despair. Teachers could no
longer assume the kinds of training of children
in the home which schools had traditionally taken
for granted because so many parents were having
to work longer hours – hours which previously
they would have spent with their children. To fund
investors’ pensions over a twenty-five or thirty year
period after retirement -when estimates made thir-
ty years earlier had assumed a post-retirement life
of ten or twelve years - required taking ever more
money from those people currently in work. Put
simply, those in work - largely those who were also
young parents - would have to work even harder
for no real increase in the purchasing power of
their wages.

Something else has started to happen; women
were finding it easier and more acceptable to break
out of the assumption that they would spend long
years tied to the raising of children, rather than ad-
vancing their own careers. In 1969 thirty eight per
cent of married mothers worked outside the home
for pay while thirty years later it was seventy per
cent. At the same time ever more aggressive and
successful marketing techniques have increased
people’s expectations of what they could purchase
if both husband and wife worked. What started
as the need to fund essentials quickly expanded to
the provision of ‘desirable but non-essential’ goods
and commodities. In other words wants started to
overtake needs.

As the need for an ever expanding economy
has become ever more dominant in politician’s
thinking, so the curriculum in western schooling
has become increasingly utilitarian. Since the early
1980s politicians have linked the justification of
expenditure on education to the idea of increasing
the country’s ‘human capital’ as an economic asset.
The idea of education being for a full, responsible
and satisfying life is fast being replaced with more
utilitarian arguments such as, “Primary school-
children in the United Kingdom are to be taught
Chinese..... it is hoped that this will place future
workers in a better position to exploit China’s ac-
celerating economy within thirty years”. 19

So persuasive has this rhetoric become that sig-
nificant numbers of people in western countries,
particularly those who have passed through formal
schooling in the past fifteen years or twenty years,
have been seduced with the belief that all problems
can be solved through continuous economic expan-
sion. They fail, however, to see the impact that
such economic policies have on their ability to be
rounded human beings, and how this undermines
family life and damages children. Paradoxically
whilst living in an affluent society it is also possible
for people to feel overwhelmed and hopeless.

The losers in this accelerated, cash-orientated
society have been the children. In most instances, a
family with both parents working full time simply
has not got the time to provide the kind of envi-
ronment very young children need ‘to grow their
brains’. This grieves parents who daily experience
the tension between what emotionally they would
like to do with, and for, their children, and what
they see as their economic needs. For single par-
ents this tension can become almost unbearable.

‘Growing their brains’ is as good a layman’s
definition of what is happening in the first few
months and years of life as you can get. Brains
grow through use. Children are compelled by their
natural curiosity to ask endless questions, and in
so doing strengthen the neural networks on which
all subsequent learning will be based. Constant
questioning can often drive adults to distraction as
each child strives to make its own particular sense
of the world around them. On a good day, children
may listen carefully to what we say, but interpret it
only in their own terms, understanding it through
the filter of their own earlier experiences, interests
and patterns of inherited predispositions. You can’t
tell them anything they are not interested in. Those
men and women in Venice in their enthusiasm to
overload their own children with their own adult
knowledge appreciated this perhaps better than
many parents.

Here I decided to give a little further explanation
about the growth of the brain in the early years. All
mammals, with the exception of us humans, give
birth to their young when their brains are at least
ninety percent fully formed. Humans, however,
are different. It seems that ever since the human
brain started to get bigger (initially this was prob-
ably to do with the growth of empathetic skills and
the need to store vast quantities of visual data, but
latterly to our ability to use language) the human
skull has had to expand. This has caused acute
problems to women in labour as bigger skulls
could not get down the birth canal. Over long
periods of time evolution appears to have reached
a compromise. Humans give birth to their young
when their brains are only some forty percent fully
formed... the brain does not reach its full structure
until about the age of three. More than any other
creature culture becomes very important to us – we
learn experientially outside the womb what other
creatures inherit as instincts.
Since the mid-eighties the new science of evolutionary psychology has revealed that, in their patterns of behaviour, every new-born child is simply repeating the successful strategies developed by our ancestors over millions of years. These are the strategies that ensure the individual’s survival. Put simply the human brain thrives on solving complex problems. To ensure its survival the individual follows up every clue, jumping from one issue to another in what seems a random fashion, and gets diverted into many a blind alley. Human learning is tremendously messy, but the results are often spectacular. Learning is as much to do with emotions as it is with the intellect, about patterns and relationships every bit as much as it is about facts.

Those who taught in the ancestral environment (that period defined by anthropologists as lasting from the dawn of human creation up to the beginning of settled agriculture some ten thousand years ago – very roughly calculated as being ninety-eight per cent of human history) were also the workers, the hunter/gatherers of days long before the invention of the classroom, and the craft of the schoolteacher. As well as having to feed their families and equip their young with the skills needed for a lifetime, our early ancestors had to be economic of their energies. What better way to do this than to have the child follow you around for the daily ride? Such learning was about far more than just acquiring specific skills. It was an introduction to the culture and the folklore of the tribe.

Superficially, the world we live in today bears very little resemblance to life as experienced by our ancestors thousands of years ago. Yet at the most basic level children have not changed very much. Research carried out in the state of Michigan in 1997 into the greatest predictors of success at the age of eighteen showed that factors outside school were four times as significant as factors within school, and of these the most significant was the quantity and quality of dialogue in the child’s home before the age of five. It was around the campfires of our ancestors that children developed this process of enquiry, and built an appreciation of the world beyond their own immediate experience through listening to stories told by their elders. The campfire has been the focal point for learning for infinitely longer than the blackboard or a computer screen.

The cosiness of sitting listening to stories told by the stone age fireside reminds us forcefully that childhood is more than the creation of Victorian moralists. Children today exhibit the same behaviour, in the same developmental sequence, as it appears did our Stone Age ancestors. Children are not automatons. While our stone age ancestors have shaped the essential blueprint for the human brain, the human achievement – that which gives us an enormous advantage over other animals – is the way in which daily life experiences sculpts each brain into something truly individual. That, this book will argue, is largely due to the self-assertive instincts of adolescence. Children, especially when very young, need a great deal of sensitive and imaginative adult time, not ‘quality time’ where parents go to the nursery for an hour in the afternoon but time to be with their parents in a multiplicity of situations whose real value lies in the fact that the situation is unstructured. Because the world we evolved out of was essentially unpredictable, we have inherited a predisposition to revel in trying to work things out for ourselves, in open, often ambiguous, situations. Boys tend to work things out systematically, girls through an empathetic appreciation of each other’s point of view. It is the combination of such approaches that accounts for human progress in the past, as inevitably it will in the future. Problem-solving brains fully developed when young are a source of great social capital for future years.

If children are to have the opportunity to grow up to be creative and adaptable, then society has to recognise that effective education does not correspond to a straightforward economic input-output model. If this book can help move the agenda beyond an undue emphasis on educational efficiency, towards a broader concept of educational effectiveness, it will have done its job. In the process it will have to reverse many of the dogmatic assertions made by politicians over the past twenty years about the centralised control of schools. In future we have to take the role of parents as seriously as we have to honour the profession of teachers.

From energetic entrepreneurs, to weary teachers

To hold a busy lecture schedule together I had to take a day out of the Venice trip and fly back to England to address a meeting of teachers from a group of primary schools in Sussex. I travel a lot, but the sheer wonder of what technology enables us to do never leaves me. To the merchants of Venice, the journey that I took that evening in a mere two hours, flying at thirty-two thousand feet over the Alps, the north European plain and then into London, would have seemed the stuff of pure fantasy. That I could have done a day’s work in England and be back in Venice the following eve-
ning would have been incomprehensible. It would have been equally incomprehensible to three of my own four grandparents as well.

I was in a reflective mood as we flew north that beautiful summer’s evening. The conflicting expectations of those entrepreneurs in Venice for their own children, with the needs expressed to me two weeks earlier by the Chief Education Officers of England, left me floundering. Was there anything that I, and the Initiative, could say and do that would help the country realise that what the children of the successful needed was exactly the same as what the poorest child needed? I was excited by the opportunities around me, but questioned whether my ability to rush around so fast was actually a good thing? Did being busy replace thoughtfulness? Was I becoming blind to the hidden connections that Vaclav Havel talked about? Years ago as a student with little money it had taken me all of three or four days to hitchhike to Venice. The problematic nature of my own travelling those years ago meant that I'd arrived in Venice prepared to understand its complexity, its confusing history and something of all its human drama. Yet for youngsters today it is all too easy to step off a two hour flight at Marco Polo Airport, look out across the lagoon with a focus dulled by over-exposure to the airports of Heathrow, Washington, San Francisco or Hong Kong, and not expect to be excited. To them the more immediate consideration is whether or not the hotel has a swimming pool.

I opened my briefcase and took out an article from the spring issue of the American educational journal Phi Delta Kappa, which had been recommended to me. ‘Changing the Pace of Schooling’ seemed an interesting title, as did the sub-title ‘Slowing down the day to improve the quality of learning’. That fitted my mood. Chip Woods, a teacher trainer from Massachusetts had written, “True learning requires time; time to wonder, time to pause, time to look closely, time to share, time to pay attention to what is most important”.

I agreed with that sentiment for I’ve long been convinced that children don’t experience or understand time in the same way as adults do. Children have the ability to become so absorbed in an issue that fascinates them that time apparently stands still; equally they turn off incredibly quickly when they decide something is boring. We spoil their learning by rushing them through too much material, in too short a time, and don’t give them the chance to relate a new idea to their earlier experiences. In America, which has to be the pre-eminent country for haste, it is said that children spell love as T.I.M.E.

I read on. “We bemoan our children’s lack of motivation, perseverance, and ability to sustain interest, to revise, to critique and to complete their work”, wrote Chip Wood, “Persistence is a skill that children develop when given the time to *practice endurance*. I heavily underlined those last two words, ‘practice endurance’. That’s what the children of the successful so often lack. In our determination to give them everything we deny them the vital opportunity to worry away long enough to find out the answers for themselves. It’s not just the children of the successful who suffer. I fear that in the rush to make education efficient we are doing this to vast numbers of children.

Woods’ comment about ‘practising endurance’ was highly pertinent to my discussions with the entrepreneurs in Venice, for it was their ability to defer gratification that several of them had identified as being so critical for them as they had fought their way through to success. This reminded me of work started in the 1960s on children’s ability to impose a delay on an impulse so as to achieve something more significant in the long run. This has to be a critical skill, not just for entrepreneurs, but for most of us at some stage in our lives. It is a fair assumption that youngsters who can defer gratification when young will become far more self-disciplined and more self-sufficient as they get older. Walter Mischel, a psychologist at Stanford, devised a simple diagnostic test to assess delayed gratification. Year after year Mischel took groups of four year olds and, one at a time, sat them down with him for a chat. Then he placed a marshmallow on his desk and explained to the child that he had to go out and run an errand, but will be back in a few minutes. He then told the child that he could either eat the marshmallow straight away or, if he waited until he returned, the child would then have two marshmallows. Twelve or fourteen years later, when those same children were tracked down as adolescents, the emotional and social differences between the grab-the-marshmallow-now pre-schoolers and their gratification-delaying peers was dramatic. Those who resisted temptation at the age of four were, as adolescents, more socially competent, personally affective, assertive, self-reliant, confident, trustworthy and generally dependable. Those who grabbed the single marshmallow as soon as the interviewer left the room - about a third of the total in each year - were more likely to shy away from social contact, to be stubborn, indecisive and easily upset by frustrations. They also tended to be prone to jealousy and envy, over-react to irritation, be argumentative and have short tempers. Those who couldn’t resist a short-term opportunity
at four were even less inclined to do so at sixteen.

What is even more significant, wrote Daniel Goldman in his book on emotional intelligence, “is that this finally underscores the role of emotional intelligence as a meta-ability, determining how well or how poorly people are able to use their other mental capabilities”.18 We learn well those things we believe will be helpful to us, and can find paying attention to things we don’t care for excruciatingly difficult. My grandfather knew this, often remonstrating with me, “You can lead a horse to water but you can’t make it drink.” Without motivation humans do the least they need to survive. Now we know exactly why we have to start by identifying areas of children’s emotional interest, and then the energy of inquisitiveness will take over.

It’s not difficult for a speaker to pick up on the mood of an audience. Those people in front of me at the Sussex conference bore me no grudge for taking up six hours of their time on the penultimate day of term. In fact they were obviously glad to be out of school and sympathetic to what I had to say. But they were tired and disillusioned. Those teachers sensed that schools had lost the plot years ago and a welter of instructions telling them how to do their job was continuously grinding them down. It was, as one said, “An insult, a flagrant demonstration that someone, somewhere, believes we are not up to working out what is best for the pupil. So we have to follow, in the minutest detail, sets of instructions for every lesson set by some so-called expert who just doesn’t realise that no two pupils.

“There just isn’t enough time for anything”, several teachers told me that lunchtime, explaining that each day had become so rushed that they were always going from one place to another, “and never really arrive anywhere at all”. The worst thing, several told me, was that the children were losing the fun of learning and becoming so neurotic that they literally begged the teacher “to keep going and do the fun of learning and becoming so neurotic that they literally begged the teacher “to keep going and finish the stuff.” The curriculum had become so overloaded and specific in what it required “that it makes me feel like a tyrant as I try to squeeze everything in”, one of the teachers told me.

One person saw where they were going. But, as I discovered later, he was not even supposed to be at the conference. Chris was eleven and the son of one of the deputy headteachers, a woman who later described herself as a seventh generation teacher. Chris is a bright young man, who has obviously been encouraged to think for himself and was in no ways intimidated by a group of adults. His exuberant confidence would, I suspect, be difficult for many teachers to handle. He is the sort of child whose enthusiasm challenges the pigeonholing nature of the curriculum. Quite simply he is excited by life.

After I’d spoken that morning he waited in line while a number of teachers spoke with me. His turn came and he looked me straight in the face. “I didn’t understand everything you talked about, but I thought that slide you used from Confucius was just right. ‘Tell me and I forget’ - that’s absolutely right. I only understand something when I can do it for myself. That’s just how it feels to be a pupil. I don’t think teachers really understand that. They just talk to us, and it’s so easy to lose interest. Only when I get fully involved with something do I really go for it!”

I looked at his keen face, an idea forming in my mind. “Could you tell everybody this afternoon why you think, as a pupil, that Confucius really understood this. Would you be able to put that into your own words?” I asked tentatively.

He faltered for a moment, as the full implication of what I’d suggested hit him. I liked that; he was not as confident as I had earlier assumed, and he needed time to think. He grinned. “OK then”, he said, “I’ll give it a go.”

“Right” I responded, “Work out in your own mind the best way of making your points and I’ll fit you in.”

But it was not to be. As the lunch break ended his mother came to me, very embarrassed. “The other teachers don’t like Chris being here, and have complained to my headteacher who thinks it would not be a good idea for Chris to talk. He says this is a meeting for teachers, not for pupils, and that Chris should not be in the audience this afternoon”. She winced, obviously extremely embarrassed and cross, yet she knew more about the politics of the group of schools than I could ever do.

I too was annoyed, but had to show as much in a non-confrontational way. I was able to change my text for the rest of the afternoon to include an illustration of what I think is a possible glimpse of education in the future. The illustration comes from a town in northern Sweden, where children between seven and eighteen spend up to three weeks a year shadowing adults on a one-on-one basis.19

“That means”, I said rather pointedly, “if we were living in that part of Sweden we could expect to have three, probably four, children with us in the audience this afternoon. That would have added a particular depth to our discussions. We have to get away from the idea that we teachers have a perfect one-size-fits-all ‘product’ that we deliver to pupils.” Learning in the future, I went on to explain, has
Exploring hidden connections

For our last day in Venice we were left to our own devices. I took the water bus to the island of Torcello, to me the most haunting and evocative part of the lagoon. It was here that the ancestors of those who made Venice great established their first settlement in the early seventh century. The Romans had been here before them, but all their villas had long since collapsed. Over an eight hundred year period, Torcello flourished as the early Venetians pioneered new ways of reclaiming land, new forms of trade and civil government. Over twenty thousand people lived here in the fifteenth century, with a score of great churches and many palaces. But then a series of disasters – an earthquake, several floods and repeated plagues – struck the island, and eventually the spirit of innovation failed them.

Most of the merchants moved to the Rialto. Speculators saw in this an opportunity to tear down the old churches and palaces and shipped them, stone and marble together, to be re-used around the Grand Canal. Only some sixty people live on Torcello now, surrounded by the mists of the lagoon and just two buildings have survived the vicissitudes of the rise and fall of successive empires. The larger of the two is the Cathedral of Santa Maria Assunta with its towering campanile, with the smaller church of St. Fosca nesting by its side. Each is built in a sombre, ochre coloured brick, roofed with clay tiles and each seems increasingly to radiate its antiquity as you get nearer. And old they most certainly are. The cathedral dates from the days of the first settlers in the year 639; in form it is partly Roman and partly Byzantine, reflecting the historical, theological and architectural tensions between Catholic and Orthodox.

The interior is spacious without being airy, the light clear, but the effect sombre, and the mouldering, dusty air seems laden with the hopes and fears of some fifteen hundred years of human passions. Only in your imagination can you hear what psalms might have been sung, what dirges chanted as successive epidemics of cholera decimated the population, or what prayers uttered by merchants for the safe return of their galleys. But two visual aids tell us most forcefully what they thought about, and what drove them. These show, to me at least, the absolute polarities of religious faith, hope and fear. The whole of the West end is decorated with an enormous mosaic illustrating in profuse and grotesque detail the crucifixion, the resurrection of the dead and the imminent day of judgement - "an illustrated manual of dogma, from St. Michael conscientiously weighing the souls, like an apothecary, to the poor damned sinners far below", wrote Jan Morris in her wonderful guide to Venice.24 No doubt it put the fear of hell into those early Venetians but faith built on fear never did appeal to me.

At the East end, above the altar, and above where the priest's head standing in the pulpit would have appeared to a worshipper, Jan Morris continues, "there stands something infinitely more magnificent; for there against a dim gold background, tall, slender and terribly sad is the Teotoca Madonna - the God Bearer. There are tears on her mosaic cheeks and she gazes down the church with an expression of timeless reproach, cherishing the child in her arms as though she had foreseen all the years that are to come, and holds each one of us responsible.” Some think that the Venetians, through all their epochs of splendour and success, never created anything quite so beautiful.

I wonder about the significance of how these two mosaics are placed. I like to think that the congregation, facing the altar, considered the beautiful young woman - the God Bearer and thought of their responsibilities for what was to come. Only the priest could see, over the heads of the congregation, the mosaic depicting the horrors of hell and surely he, of all people, should have had least to fear?

Entranced as I was by the history around me, the conscious part of my mind was still struggling with Vaclav Havel’s challenge “to perceive the hidden connections between phenomena”. I was haunted...
by that expression of timeless reproach on that
young girl’s face - a face which, to a believer, is
surely that of ‘the God Bearer’, and to many of us –
whether religious or not - is the hope and perfec-
tion of eternal youth, “as though she had foreseen
all the years that are to come, and holds each one
of us responsible”.

As I remember that moment I recall a chill
that ran down my spine. That possibly sounds
too emotional, but it’s the truth. A chill, when the
temperature is in the upper eighties, results when
the conscious mind confronts something bigger
than an everyday experience. I have no doubt it
was similar to that experienced by countless others
over the centuries as they too stared into that face
and wondered whether they were being true to
the most noble aspirations others have had for the
future of the human race. And if not what will we,
in our generation, do with all the knowledge now
available to us?

It is at that moment that a frisson is replaced by
a crippling sense of the enormity of the task, and
one’s own inadequacy. Teachers need courage to
teach for they’re responsible for opening children’s
minds to all the knowledge that is around them,
and nurturing the first shoots of their wisdom. No
one can teach what they don’t understand, so a
good teacher has to be like a good student, con-
stantly searching, sometimes vulnerable in their
ignorance, but continuously trying to fathom the
unfathomable.” A good teacher feeds students’
curiosity, honours doubt, never lets cynicism
replace scepticism and always tinges idealism with
realism.

People of faith in earlier generations did not feel
so inadequate, because they didn’t feel so alone as
I suspect modern man feels. Their belief was that,
if they did their part, a God who oversaw the whole
of creation would fit their little piece of the jigsaw
into a larger picture. The last hundred or so years
have done much to erode simplistic religious faith
which, for too many and for too long, allowed man
to create God in his own image. The silver-haired
colossus of an Anglo-Saxon-looking male God as
defined by William Blake, might well have been
helpful to the Victorians, but it is unhelpful to a
questioning twenty-first century mind. Yet without
recognition of an authority greater than ourselves,
or of an ethical code that is more than relativistic,
humanity can do horrible things to people for,
indeed, there is a dark presence of evil forever
lingering to this day within the human spirit, be it
in the shadows of Rwanda, Cambodia, the Balkans
or Iraq. All too often, it seems that when people
invoke God as being on their side evil fuses with
good in an explosive cocktail. “Just as there is a
road from faith to redemption so there is a direct
path from religion to violence”, said Rabbi Jon-
than Sacks, “for in the human condition the sense
of tribalism is far too strong - you’re either with
me, or against me”.

Years ago when I was a university student stand-
ing in for a teacher late one Friday afternoon, it
was a ten-year-old boy who most profoundly shook
my theological thinking. I was tired, I had run out
of prepared material, and the class was beginning
to get restless. “Let’s have a debate about space
travel”, one boy had suggested, and I’d readily
agreed. For twenty minutes or so there was a lively
discussion. Then one of the boys said “Does any-
body know what people would look like on another
planet?” There was silence; this was beyond their
imagination. Except for one boy whose hand shot
up. “Please sir, I know, I know!” The rest of the
class turned their sceptical, soon to become hostile,
eyes on what they saw as the precocious Timothy.
Looking around for anyone else who might have
another view, I reluctantly turned to Timothy,
who had already had a disproportionate amount of
talking time. His answer was swift, and short. “It’s
easy, sir, they would look just like us!”

The rest of the class lost its patience, and his
confidence faltered. “OK Timothy”, I said, “Why
would they look like us?”

“Well, it’s easy. In the Bible it says God made
man in his own image so, if we look like God, so
will everybody else”.

The class fell silent, and no one moved. Timo-
thy felt vindicated, and I was much moved. I had
heard many sermons in my life but nothing had
driven to the core of what I think we humans are
all about than that ten-year-old’s conviction that
we - each and every one of us - were reflections of
God, whoever, or whatever we might define Him /
Her to be.

To Timothy, as to so many of our ancestors seek-
ing an explanation for the possible significance of
every individual life, we had to ‘look’ like God. To
the Venetians anxious to create an Empire those
people who did not look like them were not of
their brotherhood, and so their rights were simply
ignored. Venetian armies massacred the Christians
of Constantinople with as little remorse as they
murdered Muslims – all of which makes many of
my generation ready to see in religion itself the
cause of violence. The politicisation of religion,
something happening now in the twenty-first cen-
tury, as in the twelfth and thirteenth centuries, has
to be more than enough to explain the tear in the
eye of the Teotoca Madonna.
A sense of inadequacy as we consider such questions can all too easily become a form of self-indulgence. We know so much more about the biological nature of life and death than did the Greek craftsman who fashioned the Teotoca Madonna, yet we have little confidence in our ability to see what the scientist Fritjof Capra calls “emergent reality”.21 A strictly objective description of that mosaic would define each and every piece of stone and ceramic in terms of colour, shape, texture and position. It is our minds that give that face an emergent reality as we recognise our responsibility to extend to every ‘child of God’ the right to be the very best they can become. It is in our consciousness that the mere position of pieces of ceramic force us to confront moral dilemmas.

Along with countless others, I revolt at the suggestion that we do, or don’t, do something because of the fear of hell and that our behaviour is no more than the confluence of several instincts. Yet despite the tortuosity of theological argument over the millennia, and the hideous crimes committed in its name, the idea that life is not adequately described simply by the structure of a relationship of molecular forms does not go away. In the words of Fritjof Capra, “The defining characteristic of a living system is the spontaneous emergence of new order.” 24 The meaning of spirit, Capra reminds his readers, is ‘breath of life’. Spirituality is the direct, non-intellectual experience of reality, moments when we feel most intensively alive. “Buddhists refer to this as mindfulness; a sense of one-ness with the whole of creation, but which is also deeply rooted in our own bodies. such an experience of belonging can make our lives profoundly meaningful”. 25

“A sense of one-ness”. Again I thought of Vaclav Havel. I thought too of Christopher’s energy, the frustration of his mother, and the anguish of teachers who want to do more than can be quantified by examinations. I sensed again my frustration – presumably shared with millions of others – that maybe modern society has made a Faustian bargain by pursuing wealth at the expense of future generations’ well being.

Twenty or so years ago I had the beginning of a hypothesis shaping in my mind which I wanted to explore, but never did. It went something like this; when the proportion of a population who believe that their reward will be in a hereafter falls below a certain level, the dominant way of thinking in that society swings from moderation in all things to an insatiable desire for satisfaction in the here and now. The native Indians of north America understood the need for moderation, and an acceptance that an individual life was part of eternity; “We have not inherited this world from our parents but have been loaned it by our children”, they constantly reminded themselves.

I can’t claim any great perspicacity in such a hypothesis, but do wish I had followed it up. Whatever that proportion is, I think we have now fallen below it. As a society, a vocal minority is all out for what it can get in the here and now, and many others follow. Gone now is the medieval caution of the seven deadly sins, all of which it seems have become the drivers of today’s economy. Gone is the thought that we are investing in our children’s children’s children. We seem to have lost a sense of eternity. Almost gone, but thankfully starting now to re-emerge, is care for our planet. Maybe it was 9/11 that jolted us, or the rapidly changing weather patterns which in the year 2000 gave Britain its wettest autumn for centuries, and in 2001 its hottest ever summer.26 Maybe its because more people are beginning to see education as the ability to perceive the hidden connections between phenomena. That has to be hopeful.

Some years ago the Russian writer V.V. Rozanov wrote, “All religions will pass, but this will remain; simply sitting in a chair and looking into the distance”. 27 Richard Holloway, former Bishop of Edinburgh, challenges us to reverse that claim. “Religion will remain as long as we sit in that chair looking into the distance”, he says. 28

Our generation can see further into the distance than any of our ancestors. The children in our schools will no doubt see still further, providing that we encourage their inquisitiveness. Countless thousands of previous generations would, I’m sure, have given their right arm to know what we now know. But what an awesome responsibility! Not only can we now comprehend all this, we have the frightening capability of destroying it all. That rightfully shakes us rigid, because whether we foul all this up or take humanity further into a more promising future depends on how well we educate our children. They are the future, our guardians in our old age.

But although education can provide the facts to help to see the big picture, we all need to ask the difficult questions for ourselves.

What are we humans all about?

What makes us tick?

To what extent do we have free will?

How much of our behaviour is dictated by the
nature of our origins?

Only our own answers will satisfy us. We can listen to the conclusions of any number of people, but what evolution has bequeathed to each of us is a distrust of anything we have not worked out for ourselves. It’s the pain of working out our own conclusions that makes us authentic. People who are always searching are at peace with themselves because they are being true to their own expectations. You don’t have to be very old to start asking those questions that probe at the essence of who and what we are. Indeed, even the oldest among us may still be uncertain of the answers. Nor will these questions simply be of interest to schoolteachers or academics, for these are issues that every member of a democracy has to confront. Only when people do this can a society responsibly shape its future.

We all have, more or less, the separate pieces in our mind’s eye. The media has made much recently of neurobiology, psychology and evolutionary studies; increasingly the public is coming to appreciate that health is much to do with state of mind, and that obesity – for instance – is both about our cravings for sweet tastes and fatty substances, as well as our gullibility in the hands of the advertising industry who play on stressed-out people’s need for comfort foods. We know that we are, on average, financially far better off than ever our parents or grandparents, but we seem to be getting ever more unhappy.

We can’t get all this to add up. We would like to answer our children’s questions better. We sense that we need to step back and see the big picture. This book is about just that, a chance to stop, get our bearings right and stare into the future as wisely and as impartially as we can.
Part One

THE DISTANT PAST (ROCKS AND OUR EARLY ANCESTORS)

In the early 1980s Sue Townsend caught the imagination of English readers with the publication of the fictional diary of Adrian Mole.\(^1\) On the threshold of adolescence, thirteen-year-old Adrian jotted down daily those things that caught his imagination. It was compelling reading for teenagers and for those adults whose memories it stirred: maths tests, difficult parents, sex, the infuriating behaviour of his little sisters, and his infatuation with Pandora. Bigger issues, it seemed, also called for his attention, as when he tried to record his full address in the front of his diary. One can almost feel the hesitation as he expanded the scale from Worthing, to Sussex, to England, to Europe, to the World, and ultimately (with, one suspects, a triumphant flourish) to ‘The Universe’. The young Adrian had succeeded in defining life’s ultimate limits, at least as far as he was concerned. Many of us, as children doodled like that as we tried to locate our existence in some greater scheme of things:

*Where* are we? *What* are we here for? *Who* are we?

These were probably the kinds of questions that drove our ancestors to seek explanations, to create big stories into which they could fit their own life experiences. Stories are reassuring. They give us a framework within which we can relate our experience to that of other people. Young children love being told the stories and the fables of the nursery. As we get older, and in danger of being swamped by too much information, the role of stories which embody the basic assumptions of our family, tribe, political party, or country, become enormously important. They become a sort of shorthand, an abbreviated story told in symbols. We don’t necessarily believe all the detail, but our individual stories frequently share common themes.

It seems that our ancestors also sought meaning by telling stories. Just as a three or four-year-old will rebuke a parent for missing out a word when reading, perhaps for the twentieth time, the story of Hansel and Gretel, so children from the earliest of times it seems have developed the ability to absorb the stories of the tribe. That Abraham begot Isaac, and Isaac begot Jacob, and that after the flood Noah lived for three hundred and fifty years mattered enormously to the ancient Jews, for this history gave them their identity. We will never know for how many generations the stories in Genesis were passed down verbatim before being written down, but it was probably for at least four thousand years. As young men became grown men they retold the mythology they had first heard as children, probably with near-perfect recall.

Out of an evolutionary history of a recognizable human species of perhaps seven million years, it is probable that our ancestors have only been talking for, at the most, one hundred or one hundred and fifty thousand years and using written communication for, probably, five thousand years. The brain’s ability to form memories out of pictures more easily than it can out of stories probably reflects those evolutionary stages, while it has only been in the past few thousand years that written text has led us to understand the subtle interplay of accurately defined words and symbols.\(^2\) At any moment in time our senses feed our brains with a bewildering stream of information. Unless we can immediately sort out that which is important our brains simply seize up. Such selection is facilitated by the existence of stories. Stories create the frameworks into which we put ideas that interest us. We have been doing this for a long time. Commenting on ancient cave paintings discovered deep underground, Ian Tattersall, the curator at the Department of Anthropology at the American Museum of Natural History in New York City, observes: “This remarkable art is the miraculously preserved symbolic expression of the yearnings and values of a culture that has long disappeared, leaving us only these indirect and shadowy reflections of the doubtless rich body of myth, belief, and tradition that they embodied.”\(^3\) These were people who, like us, wanted to understand life.

One of the most fascinating of the millions of artefacts excavated over the past few decades is the thirty-two-thousand-year-old bone excavated from a fire pit at Abri Blanchard in France.\(^3\) It has numerous inscriptions on it that seem to imply it was a lunar calendar made over a period of ten weeks. It appears that one of our ancestors - and this would be roughly fifteen-hundred generations of great grandparents back - was sufficiently intrigued by the bright object he saw in the night sky to make a series of observations both about the shape of the moon and its position in the heavens, then to draw it - at scale - on the equivalent of the back of a stone age envelope. Why did this person feel compelled to do this? Something had presumably inspired this scribbler to ask what these nightly movements might signify. Maybe that questioning ancestor...
of ours was sitting by the campfire surrounded by children asking their endless How? When? Why? questions. The same questions the adults were no doubt asking themselves. Incidentally, the statistics of reproduction would suggest that every reader of this book would have a blood relationship with this inquisitive person. An awesome thought in itself.

For many people the urge to make sense of it all is at its strongest when we stand alone, maybe on a mountaintop watching the sunrise, or we sit staring at raindrops running down a windowpane. Putting to one side everything that normally cluttered our minds, and escaping from our immediate cares, we can simply stare and ask ourselves, “Just what is life?” Every culture that has ever been studied has a creation story, an attempt to explain its starting point. That our society has found a scientific explanation in Big Bang theory should not cause us to trivialize what those earlier storytellers were trying to do with the only knowledge they had. We should ‘tread softly’, in the words of W.B. Yeats on those older stories, for they embody the dreams that have made our civilization what it is and they were the very best stories that man could craft at the time, with the knowledge then available to them.

And they’ve had great staying power. The story of Adam and Eve has probably been told for several thousand times longer than has the current explanation of the Big Bang. It’s a story that is deeply embedded in our culture. Nowadays many people reject such a story of creation and divinity but as the endless debates about cloning, euthanasia and genetics research testify we are not sure just who - if anyone - is wise enough to play God. Many people are more unsure today as to ‘who’ we are or ‘why’ we are than possibly ever before. In turn, the business of what story we should live by in the twenty-first century has made the question ‘What should we teach?’ an extremely vexed one. It’s the question this book seeks to explore for right now we don’t seem to have a sufficiently cogent story to hold together what we rather vaguely describe as a pluralistic society.

Perhaps the first few sentences of a new story lie in evolutionary psychology, the branch of learning that suggests the probable explanation for many of our social arrangements lies in a better appreciation of what the prehistoric environment did in shaping the modern brain. “You can take Man out of the Stone Age,” noted the Harvard Business Review, “but you can’t take the Stone Age out of Man.” But this story is only revealing itself piece by tiny piece. Geneticists, neurobiologists, evolutionary psychologists, palaeontologists and anthropologists, as well as archaeologists are rewriting prehistory. This multi-disciplinary approach inevitably presents us with a real problem. How do we draw all these different perspectives together to see what the big picture could be? How do we make one grand narrative out of all these smaller stories?

Unless you’re very careful, if you try and study each of these disciplines separately, it’s rather like standing too close to an Impressionist painting. All you see are thousands of dots arranged in no apparent order. If you step back a few paces, however, and let your eyes focus on the whole painting, suddenly you see in front of you a picture of great beauty. The dots are still there but, by instructing your brain to look with a different focus, you can see the significance of the whole. This is a good analogy for synthesis. Yet unfortunately most of us are nothing like as good at synthesis as we are at analysis. Big pictures often elude us.

These new ideas, accumulated within little more than a generation, present future storytellers with a problem. Who is sufficiently competent to spin all these threads together? In earlier times, before we knew as much as we know now, say in the mid-nineteenth century, there was a story that helped people decide how to live. It was, even then, a far from complete story, but it helped the Victorians achieve a worldwide empire of considerable consistency. Isn’t this new story, as we can see it so far, more about the mechanics of life, and not very much about how we should live? Isn’t survival of the fittest fast becoming the code of the future, rather than ‘love thy neighbour as thyself?’ Are we not in danger of having a one-dimensional view of what the story should be all about? Are we discovering so much about the ‘how’ of life that we’re in danger of forgetting the ‘why’?

Let’s move on and see in the next two chapters how the prevailing science of its day shaped the stories people used to tell. Stories that still haunt our imagination. Stories that told our ancestors what to teach their children about how to live.
Chapter Two

TELLING STORIES ABOUT CREATION

Going beyond Adam and Eve to discover mankind’s origins. The Dark Ages and the stifling of philosophic debate. Copernicus’ demonstration, and Galileo’s proof, that man is not the centre of the Universe. Proliferation of amateur scientists in the eighteenth century basing their work on analysis of the natural world; conclusions of William Smith - the Father of British Geology - Gregor Mendel in Austria and Charles Darwin. Darwin’s formulation of the origin of the species through evolution. Realisation that initial knowledge about mankind’s origins should lead to further scientific endeavour, and the challenge this posed to conventional religious thought.

Until some five centuries ago the story of an intentional divine creation was barely challenged. The Greeks, the Romans and the Egyptians, had speculated widely on the nature of life and human existence. “Can you tell me, Socrates, can virtue be taught or is it rather acquired by practice? Or is it neither to be practiced or learned, but something that comes to men by nature or in some other way?” asked Plato. As long ago as 330BC, Aristotle had laid out what he saw as the mathematical basis of the universe in which the stars and the moon, the sun and the planets, were all embedded in a perpetual motion that put the earth - and by inference the human race - at its very centre. It was our universe. We obviously mattered to whoever set up the universe. We were potentially important.

Human frailty, as revealed specifically in the decline and fall of the Roman Empire, virtually destroyed the finest thinking of that classical era. The intellectuals, as it were, fell to the Barbarians. For four hundred years Europe languished in the Dark Ages and those classical artefacts - libraries, buildings, laws and philosophy - were either completely destroyed or buried. For twenty or so generations most people in Europe were too busy struggling to exist to have any time to reflect on who they were, or what they might become. These were truly ‘dark’ ages.

In the seventh and eight centuries, a new dawn broke slowly over the far west of Europe as descendants of the scholars who had taken refuge on the storm-bound islands to the west realised that it was almost safe enough to move back into a Europe earlier abandoned by their ancestors. Irish monks started to retell the story of creation and the fall of man and steadily the Dark Ages receded. Meanwhile traders recovered some of the earlier classical and Hebrew texts, and a generation of new scholars rediscovered the work of Aristotle and his formulae to account for the movement of the stars and the planets. In the coming together of Christian theology with Aristotelian cosmology a new generation of Europeans saw the perfect explanation for who man was, and what he was meant to be. As to the question we now ask ourselves – ‘How is it we are as we are?’ - they had what seemed the perfect answer. We are miserable sinners. We are the children of Adam and Eve. First we were expelled from the Garden of Eden and now we have the evidence of the Dark Ages to prove God’s subsequent displeasure. We have become, they taught each other, an imperfect people living in a world meticulously created for us by God according to Aristotelian laws. We are getting our comeuppance and are a society in need of salvation.

Gradually the medieval mind emerged, based on its best understanding of the science of the day, and its dominant philosophy. This life was a proving ground for the next, priests taught. Young people had to learn how to be good and honourable and able to protect a resurgent civilisation. And whilst laws were maintained by good lawyers, and craft skills were dependent on good apprenticeship, lawyers and apprentices alike had to respect the teachings of the priest. The medieval world took to heart the teachings of St. Augustine, the North African bishop writing in the dying days of the Roman Empire who had argued that all life was a struggle between the forces of good and evil. Augustinian theology went on to advocate mutual support and care for the weak. Augustine called for a righteous struggle against injustice; his theology rejected money and worldly things as evil because they had led to the fall of Rome, and instead offered personal salvation in the after life. It sought also a new world order that could be built as the City of God on earth. Augustine’s teachings created the hope of the medieval world, a feudalistic society based on the need for self-sufficiency and held...
together by personal honour and the overarching view of God’s design.

Augustine created the powerful story that did so much to shape the lives of Europeans for nearly a thousand years. During this fifty or so generations the people of England built more than ten-thousand churches, often with flying buttresses, fan vaulting and lofty spires that no modern craftsman could create with the technology that existed then. They established the universities of Oxford and Cambridge, built a hundred or more great abbeys and cathedrals, and founded many hospitals. They formalized much of our system of law, instituted the Inns of Court and the prescription that a convicted criminal should have time to prepare his soul for eternity before execution.

They had themselves buried in their finest clothes in elaborate tombs from which they believed they would arise - in the same fine clothes - on the Day of Judgement. Their friars preached of the seven deadly sins - greed, lust, envy, sloth, avarice, pride and anger, and they went to their deaths, terrified that, at the Last Day, they might be found wanting and be eternally damned. It didn’t matter that not everyone believed in all aspects of this scenario, what did matter was that it set the agenda. Children had to learn to fit in and do as they were told if they were to have a chance of going to heaven. For nearly everybody learning was the art of accumulating ideas, and virtue; it was hardly about change.

This powerful but straightforward vision of historical purpose, of the meaning of human life, of a self-sustaining community, and a limited role for the state, still stirs people’s imaginations. Yet medieval Europe had within it the seeds of its own destruction that no story, unreconstructed, could hold together. Men were still greedy and envious. The rich feudal lord could all too easily forget his obligations to his serfs while exploiting them unmercifully. The lust of the affluent did not always look for release in the intellectual love of chivalry, preferring instead ‘le droit de seigneur’. Nor, it seemed, was it a perfect deal with the Almighty for - as ever - there was much innocent suffering. Nothing tested man’s faith more than the Black Death that devastated fourteenth century England, killing a third of the population. People were terrified. Maybe God was a god of vengeance who had simply set the world in motion and then stepped aside, blindly indifferent to the fate of the individ-
confident that they knew as much as they thought, and with that the need for people to be educated increased. There were new answers needed to very old questions.

No doubt the priests at the Cathedral on the island of Torcello looked up in dismay at the Teotoca Madonna for inspiration, and wondered why she cried. As the fifteenth century gave way to the sixteenth, thinking men became uncertain even about the nature of life. It was left to Galileo, in early seventeenth century Italy, to perfect those mathematical proofs which Copernicus sought, and show that the universe didn’t spin around the earth. In doing so, Galileo destroyed the scientific story that had underpinned the medieval world. The church woke up to these findings late, but reacted vigorously. Galileo was condemned to house arrest for the remainder of his life and his books were publicly burnt. But the truth was out. From then on theologians and philosophers would have to find a new way of describing the human race.

If Aristotle was the last of the great classical philosophers, modern philosophy is closely associated with the rise of the natural sciences in the seventeenth century; specifically the work of the Englishman Francis Bacon, and the Frenchman Rene Descartes. Bacon was a man of massive intellect of whom it has been said that he was the last man to have possessed a mind so able as to comprehend all the then-known knowledge. In ‘Novum Organum’ he described the power of inductive reasoning, and later, in ‘The New Atlantis’, he laid the foundations for the scientific method on which subsequent scientists have moulded their research techniques. Descartes is best known for his theory of Dualism: the theory that the mind and the body are entirely separate and that, of the two, the mind is the more significant. Cartesian thought was to become a major factor in separating feelings and thoughts (the emotions) from the quantifiable aspects of knowledge.

John Locke is another Englishman who is often credited with having laid many of the epistemological foundations of modern science. It was he who first defined the brain as being a ‘tabula rasa’, or ‘blank slate’ awaiting external inputs to create understanding. For very many this was a powerful, and uncomplicated, metaphor, which still has great persuasive attraction for politicians and policy makers. David Hume, the Scottish philosopher, was much influenced by the principles of mechanics as described by Isaac Newton, so that by the mid-eighteenth century the metaphor of a clockwork universe, and a mechanistic brain, came to dominate intellectual explanations of life. Knowledge, reasoned Hume, comes to us through our senses, and from nowhere else. Hume had no time for the opposing concept that Darwin was later to identify, namely that our minds have been shaped through the evolutionary history of the species to perceive external experience in specific ways. It was Hume’s passionate belief in the importance of nurture that led him to ignore the role of innate skills and knowledge which more than two thousand years before Plato had hinted at, and which the even older Jewish patriachs had probably meant when they spoke of the sins of the fathers being visited on the children for six generations.

In the writings of these men was the vigorous beginnings of rational modern science. The British Society for the Advancement of Science had been formed in 1660 but, overall, this was still not a time when the ideas of the intelligentsia could spread easily to the common man. What had rapidly caught the public’s imagination, however, was the work of Archbishop James Ussher. In 1650 Usher published a set of calculations detailing the age of the earth. Within a decade of Galileo’s proof that we weren’t the centre of the universe, Ussher’s calculations appeared to be based on hard facts that quickly attracted public attention. Ordinary people could understand these dates and, reassuringly, they appeared to prove humanity’s divine creation. They put human development onto an understandable time-scale. Ussher’s calculations (and he was meticulous in working from the earliest Hebrew texts) showed that the world had come into existence at precisely 6pm on 22nd October, in 4004 BC.

Archbishop Ussher was taken very seriously indeed for, by the methodology he had used he couldn’t be faulted. And in the mid-seventeenth century, there was no other methodology that could be used. As the church was still trying to

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*3 Ussher, James, 1581-1656. An Anglo-Irish cleric with Royalist leanings, he became Archbishop of Armagh (prelate of Ireland) in 1625, and Vice Chancellor of Trinity College, Dublin. A highly respected Hebrew scholar, whose work on ancient Sanskrit text is still highly regarded, his biblical chronology was based on seven years work which involved employing a number of Hebrew scholars to search the libraries of Europe to cross-check the chronological accuracy of biblical events. He contributed to the founding of the Royal Society.
come to terms with the failure of the medieval belief that the earth was the centre of the universe, people were vastly reassured by Ussher’s calculations. They built on the well-known story of Creation and appeared to give precise dates that substantiated the biblical story. Fewer than three hundred generations, Ussher suggested, separated the seventeenth century from the days of Adam and Eve. 1650 wasn’t a long time ago. Shakespeare had written all his great plays by that time and the struggle to establish the rule of parliament had culminated in the execution of Charles I the year before.

Let’s pause for a moment and set that in a context we can understand. Fewer than twenty generations separate us, in the early twenty-first century, from the excitement that greeted Ussher’s calculations and the fascination we now find for the Big Bang theory. In 1687 Isaac Newton was to lay out the basic principles for what came to be known as classical mechanics – the study of moving bodies, in his book *Naturalis Principia Mathematica*. The rules for analytic assessment that Newton devised have subsequently been used without significant alterations to generate explanations for a tremendous variety of physical phenomena. They provided ample justification for thinkers of the time to define a mechanistic worldview that could replace the medieval story. It was not until the birth of quantum mechanics in the early twentieth century that the limitations of such reductionism were to be recognised.

After Newton, a new story started to emerge as scientists began to split complex issues into measurable sub-parts. It was a story of a highly predictable world governed by a set of rules and equations set out by a God whose sole continuing role was to keep ‘the clock’ wound up. Newton’s mechanistic God and Descartes’ philosophic Dualism still left plenty of room for man’s freewill, for heavenly predestination, and for scientific explanations of physical phenomena. Together Newton and Descartes gave birth to the great philosophical debate about the nature of man, human rights and the role of the state. It was the century of essentially practical philosophers, men such as Thomas Jefferson and Adam Smith - men whose views on nature were more human than divine. Yet science still lacked the technology and the methodology to look deeply into the origins either of the planet or of the species. Thomas Paine might well argue for the rights of man, Jefferson might invoke the support of ‘Nature’s God’, but the technology to understand that humanity had a history thousands of times longer than anything Ussher could suggest with his biblical or archaeological ‘tools’, was simply non-existent.

On my bookshelves I have our family bible. It was printed in 1791, the year our house was built, and seven years before Malthus wrote his famous essay on population growth in a small village three miles up the road from where we live in Bath. This family bible records nine generations of my ancestors. It’s a large, well-worn leather-bound book. Many of the pages are turned down, and there are numerous comments in the margins. Looking at it again recently I was amazed to see that it incorporates Archbishop Ussher’s chronology, developed one hundred and forty years earlier. I can read, as my ‘recent’ ancestors did, that Noah’s flood occurred in 2348 BC; that Moses came down from Mt Sinai with the ten commandments in 1491 BC; that the Walls of Jericho fell fifty years later, and that Daniel went into, and came out of, the lions’ den in 537 BC.

It was while Malthus was composing that essay;
while the plasterers were finishing off the elaborate ceiling cornices in the room in which I now write, and while my great, great, great, grandfather was recording in that family bible the names of his five children, that a young, self-taught surveyor - William Smith - was helping to lay out the canal on the hillside half a mile across the valley from where I sit, that was to link Bristol to London.

For years William Smith was, to me, a most shadowy historic figure – a man remembered from lectures on geology heard long ago – but having moved to Bath in 1999 I saw a copy of one of his earliest geological maps. I was fascinated. I noticed plaques on two houses referring to incidents in Smith’s life. Walking along the canal that he surveyed, and subsequently superintended its building, I wanted to know more. Coincidentally in 2001, Simon Winchester published what was quickly to become an international best seller ‘The Map that Changed the World.’

William Smith was destined to be a ‘nobody’ when he was born in 1769, the youngest son of the blacksmith in the Oxfordshire village of Churchill, and his father died when he was six; two years later, his mother having remarried, the young Smith had to depend on his own wits to survive. His is a remarkable chapter in the story of Science’s search for meaning, for when Smith died in 1839, he was already being called ‘the father of British Geology’.

William Smith provides a classic study in how, working within a self-contained community which was sufficiently challenging to encourage personal enterprise and energy, exceptional people can grow from the humblest origins to assume roles of national significance. With only a rudimentary education in the village school, the young William became a voracious reader. He was observant and at an early age became fascinated by the various kinds of fossils to be found in the rocks near to where he lived in the Cotswolds. In his search for work, he thought nothing of walking fifty miles of a weekend. At walking pace he was fascinated by the fine distinction in the different types of stone used in house building, and speculated on the relationship of rock type to scenery. He became proficient in geometry and taught himself the skills of surveying. By the age of eighteen Smith was undertaking surveys of his own and providing plans of such high quality that it’s not difficult to appreciate why John Rennie, the Engineer in charge of the Kennet and Avon canal, put Smith in sole charge of the building of the Somerset Coal Canal. Years later Smith described this work as being like “cutting a huge slice through the history of rock formation in the British Isles”. Other canal builders had cut larger slices, other geologists had observed more rocks, but it was William Smith, the self-taught engineer, who had the passionate interest in trying to understand the significance of these different kinds and layers of rocks. His genius lay in the fact that he trained himself to see things, which however obvious, other people simply had not yet appreciated.

In 1799, at the age of thirty, Smith produced the world’s first ever geological map. It was a circular map with a radius of five miles centred on Bath. On this topographic map he put a colour overlay to represent the different kinds of rocks to be found at the surface. Then, two weeks before Christmas in that same year, just as Napoleon was imposing a military dictatorship in France, William Smith sat down to dinner at No. 29, Great Pulteney Street in Bath, with two clerics, each of whom had a passionate interest in geology. After dinner they challenged Smith to dictate what he believed to be the geological sequence of what we now know are the Jurassic rocks. Smith listed twenty three separate bands of rock, describing the various characteristics of each, including the different fossils, from chalk as the youngest through to coal as the oldest. What Smith could not do however was produce any technique to show how old these rocks were. Much excited, these three men each made two copies of the table of strata and agreed – without realising the commercial potential of such information to other people - to circulate them widely; which they did, and they were very widely read. But not to Smith’s advantage. In the inquisitive and speculative world of the early nineteenth century, plagiarism was rife and lesser men with the backing of powerful sponsors took all the credit. Smith had no sponsor either to fund his further work or protect his good name.

Undaunted by all this, Smith was convinced that working entirely on his own he could make a complete geological map of the whole of England and Wales. For fifteen years, he walked, measured, sketched, collected samples, searched widely for sponsors and took whatever surveying jobs were necessary to cover his basic needs. All this activity culminated in the summer of 1815, when exactly two months after the Battle of Waterloo, Smith published his map. It was eight feet tall and six feet wide, entitled ‘A Delineation of the Strata of England and Wales with Parts of Scotland’. His map, seen from a reasonable distance, is almost indistinguishable in its general detail from the most recent publications by the Geological Survey, which represent the subsequent work of many thousands of professional geologists with immense technical
back-up.

The effort, hardly surprisingly, broke Smith’s health. His reputation for the next fourteen years was virtually destroyed by the publication of another map, much of which was a direct copy of his earlier work, but produced by men with the money to market it. Smith became bankrupt, then homeless and spent time in a debtor’s prison. His wife went insane. It was only due to the intervention of an insightful well-to-do liberal academic, William Fitton, that Smith was rescued from oblivion and shame and lived out the last ten years of his life in comfort and eventual honour in London.

William Smith epitomises for me the inquisitiveness of ordinary people, men and women who in the late eighteenth and early nineteenth century, changed the way society thought. Some time in his early life Smith had been consumed with a passion to make sense of the physical world around him. Whether he was physically strong by nature, or became strong because of his burning desire to travel, we just don’t know. But to look at his map and to trace the intricacies of the geological formations that he recorded so faithfully over some fifty thousand square miles, is to see graphic evidence of what intellectual power can be released in a single man fired by burning ambition. Plato would most certainly have understood. I find it awesome.

William Smith’s stratigraphy needed far more than Ussher’s chronology to make any sense of how all these rocks had come together, and to start to explain the origins of the fossils which had so fascinated him as a young boy. Sir Charles Lyall, the Scottish Natural Scientist, went part way to doing this in his ‘Principles of Geology’ published in 1833, shortly before Smith’s death. Lyall argued that all features of the earth’s surface are produced by the uniform, continuous action of physical, chemical and biological processes, operating by the uniform, continuous action of physical, chemical and biological processes, operating over enormously long periods of time. But more significant than any of these men, more significant than Copernicus, Galileo or even Newton, was the thinking of one man, initially a deeply religious Victorian country gentleman and an almost entirely self-taught amateur biologist. His name was Charles Darwin. It was Darwin who first set out the principles by which life grows and changes, and in the process relegated the Victorians’ idea of God to the sidelines.

The Origin of Species

Charles Darwin was fortunate in his ancestors. His grandfather, Erasmus, was a highly successful physician who had built up a thriving practice in Lichfield (and declined George III’s request to become his personal physician) and whose many friends included Joseph Priestley, Jean-Jacques Rousseau and Samuel Johnson. His father, Robert, was equally successful as a doctor having in Shrewsbury one of the largest medical practices outside London. His mother was the grandaughter of Josiah Wedgwood, the potter and one of the instigators of the industrial revolution. Apart from the death of his mother when he was eight Darwin, it is said, had a golden childhood, cosseted and encouraged by adoring sisters and an older brother. Bored at school, the time he spent exploring the mountains of north Wales, studying plants and insects and collecting fossils, thrilled him. At the age of twenty two, after a largely unsuccessful time as a student at both Edinburgh and Cambridge universities, he set sail in late December 1831 on HMS Beagle, bound for the South Pacific. Financially well supported by the Wedgwood/Darwin fortunes, Charles was to be the unpaid naturalist on the voyage. This was to be his ‘gap year’, a time to sort out his ideas and give direction to his life. He had recently read Paley’s “Natural Theology” and confessed himself “charmed and convinced by the long line of argumentation”, and even consid-

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*7 This geological map can be seen at the Geological Society of London at Burlington House in Piccadilly. It is proudly inscribed ‘A Delineation of the Strata of England and Wales with parts of Scotland; exhibiting all the Collieries and Mines; the Marshes and the Fenlands originally Overflowed by the Sea; and the Varieties of Soil according to the Variations in the Sub Strata; illustrated by the most Descriptive Names; signed W. Smith, August 1, 1815’

*8 George Paley is most famous for his book ‘Natural Theology’ published in 1802, in which he argued for the existence of God and divine purpose from the evidence of the complexity inherent in natural objects and phenomena. (Teleology). Born in 1743, this Anglican Minister was extremely influential through his various writings including ‘The Principles of Moral and Political Philosophy’ published in 1789 and ‘A view of the evidence of Christianity’ published in 1794; both books being still required reading for entrance to Cambridge University into the beginning of the twentieth century. It was in Natural Theology that Paley developed the metaphor of the watch, and the need for a watchmaker, and a watch winder-upper. Paley’s writings were immensely influential throughout the nineteenth century.
mendel and apprentice: reuniting thinking with doing

[...]

Mendel set out to make his own systematic study of heredity patterns in a species readily available in his own family and in the natural history of Shropshire where he grew up. Darwin was a great walker and an assiduous recorder of detail. He noted that not all plants of the same species grew in the same way. Neither did his own children. Within a single family, Darwin noted, some children are tall, others short; some are alert and imaginative while others are docile; some have blue eyes and others green. Some have blond hair, others black, brown or mousy. Yet, with all that diversity, the overall shape and form of the species remained from generation to generation. Why was this? What process could be at work to give such diversity but also retain such an apparent order within a species? Darwin’s eventual theory was very simple: “If within a species there is variation among individuals in their hereditary traits, and some traits are more conducive to survival and reproduction than others, then those traits will obviously become more widespread within the population. The result will be that the species’ aggregate pool of heritable traits changes.”

Similar thoughts and arguments were being advanced elsewhere. Early nineteenth century Europe had many amateur botanists, geologists, zoologists and embryonic psychologists. Most significant of all was the work of the Austrian monk, Gregor Mendel. Mendel was a man of amazing insight and tenacious in his determination to obtain proof that would vindicate his strictly amateur botanical research. Like Darwin, his early life had not suggested intellectual brilliance. In fact, he failed several times to qualify as a teacher of natural science in the high schools of his native Vienna. Undaunted, Mendel set out to make his own systematic study of heredity patterns in a species readily available to him - the common garden pea. He measured differences in size, blossom colour, leaf shape, seed colour and in the shape and form of the pod, and he kept meticulous notes of his findings over many years. Later, when he became the abbot of his monastery, Mendel took over the entire garden as a laboratory. Using his carefully tabulated notes, Mendel proposed a theory of ‘plant hybridization’ in papers delivered to the Brunn Natural Science Society during 1865. In these papers he set out the principles that would lead later to the science of heredity, genetics and eventually to the birth of modern medicine.

We know that Mendel sent copies of his papers to Darwin - such unprepossessed men were, unlike many modern researchers, anxious to share ideas with each other. But Darwin never acknowledged receipt of the papers and it is probable that they never reached him. It was not until some years after his death that Mendel’s work was eventually published, and his genius recognized in a way that enables every ninth grade biology student in twenty-first century secondary schools to compute the probability of different kinds of mutations.

Both men were not only in advance of their contemporaries, they were also successfully postulating genetic mechanics that were not to be fully explained until the discovery of DNA in the 1950s, about a hundred years later. Darwin’s genius lay in the way that he showed that the whole natural world was in a process of continuous change. He said he could explain it in nine words: multiply, vary, let the strongest live and let the weakest die. One hundred and fifty years on we would describe his theory in terms of the algorithm of Variety / Selection / Retention. Variety in individuals is generated by random mutations in genes, and in the random recombination of these genes in the act of sexual reproduction. It’s easy to appreciate the resulting differences in our children, in plants in our garden, in animals, and in agriculture. Selection is accomplished both by the environment and by the choice of mate; for example, a climate change leads to a change in vegetation whereby fruit trees grow taller. Those human children who are born tall (through a chance mutation) will have an advantage in retrieving their food, and so will eventually be healthier than those shorter children still scavenging for the fruit that falls to the ground. Females looking to maximize the chances of survival of their young are most likely to mate with the best food provider - the tall man. Only the genes of the young who have been reared successfully will be passed on to the next generation so that over time, genetic mutations and re-combinations that enhance chances for genetic survival are retained in the population. Retention occurs as the DNA in the genes is passed on from one generation to another as members of the group become progressively taller.

This process of Variety / Selection / Retention...
goes on, so Darwin argued, at all levels of life from the individual molecule, through the cell, to the separate organ and on to the complete organism. It is the organism that fits in best with its environment that survives. The concept of fitness is always at risk of subsequent environmental change. Darwin was quick to acknowledge the work of Malthus whose essay on Population he had first read in 1838. Malthus revealed that as individual members of a species vary slightly amongst themselves, it is those individuals with certain characteristics that give them an advantage in getting food, or resources, or outwitting a predator, that have an enhanced chance of survival.

Darwin described this concept of ‘fitness’ very clearly: “It is not the strongest of the species that survives, nor the most intelligent. It is the one most adaptable to change”, he wrote. So, going back to the example of tall people thriving best when the fruit is high up the tree, it is just at the point where the genetic advantage of being tall seems to have stabilized, that an environmental change may give an advantage to a short species or a species that is fleet of foot, can swim, or climb trees. Those that can’t do this - the tall ones possibly - steadily lose out in passing on their genes. A new mutation is then favoured. Darwin deduced from his initial study of the finches in the Galápagos Islands that this probably happens quite quickly. Adaptability is the key to survival.

Although Darwin returned from the south Pacific in 1836, he wasn’t to publish his findings for more than twenty years. This was due partly to his constant editing and revising, but mainly it was because he was anxious that these ideas would distress his wife, Emma, and indeed many other people. Emma was typical of early Victorian women in that she was deeply religious in a very conventional, Anglican way, and all the evidence is that Darwin loved her greatly.

Darwin’s was an interesting personality. Despite being a scientist to the tips of his fingers, he was also a kind, sensitive man - a very moral gentleman. To the Victorians, morality and conventional religion were seen as a seamless cloth. Without religion, the Church taught, there could be no morality. To weaken man’s faith in divine purpose, Darwin feared, would be to undermine many people’s reason for a moral code. Darwin knew that the establishment would be shaken to the core both by the idea that species were mutable, and probably finite, and by his conclusion that the whole of evolution was a blind process of trial and error. In other words, the price of successful change was that many failed to make it. Evolutionary theory implied no ultimate creator, no great design, no ultimate destiny, no punishment for evil and no heaven for those who had made endless self-sacrifices. Morality didn’t enter into the equation. Yet, as Darwin observed time and time again to himself and others, man has an instinctive sense of morality as well as mighty passions that seem to deny it. We are, he sensed, a morally confused species.

Even though Darwin sensed that morality was part of our genetic heritage, he was deeply worried at the probable effect on public and private behaviour of an argument that denied divine purpose in the world. He also recognized how other Victorians, long frustrated by the stifling moral code of the fundamental evangelicals, would relish any argument that suggested ‘the destruction of God’. Between these two extremes was the ever-growing inquisitive scientific community that gave Victorian society so much of its energy. These were people much interested in the possibility of evolution, but unsure how it could work.

Events overtook Darwin when, in 1858, a fellow English natural scientist, Alfred Russell Wallace, a man twelve years his junior, sent him a copy of a paper he proposed to publish with the cumbersome title ‘On the tendency of variations to depart indefinitely from the original type’. Wallace was unaware that Darwin had already worked out these principles of natural selection for himself. The conclusions of the two men were not quite the same; it was Wallace who coined the expression ‘the survival of the fittest’. In particular, Wallace did not agree with Darwin that the brain was also a product of evolution. Nevertheless the men became firm friends, and Darwin was finally persuaded by a number of his influential associates to delay publication of his own work no longer. The entire first print run of ‘The Origin of Species’ sold out the day it was published, 24th November 1859. In deference to his wife’s religious sensitivities Darwin studiously avoided mentioning human evolution until one very short reference at the close of the last chapter, “Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by gradation. Light will be thrown on the origins of man and his history.”

Darwin’s hint was enough for the Victorian chattering classes. Man is descended from monkeys; we are not dependent on God, even if he does exist, they concluded with a mixture of relief, glee, fear and despondency. This marked the end of Newton’s clockwork universe even more effectively than Copernicus and Galileo had destroyed...
the medieval world. There was now a firm - if not proven - theory to suggest that life was not directed according to a divine plan.

Although first and foremost a scientific classic, ‘The Origin of the Species’ was written for the well-educated, Victorian general reader. It’s a book of remarkable breadth and depth, that laid the foundations for modern biology, medicine, popular science and much else besides. Six further editions were published in Darwin’s lifetime, and in 1872 he extended his ideas with the publication of ‘The Descent of Man’. It was a challenging title. I often wonder how subsequent thinking would have gone if Darwin had called it ‘The Ascent of Man’? A moving up and beyond the apes rather than a reduction from them.

Extreme positions on the theory of evolution were quickly taken in response. Liberal minded academics - not to mention the popular press - had long felt oppressed by the obsessive dominance and puritanical morality of the church in all public affairs. There were, for some, old scores to settle. Thomas Huxley, the young and exuberant disciple of Darwin (he nicknamed himself ‘Darwin’s bulldog’) challenged Bishop Wilberforce of Oxford to a public debate on evolution in 1860. There was no common ground between the two men. In exasperation it was said the Bishop resorted to a cheap quip “Tell me, on what side of his family is Mr Darwin descended from an ape? Is it on his mother’s side, or his father’s?” Huxley then rejoined (at least he said he did some time later) that he would rather be the grandson of an ape than be related to a man who so misused his mind on questions of such importance. Almost from that moment, biology and theology no longer took each other seriously and Prime Minister Disraeli did not help matters. Addressing a convocation of bishops and senior clergy he said, “The question is, are we descended from Apes or Angels? Gentlemen, I’m on the side of the Angels.” He was widely cheered by people who could not understand the complexity of the question.

Darwin was rightfully anxious that people would misinterpret his theory in ways that could have far reaching and damaging consequences. One of those who did a great deal of damage was his own cousin, Sir Francis Galton. In 1883 Galton founded In exasperation it was said the Bishop resorted to a cheap quip ‘Tell me, on what side of his family is Mr Darwin descended from an ape? Is it on his mother’s side, or his father’s?’ Huxley then rejoined (at least he said he did some time later) that he would rather be the grandson of an ape than be related to a man who so misused his mind on questions of such importance. Almost from that moment, biology and theology no longer took each other seriously and Prime Minister Disraeli did not help matters. Addressing a convocation of bishops and senior clergy he said, “The question is, are we descended from Apes or Angels? Gentlemen, I’m on the side of the Angels.” He was widely cheered by people who could not understand the complexity of the question.

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Another instance of misinterpretation of Darwin’s thinking occurred in 1864 when the political philosopher John Stuart Mill suggested that “Moral feelings are not innate but acquired”. Darwin responded robustly; “It is with hesitation that I venture to differ at all from so profound a thinker. The ignoring of all transmitted mental qualities, as it seems to me, will hereafter be judged as a most serious blemish in the works of Mr Mill”. Evolution of the mind; it was fundamentally Darwin’s conviction that our thought processes have been shaped by evolution that so thoroughly shocked the Victorians, and turned the idea of Original Sin into a biological rather than simply a theological concept.

Many Victorians found themselves seeking refuge in Descartes’ concept of dualism. The brain was within the body, but the soul was separate. The rules of science could apply to the former, but not to the spiritual nature of man. So began the tension between what could be tested empirically and what could only be experienced spiritually. Science and religion tacitly agreed to go their separate ways. The victim was any sense of an all-encompassing story.

Darwin was well aware of the implications of his theory, and was troubled by his findings for the rest of his life. In his autobiography he recalled, “In my journal I wrote [as a young man] that whilst standing in the midst of the grandeur of the Brazilian forest it is not possible to give an adequate idea of the higher feelings of wonder, admiration and devotion, which filled and elevated the mind. I well remember my conviction that there is more in man than the mere breath of his body. But now the grandest scenes would not cause any such convictions and feelings to rise in my mind. It may be truly said that I’m like a man who has become colour blind.” Nobody wants to be colour blind and none of us would wish such a limiting affliction on anyone else. Like a doctor observing a terminally ill patient who still lived in hope, Darwin felt that he was the bearer of unpalatable knowledge.

Charles Darwin died in 1882. That wasn’t very long ago. In my terms it was just before my own grandfather was born, in general terms more like five or six generations ago. Though eventually an agnostic, the man who unwittingly, yet with serious reservations, set science and religion at war, had a troubled conscience. It’s helpful to regard him, in an evolutionary sense, as being the culmination of the very best of the amateur tradition of the inquisitive minds whose theories came directly from their own practical
experiences. Darwin lived at a time when it first became possible for an individual to draw together into his own library and study the findings of the key thinkers of his day. Long before Darwin died, however, this tradition of amateur scientists had come to an end, for the explosion of knowledge was just too great, and the techniques for its exploration so sophisticated, that even the term ‘scientist’ had by then to be qualified to reflect the proliferation of specialist disciplines.

Yet as inciteful, practical and eclectic as Darwin most certainly was, the scientific community of his day simply lacked the technologies that were needed to fill in so much of the detail on which the theory of evolution had to rest. Darwin himself once tried to calculate the age of the Weald of Kent where he lived. The only technique available to him, based on the very limited observations he could then make, was to assume a rate of erosion in solid rock as being half an inch in a century. This implied, Darwin argued, an age of over three hundred million years since the Weald was created. He was vastly out -- we now estimate that it was actually only twenty million years -- but this could only be calculated once geologists got a better grasp of principles of erosion.

It was not until the 1860s, after Darwin had published "The Origin of the Species", that William Thomson, the geologist, put forward calculations that suggested the world was between twenty million and four hundred million years old. In 1905 the American Bertram Boltwood estimated the earth’s age at between four hundred million and two and a quarter billion years, whilst studies on the Greenland icecap in the 1970s led to a new calculation of four and a half billion years. In little more than a hundred and fifty years - say seven generations - we have expanded our perception of the earth’s history by a factor of nearly one million times. We now know that we live on a very, very old planet, so old that it’s hard to appreciate the enormity of its age in human terms at all. Darwin could only guess at this timescale and so it was hard for him to have any real appreciation of the enormous periods of time over which species might mutate; Archbishop Ussher two hundred years earlier could not even conceive, from his knowledge, that there was even such a process of mutation to consider.
Chapter Three

TELLING STORIES ABOUT ROCKS AND PEOPLE.


If there was uncertainty about rocks, then what about human history? Where do we fit in? Did humankind - Adam and Eve or whoever - follow within the week of the formation of the earth? The search for human origins is an even more tortuous detective story than the search for the origin of rocks, partly because human bones don’t, on average, last as long as rocks and partly because there aren’t too many of them around to study. But it’s becoming an increasingly intriguing story, as we develop ever more sophisticated technologies to assist in their decoding.

With the assistance of archaeology and palaeontology we now tend to date human history from the point where the hominid species split from the great apes - chimpanzees and gorillas - probably between five and seven million years ago. (Put that in terms of human history and that is roughly four hundred thousand generations – a vast timescale over which evolution could operate). Remarkably though we still share more than ninety-eight per cent of our genes with the chimpanzees, so much of which shapes how we think and act today.

Attempting to summarise the findings of archaeology over the past fifty years, and from sites all around the world, is fraught with difficulty. While numerous digs have reclaimed tens of thousands of human bones it is hardly surprising that few even relatively complete skeletons of great age have been found. Keen as scientists are to deduce from such remains evidence on which to build a systematic explanation for the evolution of the human race, they are likely to remain frustrated for a long time yet. The task is made complex by the competing claims of various branches of archaeology, and more difficult by national and racial susceptibilities. That said, a framework is emerging. In 1974 two palaeoanthropologists, Tim White and Don Johanson, discovered in Ethiopia a relatively complete skeleton of a recognisable hominid. They called her Lucy, and estimated that she lived three million two hundred thousand years ago. Lucy’s brain cavity was about a quarter of the size of a modern human, and very similar to that of a chimpanzee. Lucy and her kind walked on their back legs and, incredible as it may seem, two of them left footsteps of themselves walking together for almost eighty feet through some freshly fallen volcanic dust three and a half million years ago, which has only very recently been uncovered at Laetoli in Tanzania. These fossilised footprints must be some of the most haunting of relics ever unearthed from man’s distant past, as two of our ancestors walked together into the future.

About two million years ago there was a significant increase in the size of the hominid brain cavity. The hand-held axes these people made were far more carefully crafted, and their bone structure would suggest that they spent most of their time standing up. We therefore call these people homo erectus. A fascinating homo erectus skeleton from the Lake Turkana region of Kenya is that of a boy of between nine and twelve years of age, standing comfortably at over five feet high and dating between two million and one and a half million years ago. Detailed analysis showed that whilst Turkana Boy’s brain cavity clearly resembles that of a modern human, the limited size of his spinal cord (as shown by the small hole in the vertebrae of the backbone) meant that it was highly unlikely that he could have had a thorax able to handle speech - he would have sounded rather like a chimpanzee. Homo erectus was, nevertheless, a great traveller and apparently walked out of Africa across most of Europe, and through most of Asia as far as Java. In technological terms, Homo erectus was not apparently very inventive. During the whole of this long period there was no further recognisable improvement in the design and manufacturing of stone axes, and it seems from the lack of any evidence to the contrary that he made no other artefacts. Big brained he might have been, creative thinker he
apparently wasn’t.

However, Homo erectus must have been a relatively advanced social being. The colonising of such a vast land mass is only explained if the species lived in coherent, self-supporting groups with a strong tendency to divide once they grew beyond a certain size. Only if the bands of individuals split, and then split again and again could they have covered so much territory. Just what were the personality characteristics that facilitated such repeated divisions? How did these people organise themselves? Steven Mithen, an English archaeologist, in his much acclaimed ‘The Prehistory of the Mind’ has advanced the theory that homo erectus had a well-developed social intelligence, but this was strictly independent of other kinds of brain function. In other words, he was able to work out human relationships well, but could not apply such intelligence to how he dealt with inanimate materials. The idea of separate forms of intelligence, rather than a single general-purpose form of intelligence, becomes one of this book’s leitmotifs.

Half a million years ago, the fossil records suggest that brain size again grew significantly, reaching a stage somewhat larger than a modern brain. Quite why, we just don’t know. What we do know, however, is that the design and manufacture of hand axes appears to have become more innovative. For the first time it becomes clear that there are some significant variations in the axes made in different parts of the world. Some of these were apparently made to be beautiful as well as useful. The people who crafted them knew how to control fire, and used it for manufacturing and cooking purposes. They decorated their bodies and about a hundred and fifty thousand years ago some of them began to give their dead formal burials.

It is now becoming clearer that there were probably several sub-species of Homo erectus. The best known of these were the Neanderthals, a large heavy-boned species found widely across Europe and the near East. After a brief flourishing it appears that this species died out some thirty thousand years ago. Their disappearance raises a fascinating question: why should such a large-brained, strong-boned species vanish altogether? A clue may lie in the evidence that suggests that Neanderthals had no art, no complex technology and no apparent form of religious behaviour. Could they have been annihilated by a quicker, more imaginative species that was able to think more quickly and organise itself better? Was that brighter species Homo sapiens? Indeed were Homo sapiens the first to practice genocide - genocide on an almost global scale? The evidence seems to suggest that we did exactly that, though whether it was planned or not is hotly contested.

Something quite massive happened to Homo sapiens, archaeologists currently suggest, between some forty and seventy thousand years ago in a period known as ‘The Great Leap Forward’. The processes of cultural and technological evolution, that had previously been glacially slow for several million years, suddenly went into overdrive. Quite simply our ancestors started to use their brains in an infinitely more intelligent fashion. All this seems to have happened in a very short period of time, perhaps in little more than two or three hundred generations. Scientists refer to this as ‘punctuated’ evolution - evolution proceeding at different speeds. More about this later in this chapter.

All these were our Ancestors

Such an account of mankind’s early origins has only become possible in very recent years as the technologies for understanding ‘deep’ archaeological time have become so much more systematic, scientific and analytical than the trowels and sieves of nineteenth century archaeologists. As a recognisable discipline archaeology began when Renaissance popes, cardinals and Italian noblemen began to search for and collect Greek and Roman artefacts. The first systematic archaeological digs were those in Pompeii and Herculaneum in the eighteenth century, while Napoleon took archaeological scholars with him to Egypt in 1798. It was, however, the translation of ancient Egyptian texts in 1822, and the spectacular deciphering of Mesopotamian cuneiform writing by H. C. Rawlinson in 1846, which captured the attention of a significant audience. What these ancient people wrote in texts dated from about five thousand years ago would suggest that they were, surprisingly to the Victorians, just like them.

At first sight what they recorded seemed to fit neatly within Ussher’s calculations, as did later excavations at Jericho and Ur of the Chaldees. Such corroborations initially suggested that history as told in the Old Testament was reasonably accurate, at least up to about 3000 BC. Then, in the latter years of the nineteenth century, remarkable wall paintings were discovered in caves in Southern France and Spain and tentatively dated at between ten and thirty thousand years old. Most spectacular were the cave paintings found at Lascaux in 1940, and dated by the then-new Carbon 14 dating technology as being more than thirty thousand years old.
But can we learn very much from such human remains? Ancient skeletons - particularly skulls - exert a peculiar fascination. Holding someone else's head forces us to ask if these people were really like us. It was easy to understand the Egyptian mummies because their tombs were littered with artefacts for the after-life, and the numerous inscriptions told us much about their lives. But what of skeletons with no, or very few, artefacts to fill out the details? Palaeoanthropology, the study of ancient humans, has a range of technologies available to it which have been invented since I was a child. It enables archaeologists to learn a vast amount from the bones of our ancestors.

With such scientific aids our generation is now in a vastly superior position even to that of our own fathers to draw a more detailed description of human origins, and specifically of how the human brain has evolved. One illustration of such techniques, for me, is close to home.

An almost perfectly preserved male skeleton was found in a cave in Cheddar Gorge, some twenty-five miles from Bath, in 1903. It caused considerable interest at the time, though no-one had any means of deciding how old it was - it was even suggested that it could be the remains of a recent murder. In the 1960s it was shown to be more than nine thousand years old. This meant that Cheddar man - as the skeleton became known - lived some three or four thousand years before settled agriculture reached that part of Britain. History, as taught by historians in the 1960s, had assumed that as ever more sophisticated cultures had pushed out from Central Europe into the British, Iberian and Scandinavian peninsulas, so these invading peoples annihilated the existing, more primitive cultures. Cheddar man they thought then had to be a native of Somerset from before the agricultural invasion. He must be a representative of a displaced population. And that is how I first saw him myself when I visited the caves in the early 1970s - as a sad relic of an extinct people, certainly not one of my ancestors.

But was this historical hypothesis correct? Evidence of a kind unknown to academic historians is now coming from genetics. In 1989 Professor Bryan Sykes, professor of human genetics at Oxford, was the first to recover ancient DNA from a very old bone. From this he was able to extract significant quantities of mitochondria, a unique substance that does not recombine as it moves from generation to generation, so retaining an exact history of that person's evolutionary past on the female side. Consequently two closely related people will have almost identical mitochondria, whereas people only distantly related would differ by the number of mutations that have accumulated during the generations that have separated them. In ways such as this genetics is helping us to put together a much fuller account of human history. The recent findings of both Bryan Sykes and David Horrobin (which must be regarded as relatively speculative at this stage), show the potential for genetics to paint in the details of human history.

The arguments made by these two men have been much simplified in this account, but to those unfamiliar with genetics this explanation is critical to the overall development of my argument.

Sykes's contribution to our understanding of who we are lies in the way he has developed a method of studying this mitochondria. In his fascinating book ‘The Seven Daughters of Eve’, published in 2001, Sykes explains how he developed the technology to extract mitochondria from the teeth of another skeleton found close to Cheddar man, and dating from exactly the same time. When he had done this he went on to do something that seemed totally unorthodox to his professional colleagues. He set out to collect samples of DNA from ten per cent of the present day population of the village of Cheddar and from these he then extracted the mitochondria. To everybody's enormous surprise Sykes got two exact matches, and one close match with the mitochondria extracted from the ancient skeleton. The two exact matches were school children, so their names were not released to the press. The close match was none other than the village school's history teacher.

The implications of these findings are stunning. Over a nine-thousand-year period three people in the present village of Cheddar are nearly direct descendants of that skeleton found in Gough's Cave, just up the road a hundred years ago. For nearly two hundred generations the female line has apparently remained in the same geographical area. The re-writing of history books has now begun. Invading people don’t have to wipe out existing cultures; old cultures are more likely to be changed simply by the new ideas. To mate with the attractive daughter of the conquered race was - and it's that basic - more fun than to kill her. The bloodline largely stays the same.

In gloriously evocative prose, Sykes writes “Our DNA does not fade like an ancient parchment. It does not rust in the ground like the sword of a warrior long dead. It is not eroded by wind or rain, nor reduced to ruin by fire and earthquake. It is the traveller from an antique land that lives within us all”. Walk down the village street in Cheddar and note the faces of the people you pass - all are
indeed reflections from an antique land. As indeed they are everywhere. And, here in Bath, on a busy Saturday, outside the Abbey (the site of the old Roman Forum) you could well be rubbing shoulders with the DNA of Roman centurions who, when it came to retirement, decided not to go back to Italy and instead took English wives. Watered-down Roman blood most certainly still flows in this old city.

Sykes goes on to explain how he has built up a significant data bank of mitochondrial DNA from across Europe. His team in Oxford has identified, seven groups of very similar DNA that account for more than ninety-five per cent of the current population of Europe. By working out the average of the mutation in these seven groups, Sykes has calculated that each group was derived from just one woman - a sort of ‘clan mother’. That doesn’t mean she was the only fertile woman around at the time, but she would have been the one who had at least two daughters, each of whom would have had to have lived long enough to have two offspring of her own. This in turn implies that the total number of people in each group was small. Some scientists would suggest that within the last hundred thousand years there have been stages when the entire population of Homo sapiens did not exceed between four and ten thousand people. From such a small gene pool only seven clan mothers who lived between forty-five thousand and ten thousand years ago, are responsible for the majority of people now living in Europe.

Sykes suggests that these clans originated in Greece (forty-five thousand years ago), Kazakhstan (twenty-five thousand), Southern France (twenty thousand), Tuscany (seventeen thousand), the Pyrenees (seventeen thousand), Venice (ten thousand), and Mesopotamia (ten thousand), and he has gone further and applied the same calculation to a much wider DNA sample taken from around the world. This suggests a further twenty-six clans of comparable status. Thirteen of the total of thirty-three clans so identified, (forty per cent) come out of Africa. Sykes knows he can go even further by using this technology, to trace the ancestors of each of these clans back to a ‘mitochondrial Eve’ living about one hundred and fifty thousand years ago. Again, this was not the only fertile woman of that time - other lines have probably died out - but she was the one through whom each of the current six billion inhabitants of the earth is related. How Darwin would have loved to have had access to such research.

This mixing up of our genes has been going on for a very long time. Stand in a crowded place anywhere, and look at the extraordinary differences not only in the height and weight of the people you see there, but in the colour of their eyes, their hair, the form of their noses and ears, the shape of their heads and the structure of their skeletons. Some look like natural athletes, others like trolls. If you could see their medical records you would be able to note that some have ancestors that would suggest they will (all other things being equal) live a long time, while others will be prone to heart disease, cancer or mental neuroses. One day in the future we may be able to look ever deeper into their mental capabilities and see and understand things which teachers are starting to recognise - that some people have a very different profile of their multiple forms of intelligence to others, and each individual has a distinct preference for particular forms of learning. Some are good team players, while others appear excessively self-contained; some are good at deferred gratification, and others are highly impulsive. Within a single species none of us is the same - neither in our physical features, nor in the functioning of our brains. And the explanation for so much of this lies in an understanding of how our genetic inheritance has combined and recombined thousands and thousands and thousands of times.

I’m talking about ‘evolution in mind’ as operating in the same way as evolution has affected all other physical features of our bodies. When in 1859 Darwin had written ‘Psychology will be based on a new foundation, that of the necessary acquisition of each mental power and capacity by graduation. Light will be thrown on the origins of man and his history,” he knew that he was throwing out a powerful challenge for psychology, as the systematic study of human behaviour which, as a separate discipline, was less than five years old.

The discipline of Psychology was a fusion of philosophy and physiology. English philosophy had been much influenced by John Locke’s concept of the brain as being a ‘blank slate’: while David Hume had claimed that the brain must work according to the same mechanistic principles as defined by Newton. Physiology did not claim to base its findings on such well defined theories and simply studied the functioning of living organisms in ways that could be observed and measured in a laboratory. Here we have two very different academic parents; philosophy’s methodology was essentially intellectual, while physiology was a quantifiable, physical science where truth was found through the rigorous testing of every hypothesis.

This was a marriage that was difficult to make, but both partners did stand to gain for while philosophy might achieve a scientific validation,
master and apprentice: reuniting thinking with doing

Isn’t it strange,” I heard a speaker say in the three decades of the twentieth century. Psychology had so narrowed its parameters that it had excluded the possibility of incorporating any understanding of the brain as an evolving organism. To ‘clutter’ psychology’s early research with such untestable, hypothetical assumptions as posed by the concept of the brain having been shaped through evolution, explained Henry Plotkin the Professor of Psychology at the University College London in 1997, would spread confusion through a subject still trying to define itself. It was far too speculative and unquantifiable, and remained so largely until the work of John Maynard Smith on Game Theory in the early 1970s.*

So it was, from the 1860s onwards, there was to be no synthesis and no conceptual interleaving between these separate approaches to the study of human behaviour for the better part of a hundred years. As a result of this, the study of human behaviour was to proceed for this lengthy period with virtually no recognition that the brain was shaped by evolutionary processes every bit as important as any other part of the human anatomy. Medical science, on the other hand, saw in evolution the framework into which many subsequent advances in understanding could fit, and so was able to incorporate the science of genetics, inheritance, DNA and the genetic origins of disease. Psychology, however, as a direct result of that early pragmatic decision, was unable to incorporate such thinking into the study of human learning until the last three decades of the twentieth century.

“Isn’t it strange,” I heard a speaker say in the mid 1980s, “that if you took a doctor from 1900 into a modern operating theatre he wouldn’t know how to perform; or a physicist into a research laboratory; or an engineer into a modern engineering faculty. But if you took a teacher from 1900 into a present day classroom he’d just pick up the same piece of chalk and oscillate between writing on the blackboard and dictating notes to the whole class.” We now know why. The brain is every bit as complicated as any other organ of the body. The teaching profession has a lot of ground to catch up on if it is to come close to the understanding that medical science has now gained about the human body.

The Creative ‘Spark’

David Horrobin in ‘The Madness of Adam and Eve’, also published in 2001 provides another important clue as to how humans might have developed. He makes two claims that seem so extraordinary they merit serious attention. The first is that the intellectual leap made by our ancestors that resulted in such an outpouring of creativity, may have been a result of schizophrenia. The second is that such creativity resulted from changes in something as mundane as the chemistry of fat in the brain, something that is conditioned by the nature of diet.

Schizophrenia is an unusual disease in that its incidence is the same in every part of the world. Between one half of one percent, and one and a half per cent of any given population will develop the disease at some stage - either as full-blown schizophrenics, or in other psychiatric states such as bipolar disorder (a form of manic depression) or dyslexia. Schizophrenia runs strongly in certain families. Extensive studies show that where one family member is a schizophrenic it is more than likely that other family members will exhibit partial symptoms. Schizophrenia, Horrobin argues, *9 Game Theory was developed in the late 1940s by the mathematicians John Von Newman and Oscar Morgenstern, and has subsequently been elaborated to explain how people come to make economic decisions that result in conscious choices about the deployment of their resources. Game Theory makes a vital distinction between zero-sum games where one party stands to lose resources to the other, and non-zero-sum games where the games made by one partner may well benefit his competitor as well. Robert Wright in his book ‘Non-Zero’ shows how human history records the progressive benefits to all parties where competitive activity leads to better opportunities for all; “through natural selection there arrived new techniques that permit richer forms of non-zero-sum interaction among biological entities.” Both organic and human history involves ever more elaborate non-zero-sum games that Wright argues, is logic of human destiny. Biologists use Selfish Game Theory as well as Game Theory to explain complex behaviour, especially when extending notions of individual fitness to inclusive fitness. The eminent evolutionist J.V.S. Haldan illustrated this well when he said he would give his life for two or more full brothers or sisters (each of whom inherited half his genes), but as far as full cousins were concerned it would take at least eight of them to justify the sacrifice (for with each we share one eighth of our genes).
cannot be due to a single gene - the patterns of inheritance are quite different to those seen with dominant or recessive disease genes. This means that genes alone are not the only arbiters of psychiatric illnesses; environmental factors are also needed to activate the process and only do so, it seems, in about half of all possible cases.

The seventeenth century poet, John Dryden, noted what many of us have surmised from our own experience, that “Great wits are sure to madness ne’er allied, and thin partitions do their bounds divide.” Clever people, outside their area of expertise, often appear awkward, as do many of their relatives. Albert Einstein’s son was a schizophrenic, as were several of Bertrand Russell’s relatives, Karl Jung’s mother was probably schizophrenic and so too are the children of several recent Nobel Laureates.

Few of the world’s greatest achievers were full-blown schizophrenics, but many exhibited schizophrenic tendencies - Schumann, Beethoven, Swift, Shelley, Joyce, Tennyson, Huxley, Einstein, Newton, Faraday, Edison, Mendel and Darwin to name a few. Handel’s spectacular writing of the Messiah during a creative twenty-eight day burst was probably associated with bipolar illness. Writers known to have suffered from bipolar disease include Byron, Coleridge, Balzac and Dickens, and artists include Raphael, Michaelangelo and Van Gogh, and the musicians, Russini, Tchaikovsky and Chopin. The list of dyslexic high achievers is similarly enormous and includes Leonardo de Vinci, Einstein, Edison, Alexander Graham Bell, Walt Disney, Hans Christian Anderson and Winston Churchill.

Much of Harrobin’s research depends on the meticulous records that have been kept since the mid-nineteenth century by the most famous psychiatric institute in the United States, namely the McLean Hospital in Boston, whose many patients have been drawn from all over New England. Going through these records in 1931, Abraham Myerson and Rosalie Boyle found that famous families, including those who produced “Presidents of the United States, Philosophers of international importance; writers who have founded Schools of Literature; Scientists in every field from astronomy to chemistry; Medical men galore, around whose names significant developments have clustered” had all sent family members to McLean Hospital.

Highly intelligent, brilliantly creative people frequently had close relatives who were schizophrenic. “Had sterilisation procedures of adequate type been carried out in the earlier part of the history of New England and the United States,” concluded Myerson and Boyle soberly, “Many highly important individuals and their families would not have appeared. The development of the country would have been altered.” To make a simple paraphrase of Dryden; great wits are the fortunate ones – their closest relatives seem to pay the price within the family.

Harrobin concludes from this and many other studies that the schizophrenic genes must have entered the human genome before homo sapiens spread out of Africa because of the uniform distribution of the psychosis across all groups of people, probably between forty and sixty thousand years ago. He goes on to make the bold claim that schizophrenia may be the medical explanation for “the Great Leap Forward” earlier identified in this chapter by the archaeologists. At present this can only be regarded as a hypothesis awaiting further validation, but it’s fascinating nonetheless. What appears to have happened in the brain of Homo sapiens, but not in Neanderthal man, argues Horrobin, was a change in the way the nerve cells within the brain make, and break, their various connections. His thesis implies that we became what we now recognise as human because of the small genetic changes in the chemistry of the fat inside our skulls. These changes injected into the genetic structure of the brains of a minority of our ancestors the possibility of schizophrenia, and an equal possibility of extreme creativity. From the time of “The Great Leap Forward” Horrobin believes that some people began to see and think in entirely new ways, make associations, and develop new skills that no one else had anticipated. Their neighbours, without any of the genes that may be responsible for schizophrenia, quickly learnt from them. Schizophrenia is the yeast, so to speak, within the dough of modern humanity. Very few of us, for example, could possibly have discovered the secret of DNA, as Crick and Watson did in the 1950s, but many of us have been able to incorporate it into our thinking. A little yeast goes a long way.

The implications of this thesis, once corroborated by extensive field tests, are enormous. In essence, Horrobin’s argument goes like this. The most likely explanation for the extraordinary flexibility of the modern mind is the enormous increase in the functional connectivity between the individual neurons, as compared to what we understand to have been the case with the great apes, and earlier hominids. The human brain needs considerable quantities of Essential Fatty Acids (EFA) to make the phospholipids that provide the insulation for the dendrites that transmit mes-
sages in the brain. The richness of brain connectivity/intelligence and creativity, is thus dependent on these phospholipids - the more and better the phospholipids, the more the potential for creativity and intelligence. Such EFAs come from particularly kinds of lean meat – especially wild game - but extensively from the micro-algae to be found in aquatic food chains. Without these EFAs to provide the neural sheathing or insulation, the brain works sluggishly. What we eat conditions how we think.

At some stage in the last two to three hundred thousand years, Horrobin suggests, a mutation occurred that led to an enormous increase in synaptic complexity as a result of the increased quantity of phospholipids in the diet - probably amino acids found in fish. The human species could therefore think more effectively, remember more, probably communicate better, and possibly become more selective in its choice of mates. "[we would have been] large brained, cleverer than most other species, but lacking that creative spark and lust for change which has so dramatically distinguished our species from our immediate predecessors", says Horrobin. We would have been a boring species. Probably at that stage we were not a challenge to the Neanderthals and, as the fossil record seems to suggest, we coexisted.

Somewhere around one hundred and fifty thousand years ago, there was a further mutation. This change greatly amplified our neuronal responses, and made our reactions much more variable, flexible and probably spontaneous. A small proportion of the population became full-blown schizophrenics, and a significant number of their relatives became amazingly innovative thinkers. The proportion might have been small, but this yeast would have been enough to change the creative energy of the population. In less than the last one hundred thousand years homo sapiens assumed his modern identity. Such genetic change was sufficient to unleash the extraordinary surge of creativity that has characterised the past one hundred thousand years. “Instead of being uniform we became diverse; instead of being relatively stable, we created constant change; instead of being egalitarian, we began more and more to differentiate from the rest those with special skills in technology, art, religion and psychopathic leadership”, writes Horrobin.

In reality we became recognisably human with the amazing ability to be able to make moral judgements between good and bad. The human race made the Great Leap Forward (sometimes called the Creative Explosion) and achieved more within a few generations than had occurred in the previous six or seven million years. Steven Pinker, the cognitive scientist, summarises this dramatic change in ‘How the Mind Works’. “Calling it a revolution is no exaggeration. All other hominids come out of the comic strip BC, but the upper Palaeolithic people were the Flintstones. They were us. Ingenuity itself was the invention, manifested in hundreds of innovations tens of thousands of miles and thousands of years apart.”

Horrobin concludes his explanation of such developments in the brain by extending this observation down into recent historic times, by offering the following theory to explain our present predicament. The first Agricultural Revolution took place between five and fifteen thousand years ago, depending on location. Instead of people being dependent upon wild animals for their meat - meat rich in essential fatty acids, and highly beneficial to the brain (EFAs) - people started to breed domesticated animals, which are rich in saturated fats, but not of the kind able to perform the same brain function. Instead of eating natural grains, whole populations became dependent on refined, domesticated arable produce which was low in EFAs. As EFAs became scarcer in the human diet this impaired the proper development of phospholipids, which in turn led to the more extreme forms of schizophrenia.

Coincidentally it seems that as settled agriculture began to dominate over the past fifteen to twenty thousand years and the need for hunting diminished, so human societies had more leisure. People had time to think out what they wanted to do. This was very important for what emerged was an exuberance of culture, languages and invention. Micro-cultures flourished, in Egypt, Mesopotamia, amongst the Incas and along the Yangtze Valley. Urban life started to develop. The interminably slow pace of cultural change of the previous seven million years, and the consistency of culture that this implied, was replaced by a situation where every unit of a few thousand people, or sometimes even as few as a hundred or so people, had its own culture, and in many instances its own language. A veritable babbling Tower of Babel. And it is at this point in the story that we, and Adrian Mole, come in.

What a story to tell, if only we can find the right way of spinning the yarn.

The most recent episodes in this story are all there in The Book of Genesis. As wandering tribes came in from the desert they encountered walled cities, places like Jericho, newly built across their traditional migration routes. “What comes through repeatedly is that the political leaders were psychopathic killers who used religion to justify their po-
It was people like this who probably exterminated the Neanderthals, and it is their descendants - us - who are using brains shaped by these almost identical genes to discuss the intricacies of our own mental processes, make a fortune on the stock exchange, destroy the World Trade Center, or ensure that our planet becomes the sustainable home to a contented people for many centuries to come.

We each, as individuals within the species Homo sapiens, are the inheritors of all these structures and processes that enabled our ancestors to think intelligently. This ability is probably our greatest evolutionary achievement, even though the concept of intelligence is hard to pin down. Some psychologists define it simply as the ability to know what is the right thing to do as the environment changes; the Greeks called it nous, and we sometimes call it gumption. It’s more than just cleverness; it’s when someone has the ability to be clever, even cunning, as well as practical. It is, of course, about balancing thinking with doing.

We are now coming to understand that what we call intelligence is only partly controlled by inheritance. Some cognitive scientists would allocate about fifty per cent of what we observe as intelligence to genetic factors, factors that condition whether you are born with a Rolls Royce of a brain, or a clapped-out Morris Minor. Cognitive scientists point out that a significant proportion of being intelligent (maybe twenty five per cent) relates to content knowledge; I may, for example, be moderately good at writing a book, but in my understanding of electronics I’m nothing like as competent as is the electrician who rewired our house. Undoubtedly part of intelligence does relate to our field of expertise. I often liken it to the kind of map you have in front of you as you explore a new piece of country.

There is a third component to intelligence, and it’s our ability to be reflective, to know how to mull things over, to know, as it were, how to read the map. To have the ability to look at something from an alternative perspective and ask the question no one else thought about. It’s the mental activity often referred to in books about brain compatible learning strategies as ‘Reflective Intelligence’. David Perkins, a cognitive scientist, estimates that as much as twenty five per cent of what we loosely call ‘intelligence’ lies in this reflective capability. In his book ‘Outsmarting I.Q.’ with its forceful subtitle ‘the emerging science of learnable intelligence’ Perkins argues that all three forms of intelligence act together, but that it is in the practice of how we think that we can best enhance our ability to act in wise, thoughtful and considered ways. “Learning is the consequence of thinking”, Perkins declares. And there you really have it. Charles Darwin would have agreed wholeheartedly, as I expect would have William Smith. So would Socrates and Confucius. It’s what the great Danish physicist Niels Bohr meant when he once remonstrated with a young PhD student, “You’re not thinking, you’re just being logical!” Yet to Charles Clarke, Secretary of State for Education in the Labour government of 2004, such an open ended view of learning is “a bit dodgy.”

We learn best when we are intrigued and have the opportunity to find things out for ourselves. When our sophisticated natural instincts have the opportunity to react vigorously with our cultural expectations, we see how extremely powerful human learning can be when left to its own innate devices. Learning, it is said, is so much more powerful than instruction. That’s a thought worth careful pondering. Teachers, it was frequently said in America some years ago, “should be guides on the side, not sages on the stage”. In the chapters which follow I will argue that, throughout most of historic time, that is just what teachers were - experienced craftsmen who treated youngsters as apprentices, not simply as pupils. To such men helping youngsters to learn on the job was a matter of do as I do, not simply as I say. We seem to have regressed though from our expectations of the broad skills and attitudes of apprentices preparing to be as good as their masters, to those quantifiable basic skills seen as necessary for some form of unspecified future employment. We have, too often, taken learning away from its context. With a high level of reflective intelligence a driver can take even the most worn out car over an area of difficult terrain more effectively than a careless driver could take the finest modern car over a course he’d not properly studied before. That goes equally well for how we use our intelligences.

Socrates understood this, as did St. Augustine when he said that he learnt most not from those who taught him, but from those who talked with him. The youngest of children understand this too; at the age of three or four or five a child is as much inclined to tell you how they solved a problem, as they are to describe their conclusion. Young minds, inheriting all the inquisitiveness of their ancestors, are essentially reflective. In the hurry of the mod-
ern world we frequently forget this. We just want to know the answers. Progressively we hide our thought processes, thinking of them - if we think of them at all - not as wonders in their own right, but simply as means to an end.
Part Two

Our Recent Past

Given what we now know from the first two chapters about our human origins, and our instincts, why are we as individuals and societies, all so different yet at the same time so curiously similar? The colour of our skins may vary but in comparison to the overall structure of our bodies and the innate predispositions of our brains, we all conform to the same blueprint. But, for all that, we most certainly don’t live in the same way. Why?

Differences within a single family fascinate parents and grandparents alike as they look across the generations at distant cousins and half-cousins, and then look back to their own grandparents. Are these differences in our blood, or is it our culture that makes us so different? Or, if it’s a mixture of the two, what conditions that mix? Charles Darwin pondered such questions as a young man, long before he set out on his epic voyage on HMS Beagle. So did numerous other eighteenth and nineteenth century explorers who tried to make sense of the world through eyes conditioned by their English culture. Darwin was horrified by the barbarism of the inhabitants of Tierra del Fuego, who told him that, when starving, they preferred to kill their old women than eat their hunting dogs. I was equally disturbed, years ago, when I learnt that the nomads of the Zagros Mountains of Iran simply expected that when an old person no longer felt they had the strength to continue with the annual migration they would just sit down and watch the tribe disappear off into the distance, without any tears being shed. As Darwin anguished over the Fuegians, he realized that their behaviour was, of course, a survival strategy - as it was with the nomads. It did not necessarily reflect a lack of feeling, or a denial of their humanity (the nomads could be highly affectionate), it was a finely tuned response to a situation that an Englishman, from a very different culture, could neither fully comprehend nor emotionally accept.

No person brought up in a European culture could survive amongst the sandy, rocky expanses of the Kalahari, yet it appears that the bushmen have inhabited that wild place for more than fifty thousand years by developing a lifestyle so finely attuned to the desert that, away from the desert, they hardly know how to cope. They are as useless and as vulnerable as any twenty-first century London boy would be if he were suddenly dropped into the Sahara. Each would regard the other as primitive. Primitive we might describe each other as being but a medical surgeon trained, say, in India would have absolutely no difficulty operating on either the Bushmen or the London schoolboy, for their physical structures, and the operations of their bodies and their brains are, in nearly every respect, identical and interchangeable. It is the impact of culture on our nature that makes us either Bushmen or London schoolboys, polished young Etonians, or gypsies – our blood is the same.

In the fertile, temperate lands of China, the daily struggle to survive over the past five thousand and more years left significant numbers of people with energy and resources sufficient to create a most sophisticated culture. While the Bushmen knew no distinction of rank and owned no possessions, in contrast the Chinese developed a highly stratified society whose laws became encoded within a complex legal and philosophical system understood only by scholars who had to spend many years mastering the complexity of an alphabet of tens of thousands of characters. The people of the Pacific Islands appear to have colonized the most distant atolls over the past thousand years through their extraordinary navigational skills involving high-level mental mathematical calculations of the position of the stars, the nature of the seasons and an understanding of ocean currents, as well as the behaviour of birds and fish. Yet they never developed the ability to read and write, until they met peoples of other cultures.

With the same inherited instincts - mental architecture, if you like - and exposure to life in very different cultures, we humans can become very different people. It is thought, for example, that if a child from a bushman mother were taken the day it was born to be reared by an English family that child would be - by eighteen - thoroughly ‘English’, though in its personality it would probably reflect the genes of its biological parents as it got older. Reverse such an experiment and a child born to English parents taken that same day to be brought up in the Kalahari would also learn to behave according to a very different set of cultural expectations.

Cultures take a long time - many centuries - to build up, but equally they are totally dependent for their survival on the successful transmission of their values, ideas, history and beliefs from one generation to the next. The failure of only one
or two or at the most three generations leads to cultural extinction - as happened with the Incas, the Aztecs, and could happen soon to the Pacific Islanders, whose marine nomadism is totally dependent on culturally dependent navigational skills passed between each generation.

Scientists are coming to understand this mix better. If left to itself nature only produces a Stone Age person. Millions of years of evolution have given us the natural skills to function at the level of those inhabitants of Tierra del Fuego that initially so disturbed Charles Darwin. People survive in different environments because, through evolution, they know how to ask good questions. The richer the experience of those individuals, the more our innate Stone Age predispositions will equip us to create ever more complex environments which, in turn, will challenge the next generation to become even more modern people. Each of us is who we are not simply because of our inherited nature, but because of the rich interaction that has taken place in the past between the nature of these earlier generations and the cultures of their times. This they have bequeathed to us as the specific cultures we are each born into. All that complex history creates the ever-richer culture we then experience in our own generation; a real chicken and egg conundrum.

You don’t have to be particularly culturally privileged to begin questioning how all this started to happen. Jared Diamond, the evolutionary biologist, made famous his conversation with a native New Guinean (a man whose education had never progressed beyond High School, and who had never left his native land) called Yali, in 1972. Diamond, then a young biologist studying bird evolution, was vigorously cross-questioned by the young Yali on matters that would usually comprise the syllabus for university studies in human evolution, economics and politics. One afternoon Yali turned to Diamond and asked, “Why is it that you white people develop so much cargo (cargo being a generic term for material goods) and brought it to New Guinea, but we black people had little cargo of our own?”

In the context of this book this is an important question. Just how was it that the English developed such a self-perpetuating culture that we - a tiny offshore European island - became the greatest Empire the world had ever known in the nineteenth century? This culture grew rich on trade and successfully sold its cargo - goods made in Manchester and Birmingham, ships built on the Clyde or Tyneside and railway engines from Swindon, Doncaster and Darlington - literally all around the world. Whatever it was that sent our cultural development into overdrive must have happened extraordinarily quickly for, even as late as the latter part of the sixteenth century England’s future seemed far from certain; indeed the English could easily have been annihilated by the Spanish. Within a hundred years however this tiny island nation was well on its way to creating a British North America, and then losing that empire a hundred years later as it set its eyes on still greater global aspirations. The pace of cultural and economic expansion was phenomenal. By the late nineteenth century the British Empire covered a quarter of the land surface of the earth - and by the mid-twentieth century English was the lingua franca of international trade, diplomacy, science, and air-traffic control. With such achievements behind it economically the country was in such dire straits that in the mid 1970s it had to submit its economic planning to the scrutiny of the International Monetary Fund before loans were granted to keep it out of bankruptcy. The cultural expectations of any child growing up in England would have been vastly different to that of Yali and his brothers in New Guinea.

Cultures decline, as well as grow. What contributes to rapid growth under one set of conditions may prove a limitation under another. Economies respond to evolutionary change in exactly the same way as Darwin described evolution in biological terms. Factors which one generation simply took for granted can easily be lost, yet the implications of that loss may not come through for two or three more generations. Back in 1972, the same year Jared Diamond had his conversation with Yali, I was leading an expedition of Sixth Formers from Manchester Grammar School, studying the life of nomads as they migrated through the Zagros Mountains of Iran. Their way of life intrigued me, but I was to discover that the fascination was mutual. “We are deeply honoured to have you and these fine young men visit us, but we are confused,” said the khan, the Kashqai chief, one evening. “But how is it that such young men are not at home helping their parents with their work, and learning from them what it means to become a man?” He looked at his own sons, Manesh and Ar-davan, not with any apparent emotion, but rather as a business man looking with pride at his most treasured investment. “If my sons did not work with me, if we did not discuss things together, how could I be sure that I was passing on to them the wisdom of our ancestors, and all the knowledge that I myself built up during my lifetime?” I tried to explain the Western model of schooling, deeply
immersed as it is in a way of living which these people could not comprehend. Hardly surprisingly I was not successful, and my own faith in our form of schooling started to falter.

“You know”, said John, one of the English boys, quietly later on that evening, “I’d have just loved to have had that kind of relationship with my father. I feel I hardly know my Dad. He works hard to support my sister and me, but we hardly ever talk, he’s always too tired. Once I’ve finished my school work and I’ve got free time I’ve never had the chance of being able to be useful to him. Manesh and Ardavan have got a reason for being around. They might be young but somehow they seem important. In a sense I’m just a cost to my parents. I don’t think they get very much back from me. It’s all wrong: I feel like I’m incomplete”.

I’ve never forgotten that conversation. It seems to describe the modern dilemma of western adolescents very well – they lack the interaction with an older age group that is such a feature of natural learning situations. “We’ve created a way of life”, I explain, “that suits the economic expectations of the older generations but often robs young people of the essential interconnectivity with older people. This is the time-honoured way by which they come to adulthood in every culture”. Deep down I’m sure that sixth former was right. Adolescents do feel incomplete. So far no one in the many audiences I have addressed has disagreed with me.

The pace of understanding varies between England, Scotland, Wales and Ireland but slowly we British are starting to realise that we have simply taken this interrelationship between our culture and our biological natures so much for granted that we have failed to see how fragile it has become. Without an appropriate culture - a culture that addresses all our needs - as individuals or whole societies, we revert to Stone Age responses. Last year, in an inner London secondary school, a teacher from India who had worked in England for some ten years told me, “It seems to me that many youngsters in the developing world are, in practical terms, far better educated than their peer groups here in England. In India children growing up really do understand how things fit together. Here in London we teach them about things, but back in India they know this from their own experience for they have to live their own learning”.

Live their own learning. What a telling phrase. In the drive of the British government, as with other governments in different parts of the world, to raise standards and equip youngsters to perform well in the knowledge economy, learning has become ever more centrally prescribed, simulated and institutionally organised. It is less than ever to do with doing it for yourself. Sixteen or seventeen-year-old adolescents are – on average - physically fitter than any previous generation, and sometimes mature enough to pose as models on the front page of expensive fashion magazines, while Maria Sharapova won the Wimbledon ladies championship in 2004 at the age of seventeen. But in school such young people follow a routine more attuned to the need to control the excessive energy of a nine or ten year old, than to give these young adults the feeling that they are respected as thinking people, able to direct their own efforts. Probably we’re afraid to let them off the hook for fear of how their energy and imagination might rock the compromised boat that an older generation has found it convenient to construct.

What has happened? This is where we need to understand better how our culture has evolved (and evolution is not always for the better, we can lose skills and attitudes as well as gain them). In other words it’s about our “back bearings”. This is a story essentially about the English, and to understand our cultural assumptions we have to go back at least three hundred years, a relatively long time in terms of social and domestic history, but only a split second in terms of interaction with our evolutionary origins.

In the early 1700s most English people learned on the job through apprenticeships, supplemented with largely informal instructions in small, local schools. By 1950 learning had become a highly institutionalised activity, with most people living in anonymous urban centres. Yet, at a biological level, the people of 1950 had brains which were predisposed to work in the same way as in 1750, or even seventeen and a half thousand years before that. What happened to our culture in these two hundred and fifty years is a fascinating but consider-able story, which needs to be properly understood. Much of this book is to do with the science of learning - things that can be studied empirically, and which have physical manifestation. But so much of what is involved in education, growing up if you like, is influenced by the attitudes, assumptions and often prejudices of society as a whole. Many of these attitudes are peculiar to the English. As a society we are often moralistic and judgemental, as well as being increasingly materialistic. For reasons that are far from obvious we take the education of pupils over the age of eleven more seriously than we do that of younger children. We give pride of place to theoreticians, and debase the skills of practical people. We reserve the right to our own individual freedom, but we expect
governments to rescue us when things go wrong. We seem to think that old schools, especially if they have cloisters and well tended quadrangles, are automatically better than schools that are new. We have school uniforms, single sex education and boarding schools in quantities that amaze other countries. In a land where everyone is meant to be equal many assume that to educate your child privately is not only your right - but almost your duty - and we decry our state schools for being pale apologies of the private schools which charge parents fees which are usually three or four times as much as the country is prepared to pay through taxation for the education of the majority of children. And why, in 2004, is England still prepared for twenty-two per cent of its population to live below the poverty level, whereas in tiny Finland it is so small as to be negligible? Just why do these assumptions exist, and do we really have to tolerate them any longer?

In the next six chapters I’ll show how the changing patterns of nurture, experienced by English children from 1750 and culminating in the arguments that went to make up the Education Act of 1944, have had a profound effect on the character of English society today. It’s a complex story in which many strands - the economic and social expectations, the creation of Empire, the arrangements for education, the nature of religious and political thinking - all interweave with one another. A story of many parts, but a fascinating one in the way it helps us to understand ourselves so much better.
Chapter Four

I was an obvious disappointment to my grandfather, as indeed had been my father, his only son. He despaired of both of us as being too bookish, and uninterested in inheriting the family farm. I had once run screaming back to the farmhouse, pursued by a small but extremely angry bantam cockerel; I had fallen off the tractor (and almost into the blades of the harvester) when my grandfather fired his double-barrelled shotgun at a rabbit a mere fifty yards away, and fainted when he showed me how to kill a pig. I was a wimp.

I was very young at the time - not more than six or seven - but I sensed he blamed his wife (my grandmother) for encouraging my father to read extensively, and eventually go to university. And he certainly blamed my own mother for doing the same for me. I strongly sensed the strained family relationships. I can remember an extraordinary conversation between my grandfather and his father - who was born in the 1860s - both farmers with a strong interest in breeding cattle and horses. They were discussing how to breed people with predictable character traits. Why, both men were asking themselves, should strong men fail to produce male heirs tough enough to become farmers?

Of course I can’t remember the details but I was forcefully reminded of this childhood experience when, many years later, I read George Eliot’s ‘The Mill on the Floss’ and her record of a conversation between two farmers about the unpredictable characteristics of their own children. “It seems a bit of a pity, though,” said Mr Tulliver, the miller, “as the lad should take after the mother’s side instead o’ the little wench. That’s the worst on’t wi’ the crossing of breeds; you can never justly calculate what’ll come on’t. The little ’un takes after my side, now, she’s twice as cute as Tom. Too cute for a woman I’m afraid.”

“Did you ever hear the like on’t,” reflected Mr Tulliver (after the young Maggie had bemused the two men with her scintillating conversation), “It’s a pity that she’d been the lad - she’d ha’been a match for the lawyers, she would. It’s a wonderfulest thing” - here he lowered his voice - ‘as I picked the mother because she wasn’t o’er cute. but I picked her from her sisters on purpose because she was a bit weak, like; for I wasn’t a’going to be told the right o’things by my own fireside.”

“But you see when a man’s got brains himself,” concluded Mr Tulliver, proudly, “there’s no knowing where they’ll run to; an’ a pleasant sort o’ soft woman may go on breeding you stupid lads and cute wenches, till its like as if the world was turned topsy-turvy. It’s an uncommon puzzling thing!”

My grandfather left school just before his twelfth birthday because, he said, the schoolmaster had “taught me” all he could.

I was an obvious disappointment to my grandfather, as indeed had been my father, his only son. He despaired of both of us as being too bookish, and uninterested in inheriting the family farm. By contrast formal grammar school education for the minority had been shaped in the mid-sixteenth century by the belief that the affairs of the intellect were vastly superior to practical skills, while in the eighteenth century English as a language was still not deemed worthy of serious study. So, at a critical point in the development of English education the emphasis was on the elite who would emerge as the ruling class, while the education of the labouring masses in the ‘vulgate’ was seen only as a functional affair. It was to be nearly a century before John Milton (unsuccessfully) challenged this when he said “if [a man] have not studied solid things as well as words he were nothing so much to be esteemed a learned man as any yeoman or tradesman.”

Instigation of Industrial Revolution by men whose skills were a product of craft apprenticeship, and whose intellects had been sharpened by an acute interest in their surroundings. By contrast formal grammar school education for the minority had been shaped in the mid-sixteenth century by the belief that the affairs of the intellect were vastly superior to practical skills, while in the eighteenth century English as a language was still not deemed worthy of serious study. So, at a critical point in the development of English education the emphasis was on the elite who would emerge as the ruling class, while the education of the labouring masses in the ‘vulgate’ was seen only as a functional affair. It was to be nearly a century before John Milton (unsuccessfully) challenged this when he said “if [a man] have not studied solid things as well as words he were nothing so much to be esteemed a learned man as any yeoman or tradesman.”
to a woman descended from a family of blacksmiths (well-known for generations in Cornwall as champion wrestlers) and a ship’s captain who was drowned before his son was born, Lovett’s mother was, he recorded, “possessed of a vigorous constitution and a persevering spirit.” She earned a little money buying and selling fish, with the four-year-old William doing much of the fetching and carrying for her. “My love of play,” Lovett wrote years later, “was far greater than that of school learning, for I was sent to all the dame schools of Newlyn before I could master the alphabet. Eventually I was instructed to read by my great grandmother, she being at that period about eighty years of age.” Later he attended, spasmodically over a couple of years, a tiny informal school held in the church porch, where he learned “a little of arithmetic and the catechism, and this formed the extent of my scholastic requirements”, he wrote in his autobiography more than seventy years later. Lovett was eight when his schooling, such as it was, finished. By then he had already learned how to survive amongst the rough Cornish fisher folk and had started his apprenticeship first as a rope maker and later as a cabinet-maker. He was adaptable and very quick to teach himself new skills as the need arose; skills that he was later to use so forcefully as a politician in London.

By 1800 the Englishman’s world had already started to change in quite fundamental ways. To understand better the world we have come from, the time when most people’s life experience conformed to a range of well understood mental and practical skills honed to a fine level through the challenges of daily life, we need to go back still further to the 1690s when England had a population of little over four million. This, the last decade or so before the first stirrings of the Industrial Revolution, marked the culmination of a way of life that had been steadily evolving since settled agriculture began in these islands five thousand years earlier. Life was lived out, for nearly all our ancestors, in extended families of between ten and fifteen people, mostly in self-contained villages of between two hundred and five hundred people. It was a way of life where most people knew each other, where all their needs had to be satisfied within the local community, and where the results of every action had easily understood consequences. Everything could be measured on a human scale and moved at walking pace, as did a horse when it pulled a wagon. A world lived at three or four miles an hour, or twenty-five to thirty miles in a day. It would have taken William Shakespeare two days to travel from Stratford-on-Avon to London on horse-back or in a carriage, or four days on foot – which would have been the common experience of most people. The social arrangements, especially apprenticeship, were the result of countless generations working out how best to get on with each other and, in our terms, what were the most appropriate forms of nurture to complement the fundamentals of human nature.

Recent findings in cultural anthropology and evolutionary psychology would suggest that these tightly integrated communities, where everyone’s needs had to be met by local endeavour, are the most refined manifestations of how the human species has adapted to its environment since the beginning of time. Their hallmarks included an emphasis on reciprocal behaviour, empathetic understanding, collaborative skills, delight in experimentation and the utilisation of the energy of adolescents for high-risk activities. While I personally find this period fascinating, it’s not a nostalgic interest for a way of life that has gone forever (and would have been very unpleasant in many ways) but an enquiry into the extent to which the experiences of our ancestors has, at a very deep, genetic level, shaped the way each subsequent generation then expects to relate to its immediate surroundings and cultures. These were just the social and practical skills a seventeenth century English villager needed to survive. This was literally a way of life that went with the grain of the brain in places where daily activity was highly conducive to the continuous practising of such skills. It was only when society stopped living like this that countless individuals - driven by instincts which they had no means of understanding - became, within one or two generations, grossly dysfunctional. This is what was about to happen across vast areas of England slowly at first, but with gathering pace, as the eighteenth century progressed. The pace accelerated during the last twenty years of the century and reached avalanche proportions in the first quarter of the nineteenth century. As a consequence human nature, within only two or three generations, was to be deprived of the nurture that was essential for its proper functioning. The problem persists to this day. How many of today’s dysfunctional teenagers would have been yesterday’s successful apprentices?

At the turn of the seventeenth century the basic social unit had been the extended family, and the family was also the standard unit of production. A farmer, butcher, baker or cabinet maker was limited to the amount of work that could be carried out in and around the family home and to those raw materials that could be obtained within half a day’s
travelling. The family, who almost always lived above the shop, was extended beyond blood relatives to include the apprentices who, in exchange for their labour, were taught the skills of the master, and the paid servants. England was a land of villages, and villages were associations of families. Family security depended on developing the skills of the next generation. Learning was essentially a family affair, in which important information and ‘know how’ was passed on to the next generation. In one way or another virtually all children learnt through apprenticeship.

“Apprenticeship was a system of education and job training by which important information was passed from one generation to the next,” wrote the historian Professor W.J. Rorabaugh in 1986. “It was a mechanism by which youths could model themselves on socially approved adults; it was an institution devised to ensure proper moral development, and a means of social control imposed upon potentially disruptive male adolescents. In its many functions it provided a safe passage from childhood to adulthood.”

Adolescents were not, in those days, a tribe apart, as can all too often be the case today. They were an integral part of every community and their energy was greatly valued. The communities that contained quick-witted youngsters who improved before anyone else, were the ones that thrived. Those communities or individuals who did not know how to use their energy, failed and became the dispossessed - the travelling poor - who had been a curse since Elizabethan times.

Beyond the family there was the village, normally demarcated by the boundaries of the parish and its church. The 1650s would have seen most of the families attend church each Sunday, unquestioning in their belief that this was an essential preparation for a very literal life in the hereafter. Across the ten thousand parishes of England were some two thousand ‘petty’ schools, often referred to as dame schools. Most of these were small and the children frequently taught in the back of the church by a peripatetic teacher who taught the better sort to read and write. Records, unfortunately, are scant but we know, for example, that in the 1650s half the parishes of Lichfield, in the middle of England, had such a teacher while in Cambridgeshire only twenty-two parishes are recorded as never having had a teacher. Four hundred of these schools were superior, if not necessarily larger. They were to be found mainly in market towns. These grammar schools, as they were known, had been set up largely by wealthy merchants in the reign of Elizabeth I to replace the monastic schools destroyed by Elizabeth’s father, Henry VIII. They were specifically endowed for the education of the poor; the rich, it was assumed, had private tutors. Only a few schools survived from before the Dissolution. Several are still famous as, in the nineteenth century they metamorphosed into elite public schools.

Winchester College was founded in 1382 and Eton in 1440; both were established before the first book was printed in England in 1476. St. Paul’s in London was founded in 1512. Some are less known today because they remained closer to their founder’s original intentions, and were not gentrified by the Victorians. Schools such as King’s, Canterbury and St. Peter’s, York, both date from medieval times. By the sixteenth century these schools rarely had more than a hundred pupils each. It’s likely that when Shakespeare spoke of the “whining schoolboy, with his satchel, and shining morning face creeping like a snail unwillingly to school”, there could have been no more than twenty thousand or so such school boys (none were girls) across the country. That should not be taken to mean that ordinary people were ignorant - far from it. This was a country of people who enjoyed talking and were good listeners. It has been estimated that more than half of the million or so of the tickets sold for the London theatres in the early seventeenth century were purchased by people who could not read, but who were well able to appreciate a Shakespearian drama, and willing to pay to do so.

It’s difficult to estimate with any accuracy how literate England was in those years. While four out of five of Cromwell’s soldiers in the New Model Army could sign their names, this was probably higher than the national average. Between 1558 and 1603 nearly seven thousand books were published in London. Estimates by John Guy suggest an average of twelve hundred and fifty copies per edition, which would have averaged two books each for every one of the four and a quarter million population of England. Although to think of averages is misleading, we do know, however, that in the 1650s over four hundred thousand almanacs were published each year, sufficient to provide copies for forty per cent of all households. It was simple. Reading made it possible for inquisitive people to find the answers they sought. It was useful. Writing, for most people, was not; talking was what they were good at.

A flavour of these attitudes can be found in the story of Thomas Tryon, the son of a tiler. He attended school in his Oxfordshire village in the late 1680s at the age of five but had “scarcely learnt
to distinguish my letters before I was taken away to work for my living.” He was then employed at spinning and carding and then as a shepherd until, at the age of thirteen, when “thinking of the vast usefulness of reading,” he bought himself a primer and persuaded his fellow shepherds “to teach me to spell and so I learnt to read imperfectly, my teachers themselves not being ready readers.” Accordingly, Thomas, a determined youth, took himself off to a local schoolteacher who, in exchange for being given one of Thomas’ sheep, taught the boy how to write.

John Harrison, a Yorkshire-man of humble origins, presents another fascinating story. Born in 1693, his father was the village carpenter. As far as we know the young Harrison had no schooling, nor did he ever serve any kind of formal apprenticeship, yet he grew up to be amazingly observant of the finest detail. At an early age he became fascinated with clocks, and then at the age of twenty he designed and built a most unusual pendulum clock. Unusual in as far as it was made almost entirely of wood, where the natural oils made the clock’s moving parts virtually friction-free and therefore a most accurate timepiece. The clock still exists, occupying pride of place in the London Museum of the Worshipful Company of Clockmakers. Try as they might, no historian has ever been able to find a single link between the young Harrison and any existing clockmaker at the time. His design appears to have been entirely his own. He became totally absorbed in how to make ever more accurate clocks.

In the next four years Harrison made two more such clocks. Then he learned of Parliament’s offer of a prize of twenty thousands pounds to anyone who could produce a timekeeping device that would enable a ship’s navigator to determine his exact location to within an accuracy of half a degree. The size of the prize was enormous by early eighteenth century standards. It represented the near despair of ship owners and the Admiralty at the number of shipwrecks caused by their navigator’s inability to compute their ship’s true position. Shipwrecks haunted the public imagination; an entire English fleet was wrecked on the Scilly Isles in 1707 with the loss of all but seven of the sailors through their inability to accurately compute their longitudinal position, an incident said to have inspired Daniel Defoe to write the novel of Robinson Crusoe.

Harrison saw in the science of clock making a possible solution that might enable a navigator anywhere in the world to carry out exact observations of the sun and, at a constant time, relate this to a fixed location (Greenwich). Such a clock would have to run to an accuracy of less than a second in every twenty-four hours, even when the ship was in the midst of a tropical storm. Harrison knew this would require technology independent of a pendulum which, at the time, was the only mechanism that had been devised to control the expenditure of energy created by a coiled spring. The eighteenth century intelligentsia, whose practical knowledge of clocks was probably limited to the sensitivity of their own long-case clocks at the mercy of the impetuous over-winding by young servants, scoffed at his conviction that he could solve this problem with an alternative mechanism.

Harrison worried away at the problem for four years and then, in 1730, took his set of drawings for such a clock to the Board of Longitude in London. Moderately impressed with him, but requiring empirical evidence of their efficiency, the Board sent Harrison away to make a real clock that demonstrated the principles he had deduced. It took Harrison a further five years to make his first prototype - five years at a time when the average lifespan of a man was less than forty. The Admiralty moved slowly to evaluate Harrison’s clock and did not assemble again until 1737. When they did they found themselves full of admiration for what Harrison had built.

But then they were utterly amazed. Harrison, having had three further years to think through the mechanics more carefully, explained to an astonished Board why this clock was actually not as good as it could be. He needed time, he said, to build a better one. In 1741 when this was finished, Harrison’s own learning had again outrun his ability to create the perfect clock. He withdrew from the competition and worked for a further sixteen years (almost half the average person’s lifetime) to build his third, real nautical clock. By now he had perfected his technique, which included the invention of caged ball bearings and bi-metallic strips for temperature equalisation. In three more years he went on to build what is known to be his masterpiece - a pocket watch of only five inches in diameter and only three pounds in weight. Pockets in those days must have been huge!

To test this, the Board of Longitude sent Harrison, by now sixty-six years of age, with his pocket watch on board HMS Deptford across to Port Royal in Jamaica. The voyage lasted eighty-one days, such was the severity of the storms, but on arriving in the Caribbean it was found that this pocket watch had lost only five seconds over the entire voyage. Observers were incredulous. This seemed nothing short of a miracle.
Harrison would have been awarded the prize but for the jealousy of the scientific, academic establishment who wanted instead to be able to perform navigation through the use of the stars and complicated star tables. They found a legal loophole that allowed the academics to withhold the full prize, which they chortled, "had given the mechanics a bone to pick that would crack their teeth." ¹⁰

That quotation speaks volumes about the inherent snobbery of the academic world of England more than two-hundred years ago when faced with the creative genius of a self-made, practical man. Academic snobbery of the practical man is an ancient prejudice; perhaps England’s subsequent greatness is a measure of how significant numbers of people refused to let it get them down. ²¹

These would not have been unusual stories in the compact, self-sustaining villages and towns of the late seventeenth century. William Smith, ‘The Father of British Geology’, you will remember was to start life in another Oxfordshire village three quarters of a century later, and in a similar fashion. It’s totally wrong to assume that the average Englishman of the time did not think very much, or read (or write) before the widespread establishment of the institution we know as school. Because humans have inherited instincts that make us inquisitive and good storytellers, there is every reason to suppose that our seventeenth century ancestors were as good problem-solvers as many educated people in the nineteenth and twentieth centuries.

“The Scholemaster” and “The Great Didactic”

Just exactly what being ‘educated’ might mean has troubled the English for centuries, and to trace this we have to go still further back into history. By destroying the monasteries Henry VIII effectively also destroyed the schools set up by the monks for the training of priests to teach the people the essence of Christian faith and obedience to civil authority (which is the short, but fair, definition of what ‘education’ meant in such a theocratic state). As the Elizabethan merchants who had grown rich themselves through their appropriation of church lands considered the establishment of new, semi-secular grammar schools, it’s hardly surprising that they insisted upon a highly classical curriculum composed largely of Hebrew, Greek and Latin. Latin was the language of the classical world, largely rediscovered in the Renaissance; a world most of whose literature had been preserved from ancient times. Latin was a refined language, governed by fixed rules of grammar and syntax, and its literature full of history, mythology, philosophy and logic. English as a language was still a rapidly evolving hybrid of Norman French, some early English, Anglo-Saxon and German/Danish, a little Celtic and a trace of Latin as left behind by the Roman army a thousand years before. Of English literature there was, as yet, very little. An educated person in mid-Tudor times was defined by their classical knowledge. Latin could express a nicety of meaning that everyday English was to lack until the time of Shakespeare, and the late Elizabethan play-writers and poets half a century later.

Established in 1538, the school of which I was to become headmaster four hundred and fifteen years later, had foundation orders for the pupils that read ‘in their communication all shall be in Latine in all places among themselves as well as in the streets and in their playes as in schoole.’ Even their graffiti was in Latin: ‘look out, teacher’s coming’ passed into the English language as KV, from the Latin word ‘cave’ meaning ‘beware’.

What happened in these schools was largely determined by the classical scholar Roger Ascham. ¹⁰

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¹⁰ Roger Ascham, born in 1515, was probably the most influential English educationalist of late Tudor times though his most influential work ‘The Scholemaster’ was not published until 1570, two years after his death. As a fourteen-year-old student at Cambridge he was involved with Renaissance ideals, fascinated by the teachings of the classical world but dismayed by what he had seen of the debauched manners of contemporary Italy. Italians, having such wonderful access to the treasures of the ancient world were thought by sober-minded Englishmen to corrupt the minds of the young with ‘bawdy books’ and ‘infectious abuses, vain glory, self-love, sodomy and strange poisonings, wherein thou hast infected this glorious isle’ declaimed Robert Green the pamphleteer, dramatist and novelist who died in 1592. Ascham was a high-minded man, and as a scholar he insisted on humane, pedagogic principles which in those tough and raucous days were regarded almost as some now would mock as progressive. Ascham was private tutor to Princess Elizabeth; he taught her well and developed in her a love of the classics and he shared his enthusiasm with her for developing the use of the English language. This may well have contributed to her later self-identification with her people; “I know”, the Queen told the assembled troops at Tilbury in 1588, “I have the body of a weak and feeble woman, but I have the heart and stomach of a king, and the king of England.” His insistence in ‘The Scholemaster’ – a book which in other regards I respect – on the superiority of book learning over practical experience, may owe much to his unsavoury experience in Italy, whose ancient literature and culture he revered greatly but advised the young to study from books and not the reality of contemporary Italy.
From his book ‘The Scholemaster’, published posthumously in 1570, (twelve years after the school I was to become Head of the 1970s was founded) generations of pupils learned that Plato had told the citizens of his hypothetical Republic: “You are all of you in this land brothers, but when God fashioned you he added gold in the composition of those of you who are qualified to be Rulers; he put silver in the Auxiliaries, and iron and bronze into those destined to be farmers and manual workers.” Platonic thinking suggested that these differences were an intrinsic feature of the social order and that it was right to maintain strict divisions between the classes for the good of the whole community. One can only assume that such pupils, fortunate largely by birth to be amongst the tiny proportion of the formally educated, must have been quick to assume that they were indeed the rulers. From Socratic dialogue they learned how to tease out the truth - always in the singular, for classical thinking allowed for no ambiguity; alternative meanings implied a measure of loose thinking, not recognition of complexity.

Ascham emphasised three things in ‘The Scholemaster’: education should, through the study of the classics, develop men of wisdom and virtue, instruct people in the principles of sound learning (Ascham called this ‘hard wits’ in contrast to ‘quick wits’) and stress the absolute superiority of book learning over practical experience. It was possible to learn more in a year from a book, claimed Ascham, than in twenty years from practical experience. Experience, he added, often makes one miserable: “It was an unhappy mariner,” he concluded, “who learnt his craft from many shipwrecks”.

Ascham was an accomplished and persuasive writer and his book was widely read by that tiny section of Tudor society who thought about learning in the abstract. Unfortunately for English education specifically, and English culture in general, no craftsmen at the time had thought it necessary to take time out from his daily work to write about how intelligent men developed the skills of learning as they laboured to achieve such technological wonders as the building of the spire of Salisbury Cathedral, or about the organisational skills to create an English speaking Empire in the Americas. England never had its Benjamin Franklin to honour craft skills. As more people started to read about education, all that was available was Ascham’s critique of ‘learning on the job’. Slowly but steadily it came to be assumed - even if it did not resonate with people’s everyday experience - that these two forms of learning were different, and that book learning was the superior of the two.

For four hundred years the sons of English gentlemen and successful merchants absorbed the classical assumptions of Plato, as delivered by teachers following the pedagogy of Roger Ascham, with hardly a philosophical or practitioners’ challenge. The implications of this have often been disastrous. For example what was eventually to become the earliest permanent English settlement in Virginia nearly collapsed in its first year because, of the one hundred and four colonists, sixty were classified as ‘gentlemen’, and only twenty or so were craftsmen or skilled labourers. When push came to shove as conditions deteriorated in that first awful winter, Captain John Smith recorded that they were in “such despair as they would rather starve and rot with idleness than be persuad-ed to do anything for their owne relief.” Rot they did, for by the following Spring two-thirds of them were dead. The English assumption that practical skills are of lesser value than academic learning goes back a very long time.

One man did challenge Ascham. In 1644 the poet John Milton, five years before he would become Oliver Cromwell’s ‘Secretary for Foreign Tongues’, saw the foolishness of such thinking. In his famous essay ‘Of Education’ he recommended that, so important were the ‘petty’ schools to the future well-being of the nation, that one such school ought to be established in every one of the ten thousand parishes of England. Not only

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*11 Milton wrote his essay ‘On Education’ in response to an enquiry from Samuel Hartlib, an extraordinary man who, in the middle year of the seventeenth century, corresponded with very many of the most intelligent and influential men of his day concerning matters philosophic, scientific, political and educational. Born in East Prussia in 1600 to an English mother, Hartlib settled in England in 1628 and set about collecting a documentary archive of knowledge and information on aspects of contemporary life. He became known in his lifetime as ‘the Great Intelligencer of Europe’. He was an ardent promoter of Comenius’ work and published in London some of these before Comenius himself arrived in England. In Milton’s listing of the skills that he urged should be taught in his Academy can be seen the influence of Hartlib’s conviction that practical as well as theoretical skills were essential to balance the minds of young people. With the Restoration of the monarchy Hartlib was discredited and died a pauper in 1662. His papers have recently been collected and preserved at the University of Sheffield.
that, but Milton argued that this should be accomplished at the cost of the state, a truly revolutionary idea for England or any other land. Milton also noted that the grammar schools and the universities were becoming too elite and ungrounded in daily realities. His solution was radical: “though [a man] should pride himself to have all the tongues that Babel cleft the world into, yet if he have not studied solid things in them as well as words and lexicons he were nothing so much to be esteemed a learned man as any yeoman or tradesman.” This was a direct challenge to Erasmus. It also expressed well the Puritan conviction that faith without good works was without value. Vital to the Puritans as was an adherence to Scripture, so too was an acceptance of the importance of good works. It was the duty of believers to ensure that youth had the opportunity for both. In this the Puritans struck at the heart of the more moribund established Church of England, most of whose clergy came from the grammar schools, with its complacent belief in the self-correcting power of the natural order of things.

Milton not only proposed the establishment of what we would now call a primary school in every community he also proposed setting up Academies of some one hundred and fifty young men between the ages of twelve and twenty-one in most of the market towns of England. He then turned to the Czech philosopher, John Amos Comenius, whose book on education, ‘The Great Didactic’ had impressed him greatly when it was published in 1638. Comenius urged that learning should honour all forms of personal experience and that much valid learning arises from practical experience. If education proceeds from the general to the particular, going from what is easy to what is more difficult, and if the intellect is forced to nothing to which the natural bent does not incline it, and if the use of everything taught be constantly kept in mind, then the process of education will be easy, stated Comenius. Milton was much impressed. He invited Comenius to come to England to help him set up these Academies, but the Civil War intervened. By that time Milton was too late. Richelieu had invited Comenius to France, and John Winthrop had invited him to Boston to become the first President of Harvard University. Comenius went instead to Scandinavia, and Milton was left alone with his ideas.

In ‘Of Education’, Milton concludes that each Academy should call upon, as needs required, the tutorial services of “hunters, fowlers, fishermen, shepherds, gardeners, architects, engineers, mariners, and anatomists” as well as classical scholars. This would give students “a real tincture of natural knowledge as they shall never forget.” History, however, was very quick to forget Milton’s radical ideas on education. When the Protectorate fell, Milton lost any influence that he may have had and, with the Restoration of Charles II, it was even possible that Milton might have been executed. Milton went blind yet still managed to write ‘Paradise Lost’, which in retrospect seems poignant for no such vision of an educated populace was to be set out, I would argue, until R.A. Butler set out the Education Act of 1944.

The genius that was to create the devices of the industrial revolution, and the idealism that was to form the greatest empire the world had ever known, also created the most class-conscious society of modern times. Why was that? Part of the explanation has to go back to Roger Ascham, and Milton’s failure to unite thinking with doing in the theoretical framework around which the English were later to structure education. Even when the giants of Victorian engineering who should have had the confidence to express this, they were intimidated by the aristocratic conventions of the times and sought to deny the brilliance of their alternative ways of being intelligent. Brunel, probably the greatest engineer of his generation, and son of an earlier brilliant engineer, sent his two sons to Harrow so making it virtually impossible for them to follow their father’s and grandfather’s profession. Brunel simply set the pace; hundred followed his example. We pay the price to this day.

Workshop of the World

One hundred years after Milton published ‘Of Education’, England was alive with speculation. Things, it seemed, were just about to change, and in a most significant way. In the 1750s Wedgwood was making his china, Chippendale and Hepplewhite their chairs and cabinets and Whitchurch

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912 “Great Didactics is the general art of teaching everyone everything. And teaching reliably so that the results must come. And teach gently so that neither the teacher nor the pupil feel any difficulty or dislikes; on the contrary, both find it very pleasant. And teach thoroughly, not superficially, but bring everyone to a real education, noble manners and devout piety.” M.H. Keating, 1910, translated from Czech by Jaroslav Peprnik.
his clocks and weathervanes. Scheduled stagecoach services linked many major cities by the 1770s. In 1765 there began to congregate in Birmingham (then a town of fewer than forty thousand people) a number of energetic manufacturers, scientists and philosophers who, while often being fiercely competitive in their business affairs, saw the need to collaborate if they were to show the world the potential of their revolutionary inventions. Only when the world understood the value of such innovations, they argued, would demand for production increase and would their pockets be handsomely filled. So successful was this Lunar Society – so named because its members always met on the Monday nearest to the full moon making it easier for their horses to find their way home in the semi-dusk - that it has often been called ‘the committee that planned the Industrial Revolution’. Benjamin Franklin, who at this stage was representing the Pennsylvania Assembly in London, was a corresponding member of the Lunar Society, and occasionally attended its meetings. Franklin was partly responsible for recruiting William Small to the Society from the College of William and Mary in Williamsburg, Virginia. In Virginia Small had taught Thomas Jefferson much of the natural philosophy and mathematics that this Founding Father, and future President of the United States, was to value so highly.

In 1759 the iron masters first started to forge the new world by melting iron-ore at the Carron works outside Glasgow, whilst over in Shropshire the Darby family laid the first iron rails in Coalbrookdale in 1767. Twelve years later the Darby’s’ built the world’s first ever iron bridge over the River Severn. New canals made it possible for horse-drawn canal barges to take heavy bulk cargo up and across the Pennines; James Watt went into partnership with Matthew Bolton to manufacture pumping engines, and James Hargreaves invented the Spinning Jenny. At the beginning of the eighteenth century Jethro Tull had pioneered his improvements, and his methods of production that took work away from the home, and reduced the self-employed craftsman and his family to the status of mere factory hands. The new factory employers preferred to ignore the craftsman and take on the nimble fingers of a young child instead, paying them less than a third of what the craftsman would earlier have received. The fingers might have been dextrous, but the young child’s brain was henceforth starved of intellectual and practical challenge. For millions of youngsters over several generations their nurture was forgotten, their innate predispositions were totally ignored, and the potential brilliance of so many young minds lost.

In 1776 Adam Smith, working amidst all the intellectual and commercial furore of a rapidly growing Glasgow, published ‘The Wealth of Nations’, setting out the philosophical and theoretical background to these socio-economy changes. He who has the most capital, argued Smith, should be free to make still more capital, and labour must
be prepared to move to where there is work. The pursuit of individual self-interest, unfettered by government restrictions, could lead to the mutual benefit of all, directly promoting the well-being of the whole community. Man is led, Smith said most famously, by “an invisible hand... without knowing it, without even intending it, [to] advance the interests of society”.10

Because history tends to be selective, it has paid more attention to Smith’s theory of what we have come to know as “laissez-faire capitalism” than it has to Smith’s innate sense of compassion.11 Smith feared deeply for the intellectual degradation of the workers when the division of labour proceeded too far, for by comparison with the alert intelligence of the husbandman, the man whose life is spent in performing a few simple operations “generally becomes as stupid and ignorant as it is possible for a human creature to become.” 12 But the Industrial Revolution rolled onward, unconcerned by such reservations. The pace of change was phenomenal. By 1815 half of the families of England were no longer directly, or indirectly, dependent on agriculture. Many cities were doubling in population every twenty years. Journalists and novelists alike noted the forlorn nature of these men, displaced craftsmen who had previously been their own masters. Men who had learnt an apprenticeship from their own fathers but now realised they had neither a craft skill, nor a set of social and moral values to offer their own children. Workers were broken both culturally and morally, reduced to a mere pair of hands, able only to draw a wage for fulfilling a task defined by someone else. Working men lost dignity and purpose; their informal learning networks collapsed, and literacy rates started to decline. Drunkenness increased, monery decreased but the birth rate rose remorselessly. Nature was desperately seeking nurture. Money was to be protected, not people.

Smith held that society was moving into a fourth stage of social evolution, whereby individuals and institutions would be held together within a web of communal inter-dependence. This required new institutions that were ‘market determined’ - arrangements that responded to the expressed needs of people, rather than an economy directly controlled by government. Smith called this laissez faire capitalism. He saw it as perfect liberty - or at least as perfect as the conflicting passions he perceived as being the essence of humanity could allow. The Industrial Revolution that was challenging the working practices of the craftsman needed a new rationale, and it found it, just about the time that Adam Smith died in 1790. Once it had made laissez-faire capitalism its own, society held on doggedly to the belief that labour had to follow the money, whatever the damage this might do to man as a social being. Money was to be protected, not people.

Adam Smith as the thinker, and the members of the Lunar Society as the men of practical policies, largely shaped the gestation of the Industrial Revolution. Benjamin Franklin was to play one further part. A chance meeting in London in 1774 with an

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*13 Adam Smith wrote exactly as his intellect led him, and was never afraid to state what he believed. “People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends with a conspiracy against the public, or in some contrivance to raise prices.” He saw the same self-interest acting even amongst academicians; “The discipline of colleges and universities is in general contrived, not for the benefit of the students, but for the interests, or more properly speaking, for the ease of the masters.” He kept his greatest scorn for government; “There is no art which one government sooner learns of another than that of draining money from the pockets of the people.” (All quotes from The Wealth of Nations).
‘angry’ young man led to Franklin’s suggestion that the man should migrate to America, where his revolution zeal was more likely to be appreciated; that man was Thomas Paine.

Thomas Paine probably became the world’s most famous political polemистic when, in 1776, he published his pamphlet ‘Common Sense’ which did so much to unite the American colonists in their opposition to the government of George III. Yet Paine had only arrived in America two years earlier, a failed corset maker and an unsuccessful collector of taxes, looking for a new start in life, which Franklin suggested he could find in Boston. Boston was then a thriving port, the focus of political unrest, and the bridgehead for Englishmen into the great American enterprise.

Paine had grown up in a reasonably typical eighteenth-century English market town, Thetford in Norfolk. He’d received only a few years of schooling as a Quaker, and then learnt his trade as an apprentice corset maker. With a population of less than two thousand people but serving a large agricultural hinterland, Thetford had an unusually high number of tradesmen - three hundred and fifty. These were thoughtful men, who through knowledge of their craft could sell their wares and expertise to other people. Separated by a good day’s walk from any other town, such men quickly learnt that, whilst standing on their own feet, their wellbeing was ultimately connected to the fortune, or misfortune, of the entire community.

This was, however, far from being a semi-rural paradise for Thetford in the 1770s was notorious as one of the most ‘indolent, venal and undemocratic’ of all the so-called rotten boroughs of England and, ‘its affairs a source of scandal and notoriety, its behaviour a synonym for dishonesty even in an age well accustomed to such conduct’. It was not a happy place. Political controversy was the stuff of endless debate amongst tradesmen, and Paine, it seemed, became an uncomfortable man of restless energy, fired with a hatred for monarchy and past were utterly severed, only Stone Age instincts remained. England’s reservoir of thoughtful, innovative people was drastically reduced during the early stages of the Industrial Revolution, and the next generation of children were to inherit a depri-cated sense of an integrated community of people learning on the job. Something had to be done, and the beginning of universal elementary education was expected to take up what had previously been largely a community responsibility - the induction of young people into adult life. Enter therefore the invention of the school not, as Milton would have intended, to stretch the minds of the young, but to keep the majority of them out of harm’s way until they could go into employment with only the barest modicum of functional skills.
A visitor to England in the 1790s, inquisitive as to why the country was in such a ferment of innovation, might well have sought an explanation in the quality of its education. If that visitor was from the colony of Massachusetts - as indeed there were many such merchants travelling frequently between Boston and London after the War of Independence - he would have expected to find a high level of literacy amongst the English. Back home in Massachusetts, he would have reflected that an edict established as far back as 1643 had required that every community, once it numbered more than fifty households should provide a school for every child through a local tax, almost exactly as had been recommended unsuccessfully by Milton a century and a half before in England. So successful had this educational provision been that, by the end of the seventeenth century there was almost universal literacy amongst the colonists.

If my visitor had had any connection with the British army as it moved through New England in its attempt to rout George Washington’s army of irregulars, he would have noted - as Washington himself did - that many of the senior officers in the British army seemed to live in a world and a culture of their own and, curiously, all came from just one school - a place called Eton College. So impressed had Washington been by the idea of Eton that he suggested that a number of his relatives, as well as those of other Founding Fathers, should attend an elite Academy, established in 1778 in the town of Andover, Massachusetts, by the Phillips family, suppliers of gunpowder to the colonists. This school, Phillips’ Academy, would later claim that it was modeled on ‘the English Public School’. It was the first such school to be incorporated in America, and initially it described itself as an Academy, in the Miltonian sense, for Massachusetts still saw itself very specifically as being in the Puritan tradition and was proud of its egalitarian, practical and entrepreneurial activities.

It would have been entirely appropriate to expect a country like England to have a foundation of near-universal literacy, as well as an officer core of well-educated men. “Well educated”, that is in the sense Milton described the Academy - a place where both thinking and doing were honoured. Whilst a young American growing up in some frontier homestead knew he had to learn to read and write, he had also to learn to live by his wits; life could never be taken for granted on the frontier, for if the literate youngster was not able to outwit the Indian hunters he wouldn’t live to tell the tale. Indeed if the urban-living Benjamin Franklin had not also developed a successful printing business, we might never have known of him as a philosopher and thinker.

My mythical visitor - in reality based on Benjamin Franklin who had lived in London as the representative of the Pennsylvania Legislature for eighteen years - might well have started his enquiries by visiting Westminster School close to the Port of London and in the shadow of Parliament. For many years Westminster School, founded in 1560, had provided education for the adolescent sons of the aristocracy, courtiers, diplomats and the aspiring country gentry as they took their places in Parliament. Its popularity meant it had become necessary for the school to provide boarding places for its out-of-town pupils, and for the sons of English colonialists living overseas. Meanwhile, London was becoming insufferably overcrowded and polluted and George III, from mid-century on, started to move the Court to the more pleasant and healthy environment of Windsor.

Eton College seen from across the river from the

Chapter Five
FROM APPRENTICESHIP TO THE CRYSTAL PALACE BY WAY OF THE PLAYING FIELD OF ETON

Celebration of industrial genius at the Great Exhibition of 1851 owed far more to long-standing craft skills learnt through apprenticeship than to formal schooling. Beginning of Victorian investment in elementary education for masses as form of social control. Insufficient recognition that new working practices dominating industrial productivity by mid-century would erode rural craftsmen. Progressive decline in opportunities for young people to learn on the job. Hi-jacking of gentry’s commitment to classical, boarding education by Victorian middle classes’ infatuation with public schools. Public school seen as effective way of separating children of wealthy from process of wealth creation by which family fortunes had earlier been built. Sewing seeds of social conflict and industrial stagnation, both key features of late nineteenth century British landscape.
royal castle at Windsor in the 1790s, would have
still looked much as it had done fifty years pre-
viously to the Italian painter Canaletto, an apparently
serene, rural idyll out of whose water meadows
arose a lofty Gothic chapel. Eton had been built by
Henry VI more than three hundred and fifty years
earlier for the careful education of seventy King’s
scholars every year. The reality could not have been
more different from the atmosphere suggested by
the exterior. The pupils - sons and grandsons of the
wealthiest, most ancient and noble families of the
realm - were frequently in open rebellion against
the teachers. Such conflict was much more than
high-spirited boyhood pranks, and the reasons for
it are interesting. In contrast to the energy of those
whose inventions had spurred on the Industrial
Revolution, conventional English society in the
late eighteenth century had become socially highly
complacent, and a place where laissez-faire poli-
cies were always in the ascendant. Youth saw the
fallacy of this; old age most certainly did not, and
would fight for its preservation. Equally youth saw
no validity in the antiquated classical curriculum
that, from such records as do exist, was very badly
taught.¹

English was now well established as the lan-
guage of everyday business, and English literature
characterised by a richness, diversity, colloquial im-
mediacy and social dynamic that made the classical
authors seem dull, even if profound. Henry Field-
ing, himself an old Etonian, is considered by many
as the founder of the English novel and something
of the author’s own escapades can be seen in those
of his fictional hero, Tom Jones, as he attempted
elope with an heiress. Holding to the classics as
a measure of one’s social superiority – just as the
Chinese Mandarins were doing the other side of
the world – was of greater interest to their fathers
than it was to the high-spirited youth who were ac-
customed to regularly losing small fortunes at the
local ‘cock-pit’ in Eton village.

Eton and Winchester experienced eight rebel-
lions between the late 1770s and the early nine-
teenth century. So serious were these insurrections
that on one occasion in 1818 two battalions of
soldiers with fixed bayonets were needed to quell
the pupils at Winchester. Undoubtedly the problem
was exacerbated in these boarding schools by the
herding together into confined spaces of several
hundred virile young adolescents with very little
to do, for up to eight or nine months of the year.
No doubt they had easy access to that other novel
of 1749, the erotic work of Fanny Hill by John
Cleveland. Cleveland, it is said, was paid twenty
guineas by the printer, who went on to make over
ten thousand pounds from sale of the books which,
at three shillings a copy represented a phenom-
enal printing success. Pornography paid well, even
then. The problems of boarding school education
had been known for a long time - John Locke, the
philosopher who attended Westminster in the mid-
seventeenth century, subsequently advised parents
to have their children educated at home on the
grounds that vice and corruption were likely to be
less prevalent than in a mass of boys in a restricted
circle.

Boredom with what they saw as the senseless
formalities of school life, had created an explosive
situation for a long time. The immediate targets
were the teachers. Like the arch-traditionalists in
Parliament, the teachers in such schools were
fearful, with good reason, that the status quo was
collapsing, and so had to be reinforced in whatever
way possible. That meant beatings. In early nine-
teenth century terms this meant anything from
a simple caning to the most merciless flogging.
Headmasters maintained much of their authority
through a regime of fear. “There appeared to be a
strong, positive correlation between the eminence
of the headmaster and a strong right arm. In a
white heat they would certainly reduce the boy
to insensibility, if not worse.”¹⁴ Dr. Keate at Eton
was typical of others - it was claimed that he once
flogged eighty boys in a single day, while one pupil
recalled easing the shirt off the back of his friend
who had recently been flogged, and pulling out a
dozen pieces of birch-rod which had penetrated
deep into the flesh.¹ Maintaining discipline was
difficult, partly due to the extraordinarily large classes.
With all the wealth of their endowments going
into the pockets of the Fellows, little money was
left for teachers. When the young Edward Thring,
who was later to become one of the most famous
of Headmasters in the latter part of the century,
joined Eton in 1832 there were five hundred and
seventy boys in the Upper School, but only nine
teachers. Keate was accustomed to having as many
as two hundred boys at a time in the Long Cham-
ber. Years later Thring recalled that night times
were worse than life in the classroom; “rough and
ready was the life they led. Cruel at times the suf-
fering and wrong; wild the profligacy. For after 8
o’clock at night no prying adult eye came near till
the following morning; no one lived in the same
building; cries of joy or pain were equally unheard;
and, excepting a code of laws of their own, there
was no help or redress for anyone.”¹⁴

Conditions were similarly deplorable at the other
great public schools; Keate was regularly pelted
with bad eggs by the boys, and on one occasion
returned to his study to find a wild mastiff locked in his desk, and on another occasion had the lock blasted off his study door with dynamite. No wonder the Duke of Wellington claimed that the Battle of Waterloo had been won on the playing fields of Eton, for a boy who could have survived boarding school life at the turn of the eighteenth century had to be very tough, and would have come through the experience only by having sensitivity literally knocked out of him.

King George III, from his castle across the river, was fascinated by Eton. He often spoke of it in terms that suggested he had actually attended the school himself, which he hadn’t, and always enquired of any boy he spoke to of the affect of their most recent flogging. The King recognized another distinction that continues to dog English education - the comparatively low status of the teacher. He once invited large numbers of Etonians to dinner on the terrace of his castle, ‘remembering to forget’ to extend the invitation to the masters who had accompanied them, and who returned later that evening in great dudgeon to collect their pupils.

The younger sons of the lesser gentry and clergy, with no estates to inherit, were frequently sent into the Royal Navy. Horatio Nelson was typical of this trend; the son of a relatively poor but genteel and cultured country rector he joined the Navy in 1769 at the age of twelve, while still a ‘squeaker’. A Georgian warship was as tough a classroom as the Long Chamber at Eton but young midshipman had to learn advanced navigational skills on the heating deck of a warship in a mid Atlantic gale and eventually graduated with a far keener appreciation of human nature below decks than did ever a more privileged boy whose parents bought him a commission in the army after leaving boarding school.

While Eton and a small number of these old schools were held in high regard, hundreds of other equally old grammar schools, like Stratford-on-Avon where Shakespeare went to school, or Huntingdon where both Cromwell and Samuel Pepys were educated, or Thetford where Thomas Paine had been, or Hawkshead in Cumberland where Wordsworth had once boarded, were disdained as being totally inappropriate for the sons of the rising gentry. A curious phrase, ‘public schools’, was starting to be used to define those schools which were old, taught a classical curriculum, fee paying and were boarding establishments drawing their pupils from a distance. It was the fact that they preferred to take the sons of rich country gentry in preference to the sons of local merchants and townsfolk that led to the description of their being ‘public’. By this definition there were only six public schools in England at the beginning of the nineteenth century, whereas there were several hundred grammar schools, and several thousand ‘petty’ schools for youngsters below the age of ten or eleven.

There is one omission from this original list of public schools, and it’s a curious one. Christ’s Hospital in London had been founded in 1552 in the reign of Edward VI to provide a free boarding school education for poor orphans. In many respects, it was the same as the original six, including the wearing of a distinctive uniform of dark blue cassocks and orange socks and in the extent of the savagery of its flogging but it did not charge fees. What separated Christ’s Hospital from the emerging alliance of such public schools was that the social elite did not patronize it. Numerically it was second only to Eton in the number of boarders that it had, and it sent large numbers of its pupils on to Oxford and Cambridge. However, by holding absolutely to its Founder’s intention of providing for poor orphans, the other ‘great’ old schools excluded Christ’s Hospital from their emerging club. From the very start of the nineteenth century the half dozen great schools were becoming known as public, yet they were nothing of the sort - they were, quite intentionally, for the elite and as such were very, very private.

Two of these public schools were still small; Charterhouse took only some thirty seven new pupils in 1816, and a mere seventeen in 1834, while Shrewsbury had only two pupils in total when Samuel Butler became Head in 1798. The first definitive numbers for new pupils for all these schools (which included the day-boys at St. Paul’s) was three hundred and seventy five in 1816, rising to some six hundred in the 1820s. There were probably between three and four thousand pupils

\*14 An alternative explanation of the descriptive ‘public’ to these schools is given in a letter Dr. Arnold wrote in 1835 when worrying about the education of his own son, Matthew; "But I should certainly advise anything rather than a private school (i.e. schools administered as commercial propositions) of above thirty boys. Large private schools, I think, are the worst possible system; the choice lies between public schools, and an education whose character may be strictly private and domestic." (Quoted in Bamford, T.W., ‘Thomas Arnold’ Page 108).
in total at the public schools early in the nineteenth century. That in a country which had a population of some eleven million, of whom perhaps two million were of an age that could have attended a secondary school; this is a fraction, one might think, so insignificant as not to merit any attention. So why all the fuss? An interesting, but complicated question.

Let me retrace my steps and look more closely at those Elizabethan grammar schools for, curiously, as the six were becoming stronger many of the hundreds of others were actually getting smaller, less influential and significant numbers were even closing down. In the middle years of the century, as the living standards of the lesser gentry and clergy started to rise, they and the better kind of tradesman, lawyers and larger farmers, began to ape the aristocracy, and found the possible wealth to enrich themselves by plundering the trust funds of those who could not answer back. There were many of these – they were the endowments made by earlier generations of benefactors to alleviate the poverty of poor students. A few of these foundations dated back to before Tudor times and others were more recent such as that which funded the grammar school in Portsmouth in 1732. By the late eighteenth century there were more than three thousand such Trusts and they were frequently administered by the same men who then drew their salaries (and often increased those salaries) from the very funds they were entrusted to protect. Inaccurate book-keeping, the loss of key documents and fraudulent transactions, were all crimes that a country lawyer could easily disguise. Many of these men were actually clergy, and the code of conduct they preached to their congregations, or taught in their schools or hospitals, was a morality that rested somewhat lightly on their own shoulders. In simple, practical terms many of the old Elizabethan grammar schools were falling apart, their teachers apathetic and their pupils - as at Eton, Harrow or Westminster - either bored or resentful. The clergy started to rise, they and the better kind of tradesman, lawyers and larger farmers, began to ape the aristocracy, and found the possible wealth to enrich themselves by plundering the trust funds of those who could not answer back. There were many of these – they were the endowments made by earlier generations of benefactors to alleviate the poverty of poor students. A few of these foundations dated back to before Tudor times and others were more recent such as that which funded the grammar school in Portsmouth in 1732. By the late eighteenth century there were more than three thousand such Trusts and they were frequently administered by the same men who then drew their salaries (and often increased those salaries) from the very funds they were entrusted to protect. Inaccurate book-keeping, the loss of key documents and fraudulent transactions, were all crimes that a country lawyer could easily disguise. Many of these men were actually clergy, and the code of conduct they preached to their congregations, or taught in their schools or hospitals, was a morality that rested somewhat lightly on their own shoulders. In simple, practical terms many of the old Elizabethan grammar schools were falling apart, their teachers apathetic and their pupils - as at Eton, Harrow or Westminster - either bored or incensed by the low standard of their education, and indignant at the ever higher standard of living of their headmasters. Formal classical education was increasingly becoming seen as irrelevant. Quite predictably their pupils were in rebellion. In anything other than social terms, these schools were an irrelevance.

Well travelled English merchants in America would have known that a thousand miles to the south of Boston, in the colony of Georgia, a system of near-universal schooling had been established a hundred years earlier by a group of religiously inspired London traders. This was the Society for the Promotion of Christian Knowledge (SPCK), specifically established in 1698 ‘to promote Religion and Learning in any part of His Majesty’s plantations abroad’. SPCK concentrated its initial efforts in Georgia and the southern colonies, building many schools and churches. By the 1770s the Society looked at conditions nearer home and became more concerned to establish schools in the newly developing industrial centres of England where large numbers of youngsters were growing up in appalling poverty, often with no support from their parents or anyone else. These youngsters had no access to apprenticeships, and there were few, if any older women able and willing to set up ‘petty’ schools. These early SPCK schools did not much resemble what we now understand by the word ‘school’. They were principally places of refuge where children could be saved, at least for a while, from the exploitation of the factory owners. Places where children could learn to read and discover enough about Christian teaching so that when they died - which might be soon - they would have, so their sponsors believed, a chance of going to heaven. To us, in the early twenty-first century, that may sound simplistic and shocking; to many of the people of those times it was grounded in the reality of their faith.

Attendance at these early schools tended to be spasmodic and ended abruptly whenever the family needed the money that the child might earn in the mill. The new industrialists almost invariably resisted the formation of such schools, for their sole aim was to get children as young as possible into their factories, and to keep them there for as many hours a day as they could. They wanted the nimble fingers and sharp eyesight of youngsters, not their brains, and feared anything that might encourage children to become rebellious. The gentry, whose own sons went to Eton or Winchester, were no more supportive. They wanted the increased rents they could draw from the factories and the bigger these were the better.

Robert Raikes, who was establishing an SPCK school at Painswick in Gloucester in 1785, started to see, in the universal observance of the Sabbath, a unique opportunity. If Sunday was the only day on which no factories, mills or shops worked, why couldn’t the church set up Sunday Schools in which the poorest children could be taught by volunteers how to read and study the Bible? In an age in which to be poor meant, quite literally, to be hungry, Sunday Schools often assumed the role of providing food - for many poor children this was their only hot meal of the week. Sunday School rapidly became a whole day’s activity, including
lessons, meals and church services. The movement was a phenomenal success with three-quarters of a million children attending such schools in the late 1790s, and their influence amongst the working class was immense. Critically the provision of schooling gradually began to be seen as an act of charity rather than the responsibility of the extended family.

By the 1830s, over one and a quarter-million children were enrolled in nearly seventeen thousand Sunday Schools and, in the following twenty years, that number almost doubled again. The teachers were all unpaid volunteers – middle class well wishers in the main, including three successive Lord Chancellors, who feared that the new working classes would, if they had any time on their hands to think things through, quickly recognise the iniquity of their position and become committed to revolution. As well as preparing for the life hereafter, Sunday School was regarded as an essential step towards social control.

Reluctant involvement of Parliament in education

At the end of the eighteenth century there remained a deep-seated prejudice against any form of official educational reform or innovation. At heart the English had a simplistic belief in nature as a generally beneficent force whose structures always tended towards balance and stability - a world of steady evolution, not revolution. Furthermore government in the late eighteenth century was not backed up by any form of executive capacity. Those with power and influence acted in response to their consciences and sense of purpose, softened by the belief that an individual’s eternal destiny was dependent on how well he or she managed their own affairs in their lives on earth. Education was still far from being the kind of national responsibility that Milton had defined. Members of Parliament, representing in the main the established landed gentry, were predominantly interested in maintaining law and order and facilitating business, while “self-made and successful men, quick to see the possibilities of a new machine, railway or water supply, did not show the same alertness of mind in considering the economic advantages of an educated working class.”

Then, as now, businessmen were attracted to quick, highly quantifiable pedagogical schemes such as that proposed by the Quaker, Joseph Lancaster, in 1808. Lancaster’s scheme was based on the use of pupil teachers to provide a cheap, mechanical and narrow form of mass schooling. The Spicer Street Lancasterian School in Spitalfields was an example of this form of pedagogy. It consisted of a single room, thirty-nine feet wide and a hundred and six feet long, which accommodated six hundred and sixty children in thirty-three rows of twenty desks. In this educational equivalent of a battery farm, one teacher, relying on the services of his monitors, could supposedly teach all six hundred and sixty children the three ‘R’s’ at a cost of seven shillings (thirty-five pence) per annum, per child. Andrew Bell, a colleague of Lancaster’s, stated in 1808, “Give me twenty four pupils today, and I’ll give you twenty four teachers tomorrow”. To the uninstructed this sounded a good bargain.

The establishment, admitting to itself that new forms of employment needed significant levels of literacy, was determined that such learning should not be carried out in ways that might enable the working class to get above itself. Too much education, such people thought, would be bad for business. This was well illustrated when, in 1805, the citizens of Leeds, a city pulsating with new industrial activity, petitioned Parliament to amend the foundation deeds of their grammar school to enable the curriculum to be broadened beyond the classical framework. This infuriated Lord Eldon, the Lord Chancellor and an inflexible traditionalist, who saw this as ‘a scheme to promote the benefit of the merchants of Leeds’ at the expense of poor, classical scholars. Another attempt to broaden education, and possibly to involve government funding, was introduced in Parliament by Samuel Whitbread, a brewer and one of the wealthiest of the new industrialists to sit in the Commons. The Parochial Schools Bill of 1807 that he proposed was defeated, not simply because of the continuing prejudice of Lord Eldon, but for a view expressed by another member, Davies Giddy, which seems to have represented the opinion of many reactionary Members. Giddy said “Giving education to the labouring classes and the poor would, in effect, be prejudicial to their morals and happiness, it would teach them to despise their lot in life, instead of making them good servants in agriculture, and other laborious employment to which their rank in society had
That was not only the convenient, but also the very serious view of those who saw themselves as the pre-ordained elite. Elite not only because, at least to them, it was self-evident that they were already vastly wealthy, but because for those who had taken their classical education seriously, Plato had told them that class depends on whether you had gold, silver or bronze in your blood. Yet this confidence that you were born into a certain class was being shaken by the emergence of many highly successful and very rich men from what, a generation before, was a class of people that the gentry would barely have even acknowledged. Samuel Whitbread was just such a man; a man who was very obviously disrupting the social status quo. Successful wealthy men like him had to be handled with kid gloves.

So Davies Giddy felt totally vindicated as he continued his critique; “Instead of teaching them subordination, it would render them fractious and refractory. It would enable them to read seditious pamphlets, vicious books and publications against Christianity. It would render them insolent to their superiors.” Here was the extreme paranoia of the ruling classes as they faced what they saw as the apparent collapse of civilisation across the channel in France. As gratitude for the English victory over Napoleon, Parliament voted a massive one and a half million pounds for the building of more churches in the new industrial cities. Nevertheless, the clamour for reform was certainly getting stronger, and the newly influential sniffed that there was much financial abuse, especially of charitable funds in high places. In 1816 Lord Brougham, having collected evidence from Charterhouse, Eton and Winchester “that considerable unauthorised deviations had been made from the original plan of their founders”, introduced a Bill into Parliament “to enquire into the Abuse of Charities connected with the education of the poor in England and Wales.”

Brougham’s bill again caused consternation in Parliament, for it meant investigating the very schools that many of the members had themselves attended as boys. Lord Chancellor Eldon was particularly enraged and the bill was only finally passed into law in 1818 on Eldon’s personal insistence that while all other schools might be investigated these particular schools (the ‘great’ schools) should be exempt from inspection. It was a case of no smoke without fire when it was realised that the investigation of these lesser schools revealed a widespread disregard for their original charitable status, with many of them using their Foundation funds to subsidise rich students rather than support poor scholars. Worse still, Brougham found in some of the old Foundations that the majority of their funds went to paying the already well-off trustees, leaving little, if anything, for the poor students they were intended for. It was to be a further forty-four years before the great public schools were themselves to be investigated - with the most embarrassing of results.

Starting in 1802 Parliament passed a number of Acts restricting the employment of children in the mills, factories and mines, initially ruling that anyone under the age of ten could not work for more than twelve hours a day. One is forced to wonder what the mill owners were getting away with before 1801? Things now started to move, as middle-class consciences were stirred. In 1811 a number of energetic Anglican laymen determined to do more than just provide Sunday Schools, and set about establishing the National Society for Promoting Religious Education with the aim of establishing a Church of England school in every one of the twelve thousand parishes of England. Within two years the National Society was educating forty thousand children, probably ten times as many children as were currently in the elite public schools. Sensing an Anglican plot to monopolise the education of all youngsters, the Nonconformists then established the British and Foreign Schools Society (BFSS) in 1814 “to instruct youth in useful learning and in the leading and incontrovertible principles of Christianity”. Both societies were careful not to challenge the economic order, or encourage in their pupils “the folly of thinking it unjust that one man should receive more than another for his labour”. It was just what the schools’ benefactors wanted: social control through the propagation of religious faith which should ensure the maintenance of the social order. This was what the origins of English primary education were all about.

In 1848 Cecil Francis Alexander wrote what was to become one of the most famous Victorian hymns, ‘All things Bright and Beautiful/ All creatures great and small/All things wise and wonderful/the Lord God made them all.’ One of its later verses reads ‘the rich man in his castle/ the poor man at his gate/God made them, high or lowly/and ordered their estate.’ That verse, with its vehement statement that social distinctions were part of a divine plan was later omitted, but it was still there in the school hymn books we used in the 1950s. I shudder when I see in this the truth of the statement made not many years ago that the Church of England was the Conservative party at
Prayer. No wonder England remains a land haunted by class distinctions based on a combination of Platonic and Christian belief that social status is all ‘in the blood.’

The early attempts by Church leaders to establish schools certainly did not impress a man like William Lovett, that self-educated Cornishman and one of the most influential of nineteenth century ‘socialists’, who deplored such education for its separation of the intellect from emotions, the practical from the theoretical, and especially for its determination to maintain the current class structures. “This word-teaching, rote-learning, memory-loading system,” he railed passionately in his speeches and in his pamphlets, “is still disguised by the name of education; and those who are stored with its greatest lumber are deemed its greatest scholars”. Lovett’s use of the word “lumber” is significant. Lumber is timber in its rawest, uncut, unseasoned and unprepared state, a substance of little value until ‘improved’. “Seeing this,” Lovett went on to argue, “need we wonder that scholars have so little practical or useful knowledge - are so superficial in reasoning?” What was needed for a complete education he went on to argue, “was a pedagogy of self-activity, personal discovery and creative understanding. Give a man knowledge and you give him the light to perceive and enjoy beauty, variety, surpassing ingenuity and majestic grandeur, which his mental darkness previously concealed from him.” Teaching should therefore be based on observation and incremental development of the child’s understanding, concluded the old craftsman-turned-politician.

Most people in the early nineteenth century had no such all-embracing dream as had the redoubtable William Lovett. More and more of them were gradually coming to accept the Platonic three tier society, and those who thought about it – usually the ones with the power to do anything about it - were determined that they would be at least in the middle category. To do this they had to define a class below them, then they had to prevent that class from becoming too powerful. Schools had the potential to be dangerous places that could, unless carefully controlled, upset the social structure.

At the start of the nineteenth century, the churches persuaded their congregations to put up enormous sums of money to build twelve hundred new schools in the 1820s and an amazing further three thousand in the next ten years. By any standard this was a remarkable achievement. Even so by 1833 less than half the children under the age of eleven were able to attend any school, even for a year or so. A case was gradually being made in Parliament by men such as Arthur Roebuck that government financial support would eventually become essential. “Anyone who will look before him must see the growing political importance of the mass of the population. They will have power”, Roebuck told the House of Commons, “In a short time they will be paramount. I wish them to be enlightened in order that they may use that power which they will inevitably obtain.” He sounded rather like Thomas Jefferson. This was about education for enlightenment, not simply for social control; a new agenda was just stating to emerge.

“In school” didn’t mean what it means today. Thomas Dunning, who attended a National School in Newport Pagnall in 1820, wrote, “The boys who could read moderately well were apprenticed to teach the younger, or lower, classes. I was one of these, and I had very little time allowed me for either writing or arithmetic, and none for geography or grammar. Our schoolmaster, Mr Johnson, was the parish clerk and he had to see to the bells being chimed for prayers on Wednesdays and Fridays, so he sent the biggest boys to perform the chiming business. All the scholars had to attend church on Wednesday, Friday and Sunday and gabble over the responses!” Of teachers a contemporary commented: “Little else is required of a teacher other than an aptitude for enforcing disciplines, an acquaintance with mechanical details for the preservation of order, and that sort of ascendency in his school which a sergeant major is required to exercise over a batch of new recruits.” Worse was to follow, Lord Macaulay, the detached, intellectual Victorian historian, who disclaimed any interest in science, technology, art or music and proudly admitted his inability to shave himself or to tie his own cravat, described schoolmasters as “the refuse of all callings, to whom no gentleman would entrust the key of his (wine) cellar.”

*15 Lord Macaulay (1800-1859) is now best known for his History of England. He was a man of massive self-assurance, never doubting the justice or truth of his criticism. A contemporary once described Macaulay’s religion as a form of polite, though distant recognition of Almighty God as one of the Great Powers... British civilisation gives Him assurances of friendly relations”}; from such a standpoint even the teachers might not have felt quite so trivialised.
Tom Browne’s Schooldays

During the first quarter of the nineteenth century the sons of the aristocracy and the upper gentry continued to receive a classical education in the largely unreformed public schools. Shrewsbury was the first of these schools to claim a reforming headmaster - Dr. Samuel Butler. The school’s most famous former pupil, Charles Darwin was scathing of such reforms in his autobiography, “Nothing could have been worse for the development of my mind than Dr. Butler’s school. When I left school I was, for my age, neither high nor low in it; and I believe I was considered by all my masters and by my father, as a very ordinary boy, rather below the common standard in intellect.”

It was in 1827 that Dr. Thomas Arnold was appointed headmaster of Rugby. In a remarkable fifteen years (he died young in 1842) Arnold took the wild rough and tumble of a large, unreformed Georgian boarding school andenthused it with a sense of purpose, cultured behaviour and Christian zeal which history has subsequently defined as the essence of Victorian values. A self-declared and passionate reformist, Arnold was appalled at the lack of leadership shown by the upper classes in response to the social turmoil that was all around them, and distressed by the complacency and intellectual and spiritual vacuousness of the Church. In these years before the Reform Acts of the 1830s, Arnold feared rebellion, while simultaneously being sympathetic to the plight of the working classes. He was terrified of the political, destructive power of mob orators manipulating the minds of the ignorant. His hope was for a revival of both Church and State with every citizen involved in the struggle for a good and responsible society, but he was also fearful at the increasing separation of the classes, and of a church that did not extend its precepts into practice.

“What we must look for here is, first, religious and moral principles; secondly, gentlemanly conduct; thirdly intellectual ability”, Arnold said in his first address as headmaster. Manliness, to Arnold, meant the conquest of moral weakness - not simply physical prowess on the playing fields, which did not interest him greatly, but the mental and spiritual determination to find self-fulfilment.

Arnold saw this struggle every day in the life of adolescents. He wrote often of the ‘wickedness’ of boys; “A society formed exclusively of boys, that is, of elements each separately weak and imperfect, becomes more than an aggregate of their several defects; the amount of evil in the mass is more than the sum of the evil in the individuals; it is aggravated in its character, while the amount of good, on the contrary, is less in the mass than in the individuals and its affect greatly weakened.” This ‘evil’ Arnold understood, was explained by the Christian doctrine of Original Sin.*

What other men put down to ‘high spirits’, Arnold put down to moral weakness. Often humourless in his dealings with miscreants, he found amazing loyalty from the older pupils and saw in this the opportunity for prefects to exert their authority over juniors, and for juniors to show their subservience as fags required to serve every whim of their superiors. Not all Arnold’s staff saw things in the same way and over the years emphasised the ‘muscular’ component of Arnold’s Christian duty. “Much of their [pupils] mischief arose from having nothing else to do. Boys prefer to run, leap, climb, catch, kill, and carry off something. And if these adventurous desires have given place to universal cricket, keen house matches, and the dominion of the umpire, we must not too much murmur at that which has brought about the change.” So came about the public school tradition of games and a team spirit. Arnold was haunted by the fear that his ideas would be trivialised. He wrote in April 1840, “There is no earthly thing more mean and despicable in my mind than an English gentleman destitute of all sense of his responsibilities and opportunities, and only revelling in the luxuries of our high civilisation and thinking himself a great person.”

The impact Arnold was to have on English education was immense. He effectively created not only the concept of the Victorian gentleman, but the expectation that a headmaster should be the ultimate personification of that near-perfect gentleman, remembered specifically for his charisma and public judgements on morality. When such headmasters went on to become Archbishops of Canterbury – five did – they appeared to pass beyond the mere personification of the near perfect

*Arnold in describing Original Sin wrote in 1836: “I am sure that distinctions of moral greed are as natural and as just as those of skin or of arbitrary cast; it is a law of God’s providence which we cannot alter, that the sins of the fathers are really visited upon the children in the corruption of his breed and in rendering impossible many of the feelings which are the greatest security to the child against evil.”
gentleman, to become virtually God-like... in a very English manner.

The Arnold phenomenon, real or enhanced by his many admirers, resuscitated these old and decayed schools that many had anticipated only ten years earlier were in terminal decline. Strangely, given the man’s significance, his influence amongst the Victorians came not from any factual account of his ideas, but from the story of “Tom Brown’s Schooldays”,5 perhaps the best story of a boy’s schooldays ever written. It did much to popularise the idea of boarding school education. In 1841 Cheltenham College was established, in 1844 Rosall, in 1847 Radley, in 1851 St. John’s, followed in 1853 by Wellington and Marlborough. In 1862 Clifton, Malvern and Haileybury were opened and several older grammar schools - Repton, Shrewsbury and Uppingham - acquired the status now associated with the older public schools. Arnold had created a sense of purpose and identity for the Victorian boarding school that was so persuasive to the middle classes that they increasingly ignored their local grammar schools when considering the education of their sons. To be a dayboy, however, even in one of the best public schools, was to be not quite a true public schoolboy. It was being a boarder that gave boys status. This meant detaching them from the reality of their local community, and even from their families, frequently inhibiting their emotional and sexual development. English society aspired to just such a rural ideal. Indeed it was a feature of the English Industrial Revolution that it was largely funded by the aristocracy who saw no conflict between becoming rich through the industrial process, while almost invariably using their money to enhance their country estates. The ‘nouveau riche’ bought country estates not, as in other nations, to develop them, but simply to enjoy them.

**Bemused by a Crystal Palace**

It is necessary to step back from an explanation of the elite public schools to study further the development of education for the vast majority of the population. In 1833 Parliament took the historic step of making its first ever grant to support the two voluntary bodies - The National Society and The British Society – in their establishing of schools in those parts of the country lacking sufficient local sponsors to do this for themselves. Parliament did so, however, with remarkably little enthusiasm, probably rightly anticipating what a political and administrative nightmare this was to produce. The grant was for thirty thousand pounds, even in those days a derisory sum. It eventually became an annual affair though, and its calculation led to enormous bitterness between the rival denominations, and created an administrative nightmare for Parliament, eventually resolved not by the creation of a Department of Education - that would have implied more commitment than Parliament was prepared to make - but by forming a Committee for Education, answerable to the Privy Council. A something almost of nothing. The first Secretary, James Kaye-Shuttleworth, struggled hard to prevent the Committee from “becoming first an irrelevance, then an anachronism, and finally a laughing stock”.26 but the difficulty of trying to create policy when the politicians were so arrogantly dismissive of the professionals, broke his health. In 1849 he was replaced as Secretary by Ralph Lingen, who administered a grant which grew from a quarter of a million pounds in 1840 to over half a million in 1857 - a small sum in comparison to the roughly two and a half million pounds contributed by the faithful of the rival churches, and two million pounds paid in fees by those children whose parents were able to afford to do so.

In July 1843 Joseph Hume boldly told the House of Commons that religious rivalry and aristocratic conservatism had resulted in “England (standing) at the bottom of the scales of the civilised world. Only Portugal has a worse record.”27

The explanation was simple: England thought, if indeed it thought at all, that education was an expensive way of keeping children off the streets. It was no more than an extension of poor law. To men who had done well through minimal schooling themselves it would be an abrogation of individual responsibility, they argued, for government to be involved in such a ‘private’ responsibility as the bringing up of children. Consequently England alone of the major European states in the 1840s had no central government authority for education, no national examination system, little regulation or inspection of schools and practically no teacher training. Levels of education-related public spending were significantly lower than in all other countries. In England laissez-faire policies dominated everywhere. “I stand for the English, the free, the voluntary method”, the ultra-traditional MP Edward Baines said proudly in 1848, “which I hold accordant with the national character, favourable to civil and religious liberty and productive of the highest moral benefit to the community.”28

While Parliament continued to extol the benefits of ‘leaving things to work themselves out’,
Karl Marx was in London writing ‘The Communist Manifesto’. In his observation of English society he saw the breakdown of mankind’s natural way of doing business with each other. In a much quoted passage Marx analysed what industrialisation had done to the agricultural democracy of an earlier, tightly defined rural society: “The bourgeoisie has stripped of its halo every occupation hitherto honoured and looked up to with reverent awe. It has converted the physician, the lawyer, the priest, the poet, the man of science, into its paid wage-labourers. The bourgeoisie has torn away from the family its sentimental veil, and has reduced the family relative to a mere money relation.”

Social change nevertheless takes many years to affect all sections of a people. Beyond the industrial cities of England, with their new National and British Schools, beyond the playing fields of Eton or the school chapel at Rugby, Friedrich Engels, who was the scribe to Marx - in ways comparable to what Bosworth was to Dr. Johnson a hundred years earlier - could note in 1844 that ‘old England’ was far from dead: “I often heard working men, whose fustian jackets scarcely held together, speak about geological, astronomical and other subjects with more knowledge than the most cultivated bourgeois in Germany can possess.” Perhaps England’s strength really did owe its origin more to individuals working against the odds, than it did to an excessive formalisation in classrooms of what earlier would have been the natural way to get things done.

* * *

The Great Exhibition of 1851 celebrated the achievements of English industrial and creative might by housing, in a mighty Crystal Palace especially erected in Hyde Park, the greatest array of inventions in the arts and industrial sciences ever seen anywhere before in the world. As a visual embodiment of national identity, it was to shape the way Englishmen thought about themselves for generations. Such an exercise of the imagination was vastly important in creating a sense of national purpose. As Enoch Powell was to comment more than a hundred years later “The life of nations no less than that of men is lived largely in the imagination”, From the Scottish borders to the far end of Cornwall, from Wales to East Anglia, no fewer than six million visitors made what was for many their first visit to London. For the first time the steam train enabled them to travel faster than a galloping horse. Millions of people could see what England was like, and could dream of what they personally might achieve. It’s hard for us today to really comprehend just what a thrilling experience it was to see that glittering Crystal Palace amongst the green spaces of the park. This was a once-in-a-lifetime opportunity to see a display of human ingenuity on a scale never before thought possible.

One of these visitors was a twelve-year-old boy, my great, great grandfather. It was the first time he had ever gone beyond the local market town of Axminster. He travelled to London by a special excursion train and, as someone who knew little beyond the farm and the Devon coast, he was stunned to discover what it meant to be English. A hundred years later, in the 1950s, my grandfather - that boy’s grandson - showed me the treasured copies of ‘The Illustrated London News’, describing the Exhibition, that he had inherited from his own grandfather. I can clearly remember the way my grandfather recounted to me the lesson that this twelve-year-old boy had repeated to him possibly fifty years earlier, when recalling the exhibition: “Britain has three advantages that will enable it always to be rich”, he told me, “We sit on top of the world’s most plentiful coal fields; we have the world’s most creative engineers, and the Navy gives us protection from all other nations”.

The Great Exhibition had brought together the very latest products of engineering and the decorative arts from many nations, not just Britain. But above all the Exhibition celebrated British creative genius and imagination, and demonstrated just what a nation of skilled and thoughtful craftsmen could achieve. The inventors whose wonders these men and women marvelled at - men like Thomas Telford, George Stephenson, Richard Arkwright, Samuel Crompton, Frank Darby, John Smeaton, George Hudson and the two Brunels, both father and son - were all former craftsmen who had each served lengthy apprenticeships. Few of them had gone to school for any significant time, and most regarded school as subordinate to what they had learnt on the job. They had all learned to read early in life, rather as William Lovett had, and were later voracious consumers of books. What they read stimulated them to even greater invention.

The very scale of the Crystal Palace electrified the imagination as to what was to come: eight hundred thousand square feet of glass carried on three thousand three hundred iron girders and two thousand seven hundred iron pillars, all erected in seventeen months. It enclosed an area four times the size of St. Peter’s in Rome and six times that of St. Paul’s in London. It was designed neither by an architect nor a structural engineer, but by a man who designed and built elaborate greenhouses of
the kind with which men like the Duke of Devonshire, and subsequently the newly rich, liked to decorate their houses. His name was Joseph Paxton.

What kind of people were they, those millions of visitors to the Great Exhibition, and how well educated were they? What motivated them to come? These were questions that worried the government of the time who, fearing civil unrest, stationed several additional regiments of cavalry in nearby barracks. But there was no trouble. The average Englishman of 1851 it seems, was far more fascinated by what man’s ingenuity could fashion than he was in assisting political upheaval. That says a lot about these men who found their daily life of sufficient interest that they wanted to find out more about matters that could inspire them: these were a practical people, not much given in the main to political speculation.

Amongst the older visitors there would have been men who had fought Napoleon at Waterloo, possibly even sailors who had been at Trafalgar. For such men their education long before would have been confined, if they were lucky, to learning to read at one of the early Sunday Schools. Men in their forties might have experienced hour upon hour of rote learning in classes of several hundred pupils, under the instruction of one of the teachers in a Lancasterian School. Others might have attended, for two or three years, a National or a British school where the education would have been almost entirely limited to Bible study. Of those in their mid-twenties, if they came from a working class area of Manchester, the heartland of so much manufacturing industry, a third of them would never ever have attended school at all. If they came from Liverpool the proportion would have been even less. Fortunately for some the ever decreasing cost of printing meant that, outside the classroom, working people could learn a lot from cheap, informative journals, such as the widely read ‘Penny Encyclopaedia’ and ‘Popular Education’.

In the newspaper etchings showing the crowds at the Crystal Palace there are many well-dressed women, decorously holding the arms of their formally attired husbands, and there are a few young children, both boys and girls. It’s fair to assume that the girls came from well-to-do homes, for the young daughters of the labouring classes would at that age already have been working as seamstresses. Any education for young women beyond the stage of the national school would have been in the protected environment of the home under a governess, and would have been concerned with the cultivation of genteel manners rather than with education itself. When prosperous middle-class families choose to send their daughters to school it was normally for about three years at a local school, or occasionally at a nearby boarding school. Secondary education for girls in England really started only a year before the Great Exhibition with the formation of North London Collegiate School by Frances Buss and Cheltenham Ladies’ College in 1858 by Dorothy Beale, two remarkably courageous visionary and practical Victorians.

Amongst the older of these visitors would have been men whose expertise was due entirely to the apprenticeships they had undertaken early in life. Men in their forties and fifties would have had experience of both worlds, and might well be feeling optimistic about their future. Amongst some of the youngest would have been men who knew a lot about school, and little if anything about learning on the job. The very youngest of these might well have ended the visit confused. Who were these giants of the past, and how on earth were they, the younger generation, ever going to equal them? They had learned nothing from a textbook in school about engineering, farming, the decorative arts, transport or trade, and they had few opportunities to get into craft apprenticeships, and knew little about working collaboratively in teams.

They were right to be worried. Not that apprenticeship disappeared overnight, for it took nearly two hundred years for school-based learning to establish near dominance over the earlier system, while even today a tiny number of craftsmen still maintain an apprenticeship-type of approach to their younger staff, but it’s rare. Nevertheless by the 1850s apprenticeship in general had had its day. The Victorians knew instinctively that their industrial genius owed very little to formal schooling; what they were much slower to appreciate (and this was almost self-imposed blindness) was that the new working practices coming to dominate industrial production would steadily degrade the role of the craftsman, and progressively lessen the natural opportunities for young people to learn on the job. In 1851 Great Britain had won the ‘Palm of Excellence’ - the top prize - in ninety per cent of the categories at the Great Exhibition. Eighteen years later at a similar exhibition in Paris, the British won only ten per cent of the prizes.

What had gone wrong? It seemed that formal schooling, in this nation without an educational policy, was failing to make up for the loss of craft skills that William Lovett so powerfully prophesied would happen thirty years earlier.
Chapter Six

THE AGE OF REFORM

Half-hearted educational reform. Determination of wealthy elite to retain control of society at odds with the urgent need for various forms of mass education. Newcastle Commission states in 1858 the need “to consider what measures, if any, are required for the extension of sound and cheap elementary education.” Struggle of church societies to extend their influence by building schools as an act of charity. Foundation of more exclusive forms of education advocated by church leaders for the rapidly growing middle-classes. Government initiative to raise money for elementary schools through local taxes seen by supporters of privately funded public schools as ‘public robbery’. The origins of the social split in elementary and secondary education – the former out of charity, the latter as a measure of social acceptability. The use of the curriculum as a device to maintain the separation of the classes.

It is estimated that, by 1857, approximately sixty per cent of children below the age of ten attended some kind of school, many of which were of a poor standard. Most children had left school before the age of eleven, with only one child in twenty from a working class district still in school by the age of thirteen. Sensing that the generosity of millions of small donors through the church collection plate would never provide for every child’s education, Lord John Russell, a man twice prime minister, introduced an Education Bill to the Commons in 1853 to make it possible for towns above a certain size to levy a rate on all tax payers to establish schools independent of the church. His proposal was decisively rejected by The House of Lords who could not conceive of an education system that was not enforced by the moral injunctions of the church. Here was emerging a particularly English compromise. Parliament was accepting that education was becoming a national necessity but largely insisting that it be delivered as an act of charity. Not a single elementary school was owned or directly controlled by an elected authority. With an annual salary of eighty-five pounds for a male teacher and only sixty pounds for a woman – at the time a small shopkeeper would have earned one hundred and ten pounds a year - it’s little wonder that there was a massive shortage of teachers. The idea of a qualified teaching profession had been recommended by the Newcastle Commission in 1858, set up “to enquire into the present state of popular education in England and to consider what measures, if any, are required for the extension of sound and cheap elementary education to all classes of people.” That sounds a pretty cheap-skate approach to education. It was, and of course it did not really mean ‘all classes of people’. That phrase can probably be attributed to the Secretary to the Committee, Ralph Lingen, who found in the appointment of Robert Lowe (soon to become Lord Sherbrook) as Vice President of the Committee in 1859, a fellow spirit. Lowe had been educated at Winchester and Oxford. He qualified as a lawyer and almost immediately emigrated to New South Wales where he became a member of its Legislative Council. In Australia he learnt the need for firm and, as he saw it, autocratic leadership.

Seven years later Lowe returned to England. He was ambitious and certainly arrogant. Having lost faith whilst in the struggling Australian colonies, in any form of democracy that was not based on informed intelligence, he was totally intolerant of those he regarded as his social inferiors. He treated teachers with the same contempt that he had learnt for the convict settlers of New South Wales. This was to be the man who, with Ralph Lingen as his willing assistant, was prepared to stand up in the Commons in 1862 and say, “We do not profess to give these children an education that will raise them above their station and business in life. But to give them an education that will fit them for just that business.” With their mutual antagonism towards schoolteachers and the managers of the voluntary schools (many of whose aspirations were generous and sincere), Lowe and Lingen with their own classical, elite assumptions about education, set elementary education on a course that would destine it to be inferior to the education of older children, right through into the twenty-first century. They regarded elementary teachers as men “whose education and duties should be limited to the teaching of the basics necessary for the working class.” For such a lowly task Lowe argued that “a lower class of teachers must be employed”, not the kind of man a gentleman would have expected.
his son to encounter at Winchester. Between them
Lowe and Lingen took the first of several steps to
ensure that England would always have a two-class
education system.

Between them they implemented with alacrity
another of the recommendations of the New-
castle Commission, namely the Scheme known
as Payment by Results that would give "mediocre
teachers the incentive to greater efficiency".7 They
set up the first system of national examinations,
and appointed the first school inspectors, under
the direction of Matthew Arnold, son of Dr. Arnold
of Rugby. Teachers’ salaries were to be tied, for
the next forty years, to the teachers’ efficiency in
getting pupils to pass the examinations that Lowe
and Lingen had established, a procedure that made
elementary education a deadening form of rote
learning. While it would have done something to
lift the standard of the most mediocre teacher, it
over-burdened the pace for the dull student, and
neglected the bright. Matthew Arnold noted: “In a
country where everyone is prone to rely too much
on mechanical processes and too little on intelli-
gence, [the regulations of the Revised Code] give a
mechanical turn to school teaching, and a me-
chanical ‘twist’ to inspections, which must be most
trying to the intellectual life of a school”.6

Between them Lowe and Lingen stirred up so
much antagonism amongst members of Parlia-
ment and teachers that Lowe was eventually
censured by the House of Commons. Although the
vote was ultimately unsuccessful, it brought about
Lowe’s resignation, a man of whom it was said
“his abilities were offset by his lack of tact” 7 but
which did not prevent him from, a year or so later,
becoming as Lord Chancellor, as a harsh and cyni-
cal successor as had been Lord Eldon earlier in the
century. One commentator at the time described
the affairs of the Office of Education as being “con-
ducted by officials who, by all accounts, knew little
and cared less about the education of the poorer
classes and who, on the admission of one of their
numbers, treated elementary education with con-
tempt.”9 Once in place, however, the system and
these attitudes, proved most difficult to change.
Lowe might have gone, but Lingen was to hold
office until 1869, and the tradition of contempt for
teachers that built up in these years was to become
alarmingly entrenched. Twenty years later Lingen,
by then an old man, argued forcibly in the House
of Lords against any form of elementary education
that might go beyond the three R’s. The Liberal
politician W.E. Forster, as he was preparing in the
late 1860s to make elementary education available
to all children, provisionally entitled the act that
was to become law in 1870, as ‘The Education of
the Poor Act’. The charity origins of elementary
education were, and are, hard to lose.

Buying into Privilege

The self-made men who emerged in ever increas-
ing numbers in the second half of the century saw
themselves as having arrived when they enter-
tained in their country estates, and saw their sons
educated, not in the town in which the father had
served his apprenticeship and made his fortune -
and continued to make his fortune - but in a newly
founded public school. If they - the fathers - were
in Plato’s terms technical people of the second sort
with silver in their blood, they wanted to believe
that the new Victorian public schools - which in a
few short years had projected an almost mythical
account of their ancient lineage - had so perfected
the medieval art of the alchemy that they would
be able to transmute the silver in their sons’ blood
to gold. In this way the Victorians were to create
a highly efficient, unique and entirely segregated
system of education for its upper classes, which at
no time amounted to more than two or three per-
cent of the population.

While it was business that created the wealth
that supported the country gentlemen and funded
the public schools, those schools most certainly
did not favour business, and virtually ensured that
none of their graduates would ever go into com-
merce. Isambard Kingdom Brunel, who built over
a thousand miles of railways in England, as well
as enormous bridges, long tunnels, and complex
docks, even the world’s first iron steamship, the SS
Great Britain, sent his sons to Harrow. Why was
this? The American historian Martin Weiner offers
an interesting possible explanation: “As capital-
ists became landed gentlemen... the radical idea
of active capital was submerged in the conservative
ideal of passive property, and the urge to enter-
prise faded beneath the preference for stability”.9
Bertrand Russell puts a finer twist on this: “The
concept of the gentleman was invented by the
aristocracy to keep the middle classes in order”.10 It
was fear of social change that was the spectre that
prevented the Victorians from providing universal
education.

That there was something fundamentally wrong
with the well being of the schools that educated the
aristocracy and the upper gentry had been evident
ever since Lord Brougham had failed in his at-
tempt to include these great schools in the inves-
tigation of the abuse of charities in 1818. It finally
came to a head in April 1861 with the renewed claim made very publicly in the much regarded *Edinburgh Review* that even the monies bequeathed by Henry VI at Eton College were being “illegally diverted into the pockets of a small number of individuals who are not entitled to them.” This criticism was so well publicised that Parliament had to act. A Royal Commission was set up under Lord Clarendon to investigate the very schools that the aristocracy had attended as children. One harrowing day in July 1862 Lord Clarendon effectively drew the blood of old eighteenth century England when he faced the Provost, the Bursar and the Registrar of Eton College. On examining the College’s books, Clarendon had discovered many discrepancies, but one stood out above all the others; over the previous twenty years, one hundred and twenty-seven thousand pounds (at today’s value probably between seven and eight million pounds) of taxes payable on the renewal of leases on college property had never been banked or accounted for. Clarendon found that all that money had been shared out privately between the Provost and the Fellows, in a way that was “in absolute and direct contravention of the statutes, because each such statute over and over again binds... the Fellows... to apply whatever surplus may remain... for the common use and advantage of the Foundation (the College).”

“I should like to know”, asked Lord Clarendon in an interchange later published for any interested reader to study in Volume III of the Public Schools Commission Report of 1864, “in what way they (the Fellows) can reconcile the division of funds with the observance of the statutes?”

The Bursar, the Reverend G. J. Dupuis replied simply, “The only answer I feel I can make to what your Lordship has asked is that it has always been so; a bad reason, perhaps you will say, but I really do not know of any other. We have each been elected one after the other, with this system coming down to us, and we took it as we found it, and have been carrying it on,” Lord Clarendon pressed further and found that for every share of money taken by a Fellow the Provost had taken two. He then asked, “And had it appeared to the Provost and Fellows that there is nothing contrary to the statutes in their so doing?”

To this the Registrar replied simply, “No”. One can only guess at what the atmosphere in that room must have been like.

This sum referred only to the previous twenty years, namely from about 1840 - more than twenty years after Lord Brougham had urged that the foundations be investigated. The abuse and duplicity had in fact been going on for probably more than a century. This was evidently only one small example of the irregularities and privileges that were laid bare day after day as the Commission did its work, not only at Eton but at other schools by lesser and differing degrees. So bitter were the feelings these discoveries inspired that it was almost a century before J.D’E Firth, in his 1949 History of Winchester College, could publicly record the fury, and the sense of shame and indignation that such headmasters and their immediate colleagues (almost all of whom were clergymen) felt: “But the law of the land, on whose letters they (the Warden and Fellows) had relied for centuries to cheat the children and starve the ushers (the ordinary teachers), now turned its bleak face against the exploiters themselves. They might whimper and snarl, like old dogs driven off a juicy and familiar bone; but their teeth were drawn.”

Trollope’s *Barchester Chronicles* could just as well have been set in Eton, Winchester or Westminster as they were in a mythical Cathedral Close somewhere in middle England.

In the history books about education it is strange that the Report of the Clarendon Commissioners is almost invariably quoted for the praise it heaped on the public schools, rather than for the many criticisms it made. In one sense its praise had to be self-evident, for up to that time there were few other places for the ruling classes to send their sons, and as England was obviously doing incredibly well in comparison to all other countries, Clarendon could safely say, “It is not easy to estimate the degree to which the English people are indebted to the character of the English gentleman”.

After such paens of praise, however, Clarendon then went on to record a general impression of idleness and inefficiency. The report was strident in its attack on the abuse of trust funds; in their class-based attitudes towards practical skills the schools placed “the upper classes in a state of inferiority to the middle and lower classes.” The commissioners recorded low standards in the teaching of the classics, and even lower standards in maths and English. Clarendon recommended that science and modern languages should be included in the curriculum, but then muted this recommendation by reasserting that the classics should remain the central core of the schools’ activities. In this last
outdated requirement Clarendon effectively guaranteed that these schools would remain separate from whatever arrangements might emerge in the future for the secondary education of the rest of the country. Another step towards a socially divided education system.

The commissioners were particularly critical of the almost total absence of any science teaching. Dr. Arnold had actually stopped the teaching of science at Rugby because, he argued, “Physical science alone can never make a man educated; even the formal sciences (grammar, arithmetic, logic, geometry), valuable as they are with respect to the discipline of reasoning power, cannot instruct judgement; it is only moral and religious knowledge which can accomplish that.”14 The Clarendon Commissioners went on and interviewed a number of eminent scientists, including Michael Faraday, the man who effectively discovered electricity and through his understanding of electro-magnetic induction designed the first dynamo - a man who had started life as an apprentice bookbinder and gone on to become Professor of Chemistry at the Royal Institution. Faraday said, “It (the classical mind) does not blunt the mind. but it so far gives the growing mind a certain habit, a certain desire and willingness to accept general ideas of a literary kind, and to say all the rest is nonsense and belongs to the artisan.”15 His parting comment was highly perceptive, and struck at the roots of uncertainty in the Victorian character. Go back only a couple of generations and the immediate ancestors of so many Victorians had been just that - skilled artisans. Some contemporary Victorians would have been self-critical enough to realise that such craftsmen were indeed highly skilled, but they saw themselves as belonging to a higher class (by then well-established by the later Victorians) so that no gentleman would wish to associate with the class that he had emerged from. The nouveau riche are, it seems, all too often the worst snobs.

Such Victorians did not wish to have anything to do with the argument later advanced to the Commissioners by T. H. Huxley, the English biologist with such a considerable worldwide reputation that he was honoured by more than fifty overseas scientific societies. Huxley neatly made the argument on which this book is based when he told the commissioners, “I am, and have been, any time these thirty years, a man who works with his hands - a handy craftsman. I do not say this in the broadly metaphorical sense in which fine gentlemen, with all the delicacy of Agag16 about them, trip to the hustings about election time, and protest that they too are working men. I really mean my words to be taken in their direct, literal, and straightforward sense. In fact, if the most nimble-fingered watchmaker among you will come to my workshop, he may set me to put a watch together, and I will set him to dissect, say, a black beetle’s nerves. I do not wish to vaunt, but I’m inclined to think I shall manage my job to his satisfaction sooner than he will do his piece to mine.”16

If only the Clarendon Commission had come 50 years earlier. Whatever the strength of the Commission’s criticisms, the emerging Victorian middle classes were in no mood to hear them, yet welcomed any praise. The historian Rex Warner was right when he wrote in 1945 of the failure of Lord Brougham’s 1816 attempt to investigate the abuse of those schools: “The defeat of Brougham’s proposal is a measure of Parliament’s lack of vision, and the result of this lack of vision was the increasing segregation of the classes just at that period when the foundation of a truly democratic society might, with more wisdom, have been laid. The conditions were present - social necessity and a growing force of idealism upon which Arnold was to draw.”17 But by 1864 the opportunity had passed. By this time the Victorian upper and middle classes had reinvented the Public school to reinforce an emerging class-consciousness that was to bedevil English Society until this day. Such Victorians were pragmatic and self-interested, rather than idealistic. They simply ignored the difficulties posed by the Foundation Deeds of the old grammar schools and, Warner continued, “in particular the vexed question of the rights of the poor to benefit from the expressed wishes of the founders of the great schools. These matters were hardly debated, but in a most business-like manner brushed aside. Therefore there was to be no attempt to reassert forgotten claims at the expense of an existing efficiency.”18

It was not to stop here, for by now Parliament was deeply into reform issues. While Clarendon

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17 Agag was said to have been hewn to pieces by Samuel in the Old Testament (1 Samuel 15, verse 33), and popularly referred to in Dryden’s poem ‘Absalom and Achitophel’ as the magistrate murdered in the Titus Oates’ conspiracy – a somewhat remote reference, to a modern ear to be made by a scientist seeking to make a point about his own practical knowledge, yet this was a time when even the most sceptical of scientists would quote scripture with the greatest of ease.
had investigated the ‘Big Nine’ there were, it was discovered, some three thousand more separately endowed schools in England and Wales (as Brougham had known) and if corruption had been found in the most famous schools, how bad might it be in the smaller establishments? Almost immediately Lord Taunton was appointed to investigate all those other schools. If Clarendon was seen to endorse the large public schools, many saw in Taunton’s future work a threat to merge the aspirations of some of the old, endowed schools to better themselves with the more general need - steadily being understood in Victorian society - for an education for a much wider range of children. To the trustees of the endowed schools the very thought that they might now come under the jurisdiction of the - purportedly obnoxious - officials at the Office of Education sent them running for any cover they could find.

Taunton’s task was daunting. Not only had he to investigate the possible misuse of charitable funds, he had also to question the nature of education that was offered and how it might satisfy the needs of particular kinds of populations in the future. Of the three thousand or so endowed schools, Taunton only investigated less than eight hundred, because the vast majority of these endowed schools taught only elementary pupils. It was only the seven hundred and ninety-one who were deemed to be offering an education higher than that necessary for the manual or working classes that Taunton studied. On further enquiry Taunton found that only two hundred and eighteen of these had a full classical curriculum, and of these one hundred and one made no attempt to prepare boys for university. That left just over one hundred endowed schools across the entire country which did take the claim of preparation for University education seriously but, and here is the final twist, on average half of these schools sent only a single pupil to university each year. Only some fifty of these schools regularly sent at least twenty per cent of their pupils to Oxford or Cambridge, the two universities which in the 1860s still dominated English higher education. "From the strictly educational point of view, forty-two out of seven hundred and ninety-one represented the potential endowed/proprietorial school recruitment to the universities – seven hundred and forty-nine had lost the race."

It was appalling that despite their stated objectives most schools failed the vast majority of their students. This wasn’t really very long ago. It was in the lifetime of my great grandfather. Taunton in his report of 1868 decided to classify these schools according to parental preparedness to support their sons’ education for varying lengths of time. In what he was to call Grade A Schools, parents expected to keep their sons in school up to the age of eighteen or nineteen on the basis that they would go on to Oxford or Cambridge. In Grade B Schools, largely those attended by the sons of ‘tradesmen in considerable business’, a broader education would be followed until the age of sixteen and would contain some Latin. The sons of the lesser tradesmen, shop-keepers and ‘decayed craftsmen’ would go to Grade C Schools until the age of fourteen. The sons of artisans or labourers would all have left school by the age of eleven, as would the children of paupers in the workhouse; there was no thought of providing any kind of post elementary education for them.

The Commissioners were zealous in travelling to each of the seven hundred and ninety schools in preparation for drawing up new Trust Deeds, and frequently incurred the wrath of local dignitaries when they were told that their school would only merit a Grade B or Grade C classification. Of Sedbergh School in Yorkshire (now a reasonably known public school) conditions were so bad that the commissioner reported: “I despair of putting it into any class at all. In its present state it simply clutters the ground.” What happened at King Edward’s School in Bath was typical of many others. A reorganisation scheme twenty years earlier, following Brougham, had attempted to force the school to use its original Foundation funds to again take on a certain number of free, poor students. This had had the effect of frightening off the sons of the wealthier classes for, as Mr Maclean, the newly appointed headmaster stated, “the election of the sons of small tradesmen, unless it be in exceptional cases, has the effect of preventing persons in a different grade of life from sending their sons, (because) their habits and associations are different.” Consequently numbers of pupils in the school had fallen, and this once successful grammar school, which during the Napoleonic Wars had contributed many officers to the Army and later to the Indian Civil Service, now found itself down-graded to a Grade B school. With education ending at the age of sixteen it was no longer to be a route to university.

Some of the recently classified Grade A Schools started to scheme. They saw in the possibility of removing the bottom two classes of eleven and twelve-year-old pupils into separate preparatory schools the ideal stepping mechanism to gentrification that would enable them to become patronised more by the upper classes and ever less by local townspeople. This cynicism caused a furore
at many places, especially at Harrow, where the Lower School was hived off to create a separate school for local pupils so enabling the older school (set up in 1680 by John Lyon for the sons of local tradesmen) to concentrate on the sons of the elite. “This would amount to a wicked confiscation of private rights and privileges” a local tradesman, Mr J. W. Cunningham, proclaimed. But the protest was in vain for the Taunton Commission allowed these changes to go through. And a mere twenty-five years later, the thirteen-year-old son of an English aristocrat and an American heiress arrived at this school. He was by all accounts not only an indifferent scholar, but one totally captivated by the myth that he was the lawful descendent of the wishes of the founders more than three hundred years before. His name was Winston Spencer Churchill, and his initials are still to be seen carved into the desk he once occupied.

Other old grammar schools viewed the coming of the Commissioners as an outrage and an attack on their freedom, none more forcefully than Edward Thring. Thring was a former Etonian boy himself, who in 1853 had become headmaster of the ancient, but at that stage, tiny Elizabethan grammar school of Uppingham. When Thring arrived there were only twenty-five pupils and two teachers. Thring was a man of enormous energy with a broad vision of education who built at Uppingham, amongst other things, the first purpose built gymnasium in an English school, and quickly increased the number of pupils to three hundred and twenty. He extended Arnold’s concept of the all-round man, civilising school life by providing pictures for the walls of classrooms, and broadened the curriculum to include maths, history, geography and scripture as a separate subject to the biblical teaching of the chapel. But, like Arnold, he would have no science.

Thring was as much an autocrat as Dr. Arnold had been thirty years earlier, but he was a man with a more modern approach to the needs of young people. Like Arnold, he never did things in half measures; an outbreak of fever in the town in 1876 led to his abrupt evacuation of the entire school to a hotel on the Welsh coast at Borth, some six miles from Aberystwyth. Two hundred and ninety boys lived and studied there for a year and Thring carefully exploited their experiences with an eye to useful publicity, regularly describing their (acceptable) high spirited behaviour in the columns of The Times. So effective was this publication that it enabled the exploits of his pupils to eclipse, in the public imagination, the antics of the fictitious Tom Brown at Rugby.

Thring especially feared the Taunton Commission and the plans that they were formulating for setting up a network of boarding and day grammar schools right across the country, by amalgamating all the funds of the existing endowed schools. He saw this as an attack on all that he held dear, namely the education of the upper middle classes. He was further incensed that they were proposing a national system of examinations and national training for teachers. Mostly he saw in it a threat to the sanctity of the elite world he was trying to create. The culprit, it seemed to Thring, was the new President of the Committee of Education, W. E. Forster, and his proposed bill for elementary schools to be built at the expense of local taxpayers. Thring and other mid-Victorian heads were enraged. It’s important to understand what happened, for these men who were guardians of the sons of the upper classes, were to do everything in their extensive power to limit the education of the lower classes. Thring was contemptuous of the Taunton Commissioners and their recommendations; “How ridiculous it will seem in years to come, appointing a lot of squires and a stray Lord or two to gather promiscuous evidence on an intricate professional question, and sum up, and pronounce infallible judgement on it.” It would be hard to be much more dismissive than that.

One headmaster took a more strategic view. John Mitchinson at King’s School Canterbury, probably the oldest of the grammar schools of England, saw the appalling weakness of individual headmasters trying to oppose Parliamentary action, so in March 1869 he called a meeting to which some twenty-five headmasters came. After much discussion they decided to go together to meet with W. E. Forster. Edward Thring, ever the autocrat, initially refused to attend, but changed his mind at the last moment. Not much happened at the meeting with Forster, but the idea of an Association of Independent Heads so appealed to Thring that he invited sixty of his colleagues to Uppingham over Christmas that year. A mere dozen came; they were largely the heads of the old grammar schools such as Repton, Tunbridge and Canterbury and not the more established, prestigious, public schools like Eton, Winchester or Rugby. Thring was instinctively determined to go ahead with such a line up, feeling that such smaller schools were better off without the heavy weight inertia of the better known schools. In his diary he wrote, “I laid down plainly that I thought it was simple death to do so (remembered that it was only five years before that Clarendon had exposed Eton and Winchester for their embezzlement of funds); we rested on
master and apprentice: reuniting thinking with doing

ours own vitality and work; they on their privilege and false glory; if they would meet us on common ground, well and good; if not, not.”

Thring waited, and by the next meeting in early 1870 the great schools recognised there was a strength in a common cause. In his diary Thring noted: “The seven school delusion broken up. Winchester and Shrewsbury there; Eton has joined since. A Committee formed to look after the school interests.” So, in 1870, the Headmasters’ Conference was formed as a sort of club of schoolmasters of the privileged schools. After an initial flurry of activity meetings were held only sporadically, for the autocratic nature of the heads who ran their schools as tight ships had no appetite for full federation but only for common cause against central government. Given such a half-hearted beginning, it’s ironic to recognise that by 1902 what had started as a defence against the power of Parliament was turned on its head – and the members of the Head Masters’ Conference were invited to advise government on how to create a nation-wide system of education for the masses which would not intrude on their own privileged position.

Self Help

It is necessary to take a step back now some ten years to 1859, the year Darwin published ‘The Origin of Species’. It was in that same year that Samuel Smiles, a Scottish doctor-turned-journalist, published his book ‘Self Help’. Just as Thomas Arnold had created a new nation-wide tradition of elite boarding schools, so Samuel Smiles influenced literally hundreds of thousands of working class youngsters who aspired to being part of the new middle classes, but who were already out of school. Smiles was the first to advocate the ‘do it yourself’ principle. He gave nineteenth century substance to the old proverb that ‘God helps those who help themselves’. Smiles had a way of writing that fired the imagination and seized the moment. He had an easy but memorable prose-style that linked the general to the specific and inspired his readers to believe that a multitude of small steps, planted in the right places, meant that no mountain was unconquerable. “One of the most strikingly marked features of the English people is their spirit of industry,” he wrote. “It is this spirit, displayed by the commons of England, which has laid the foundation and built up the industrial greatness of the empire.”

The concept of "the free energy of individuals", was what Smiles helped ordinary Victorians to understand, namely that each man held his destiny in his own hands. “Daily experience,” he went on, “shows that it is the energetic individualism which produces the most powerful effect upon the life and actions of others, and really constitutes the best practical education.” Experience, determination and a sense of purpose became, to the Victorians, the essence of success. Here was the Protestant work ethic expressed in its most pungent form. “Schools, academies and colleges, give but the merest beginnings of culture in comparison with it.” Smiles went on to echo Milton: “Far more influential is the life-education daily given in our homes, in the streets, behind counters, in workshops, at the loom and the plough, in counting houses and manufactories, and in the busy haunts of men.”

This was a most reassuring message to men who valued their own experience, and their ability to find practical solutions to real problems which their superiors had not been able to solve. They knew they were much more than just factory hands, and Smiles gave them a banner under which to work. Once marching such men even surprised themselves in what they could achieve. In ‘Self Help’ Smiles wrote, “A man can achieve almost anything by the exercise of his own free powers of action and self-denial...A man’s character is seen in small matters, and from ever so slight a test as the mode in which a man wields a hammer, his energy may in some way be inferred.” Self-help, Smiles was convinced, was the road to all genuine personal growth. The lives of individuals showed that it constituted the true source of natural vigour and strength. “Help from without is often enfeebling in its effects”, wrote Smiles, “but help from within invariably invigorates.”

Working class parents reading Smiles looked with disdain at the basic education and complacency of the church school student. They wanted their children to be successful in this world, as well as have recognition in the next, and preferred their sons to practice the code of Samuel Smiles through patient purpose, resolute working and steadfast integrity. Such a code would "enable men of even the humblest ranks to work out for themselves an honourable competency and a solid reputation." This was to be their rallying cry. Young men in their tens of thousands attended his lectures; and within forty years a quarter of a million English language copies of ‘Self Help’ had been sold and it had also been translated into a dozen other languages.

In the latter years of the nineteenth century there was to be a remarkable convergence of the energy that Smiles released amongst working class
youths, and the ‘noblesse oblige’ idealism of public school boys. And all at a time when the riches of the world were becoming available to the first country with a navy able to dominate the seas, and a merchant navy able to carry that merchandise to the farthest corners of the earth. This country was to be England. The map of the world was soon to be painted red by ex-public schoolboys in collaboration with entrepreneurial zeal of working class men.

The tension between the social reformers of the mid nineteenth century, and the growing powers of the business classes, can be seen as a continuous tug-of-war. Both sides were getting stronger, and the resulting stalemate ever more damaging to the nation as a whole. The struggle continued to be all about social control. Lord John Russell’s proposal in 1853 to augment the voluntary system of schools with schools funded through local taxes was rejected largely through the influence of the bishops in the House of Lords, who could not conceive of an education system that was not enforced by the moral injunctions of the church. So it was that through the 1850s and ‘60s, the churches continued to be the prime agents in the building of new schools, yet becoming ever more dependent on government for grants to augment their own funds. Despite this over a thousand new schools were built by the churches between 1863 and 1869, and it seems that more children attended school, and attended for more years.

But the voluntary system could not keep up with an ever growing population. It was in the industrial areas that the problem was at its greatest, and where there were fewer people who would accept the need to donate funds for the education of the masses. It was in the cities, too, where there was the greatest number of street urchins who didn’t attend any school and who were fast becoming seen as a threat to public order. The competition between the churches was a further problem. While the Anglicans had built the most schools they had become over-committed and increasingly unable to maintain their ageing buildings. The non-conformist churches had been more careful however and had set up their schools to operate on a self-financing basis. They were aghast at the thought that government would support Anglicans in the building of any more schools, whether in a newly expanding industrial city, or elsewhere. The endless compromises were finally collapsing and it seemed to many that the voluntary system could no longer cope. “The dream has vanished”, Horace Mann told Parliament in 1864. “Do we now form a policy of co-operation? A perfect system covering the whole community and consistent with the self-respect of all, or try to satisfy ourselves with half a system?”

The man who had to make this decision was W. E. Forster. Forster had grown up as a Quaker and his brother-in-law was Matthew Arnold. Forster was passionately committed to the creation of a genuine education system for all, but was constantly constrained by the legacy of history and the Victorian commitment to laissez faire policies. On entering Parliament in 1861 he argued that universal education had to be an essential component of the Liberal Reform Programme. Then in 1868 he was made Vice President of the Committee for Education in the newly elected Liberal Government and started discussions about how to provide, through the establishment of Local School Boards of Education, elementary schools in those areas where the voluntary societies had been unsuccessful. Such locally elected School Boards would be able to levy taxes on their local communities and from these fund the capital and on-going costs of the schools. The advocates of the voluntary school system were furious. Some of the harshest criticism of the plans came, hardly surprisingly, from Edward Thring, coming as it did just after his successful attempt at drawing together the Heads of the public schools to form the Headmasters’ Conference; “You cannot break the laws of nature which have made the work and powers of men vary in value”, wrote Thring. “This is what I mean when I ask why I should maintain my neighbour’s illegitimate child. I mean by illegitimate every child brought into the world who demands more than his parents can give him, or to whom the government makes a present of money. The School Boards are promising to be an excellent example of public robbery.”

“An excellent example of public robbery.” In the face of such extravagant language it is a wonder that Forster’s Education Act eventually became law in 1870. It bears testimony to Forster’s toughness, determination and his extraordinary negotiating skills. While Thring’s views were those of the ultra conservative, there were many others who were bitterly opposed to any move that would lessen the control of the churches on education. Forster told Parliament during the debate on the bill, “if we are to hold our present position among the nation’s of the world we must make up the smallest of our numbers by increasing the intellectual force of the individual.” In setting up Boards of Education in those areas in which the voluntary schools were not operating, Forster had to be most circumspect. He went on to tell the House of Commons, “We
must take care not to destroy in building up - not to destroy the existing system in introducing a new one. Our object is to complete the voluntary system, to fill up the gaps, procuring as much as we rightly can the co-operation and aid of those benevolent men who desire to assist their neighbours.”

Forster’s carefully crafted explanation ameliorated the aggrieved sensitivities of the more conservative politicians, and just about satisfied the more radical members. Time, however, was to show that the Act of 1870 was an unworkable compromise.

Even with the passing of the 1870 Act, Parliament was still not committed to the belief that every Englishman had a right to an education, and still preferred to leave such matters to private enterprise. Just who were these “benevolent men” that Forster was courting? They were the officers of the church societies, and behind them the clergy and their congregations who, by 1870, were becoming more enthusiastic about putting money into a collection plate for the support of foreign missions than they were to carry on the regular task of funding their local school. Quite simply, these churchmen were losing interest but were a long way from admitting as much. There was another group of benevolent Christian gentlemen that Forster did not wish to offend - men like Edward Thring - but their generosity was limited to that certain class of boy whose parents would pay for them to attend the new public schools now being built across the country.

One of these new schools, Wellington College, was built as a result of a public subscription in memory of the Duke of Wellington, the victor of Waterloo. It was originally designed for the orphans of army officers but its first headmaster, E. W. Benson, so subverted the original purposes of the trustees in favour of creating an elite public school that, on his retirement, he was warmly congratulated by the Iron Duke’s son. “You can fancy what our feelings were when [we found that] a charity school [was to be built] where scruffy little orphans could be maintained and educated. [But] you have made the College what it is, not a mere charity school, but one of the finest public schools in England. I and my family are more than content with the result.”

“Scrubby little orphans..... a mere charity school”; such remarks show something of the atmosphere that prevailed when Forster announced that, once all the arrangements were in place, elementary education would be, for the first time, within the reach of every English home. But even these reforms were to be a long time coming. By 1883, over three and a half thousand board schools had been built. These were generally in urban areas and tended to be built to accommodate more pupils than the smaller voluntary schools. However, even by the 1890s more than half the country’s pupils were still in the voluntary schools, schools that were starting to look enviously over their shoulder at the money that could be raised by the board schools from the rates, while they remained dependent on the dwindling voluntary donations of the faithful. This unsustainable compromise was to lead to tensions that Forster could not have anticipated. And remember Forster’s Act only applied to children under the age of thirteen and did nothing about secondary education. The thought that he might go to a secondary school would never have crossed my great grandfather’s mind, for in his past of Devon there just weren’t any, not were there any in my grandfather’s time.

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In writing this I was forcefully reminded of a conversation I’d had with a conservative member of the Hertfordshire County Council in the early 1980s, a man who was currently the Chairman of the county education committee. He took me to task, in my capacity as Headmaster of a county maintained school, for my persistent complaints that there were insufficient funds to do the work the school was being required to undertake. “You complain too much. If people don’t like it they can send their children to private schools. I did. I have three children and seven grandchildren, and not one of them has been a charge to the state for their education.”

“A charge to the state...”; it could have been the second Duke of Wellington speaking, or Edward Thring. What was staggering was that such perceptions were so strongly restated more than a hundred years later. Talk of ‘scrubby little orphans’, of children seen as ‘illegitimate’ if their parents could not afford to educate them, and taxes to do this on behalf of the state being seen as ‘robbery’ - is that, I wonder, not still at the back of some conservative thinkers even now early in the twenty-first century?

It was in September 2003 that Oliver Letwin told the Conservative Party Conference that he would rather be a beggar than send his own children to a state school, and would give his ‘right arm’ to pay for private education. Will England ever stop thinking about the education of the greater proportion of its young people as being a burden on the taxpayer and start to recognise, as do so many other countries, that to educate all children properly is a key investment in the future well-being of the entire country?
England seemed full of children in mid-Victorian times; a quarter of the population was under ten and vast numbers of them were very poor. Queen Victoria set the pace; she had nine children herself, from whom most of the royal families of Europe were to descend. In the late 1860s married women between the age of twenty and forty bore a child, on average, every three years, a figure comparable to the Bushmen of the Kalahari to this day, where it is suggested that suckling a baby until the age of three is the most effective form of contraception. In the mid-1870s the number of children in a family was just over six, and would have been higher had not an average of one hundred and fifty thousand babies a year failed to survive until their first birth-day - many of their deaths being ‘organised’ by the notorious baby-farming practices about which Victorian society was so equivocal for so long. Then, comparatively suddenly, and for reasons which historians have long disputed, the Victorians simply decided to have smaller families.

By the 1890s the number of children per family had fallen to 4.3, and by the start of World War I to 2.3. These average figures reflect vast cultural differences between the social classes. By 1914 the professional classes were averaging only 2.05 children per couple, an insufficient birth rate to maintain that part of the population, while the labouring classes were still having 4.1. If the reasons for this dramatic fall are unclear, the method for achieving it is obvious; unlike the Continentals, the English did not favour the use of contraceptives - French letters and Dutch caps were not for them. It seems that seventy per cent of families found it safer to indulge in the age-old process of coitus interuptus. Which had its problems. The historian A.J.P. Taylor notes that between 1880, when it appears that majority opinion moved against having large numbers of children, and the 1940s when the use of the sheath became more general, the English were a ‘frustrated’ people, getting little joy from their marital relationships, with women in particular complaining that they were constantly being ‘used’ by their husbands. "The restraint exercised in their private lives may well have contributed to their lack of enterprise elsewhere", Taylor carefully suggests. Which may explain why in their photographs so many late Victorians looked unhappy.

It was the mid-Victorians who invented much of what we understand to be the modern concept of childhood. "Children are weak and tender creatures and, as such, they need patient and considerate treatment. We must handle them delicately, like frail machines, lest by rough fingering we do more harm than good", wrote an evangelical cleric, in a book read widely in the 1850s and the 1860s. If such thoughts were to influence the genteel classes, the reality for most other children was vastly different. Although the country districts accounted for ninety-five per cent of the land mass, only one third of the population of England actually lived outside the towns in 1871, nevertheless most of the urban poor still lived as their country cousins did. In a fascinating anthology of nineteenth century autobiographies of childhood John Burnett wrote a hundred years later, "Brought into the world by no will of their own, children had the right to be fed, clothed, sheltered and, to some degree, educated, but in return they were expected to contribute to the maintenance of the household as soon as they were old enough to be useful". Burnett made the point that childhood did not really exist as a
separate ‘space’ until the end of the nineteenth-century. “In almost all working class families, boys and girls have tasks to perform, both specific and regular and unspecific and occasional, until they graduated as full-time wage earners and were able to make their contribution in monetary form,” he concluded.

Most children in late-Victorian times were pretty street-wise for then, even more than now, what a child knew and thought owed more to what happened to them outside, rather than inside, the school. Daily life for many was tough, and for some unbearable. Of his baby sister’s death when he was five (he didn’t even know what her name was) Sid Metcalfe, from a poor home in Bolton recalled in his later years, “Child mortality was so common then, and usually there were so many children left over at the final count, that the loss of an odd one here and there on the way didn’t really matter much.” My own grandfather recalled how, when he was a child, a girl in a neighbouring village had been playing in the pond below the mill when one of her friends had been drowned. That evening her father said he had heard about it at work, but when he learned that it wasn’t one of his he thought no more about it, and his only advice to the children that evening was to “keep clear of the mighty current when they open the sluice gates.” Every day was rich in experiences showing them how to survive. “Honour thy favour and thy mother” the Old Testament said to the child, while the parent - in this time before the State had any interest in looking after the old people - saw children as their most certain comfort in old age.

Another autobiography was that of Harry West, born in 1888 to a respectable, self-educated manager of a small paper works, who said of his father, “[He] was naturally kind and compassionate. Nearly all his evenings were given either to helping us with our lessons or amusing us in several ways; he was versatile. He understood geometry, and long before jigsaw puzzles were available he cut cardboard into geometrical shapes and sizes. Sometimes he read suitable passages from Dickens and reputable authors.” In the closeness of their everyday lives children learnt from their parents in ways identical to the more formal relationship of master and apprentice. Yet another who exemplified this was Fred Boughton, born the son of a miner in the Forest of Dean in 1897. He had a great respect for his father’s strength, courage and knowledge. “Father used to say, ‘I shall not leave you much money, but I will teach you every job, and you can always get work’. He showed us every job in the garden and on the farm, including how to get stone in the quarry and trim it to build stone walls, and how to put a roof up on a shed.” Then there was John James Bezer born in Spitalfields in 1816, the son of a barber whose experience was no doubt typical of many: “Father was a drunkard, a great spendthrift, an awful reprobate. Home was often like a hell, and ‘quarterdays’, the days father received a small pension from the government for losing an eye in the naval service - were the days mother and I dreaded most; instead of receiving little extra comforts we received extra big thumps, for the drink maddened him.”

The experience of childhood lasts a lifetime, which makes any account of trying to understand how cultures change extremely difficult. Sometimes what happened to children, say, in 1870, might not impact on cultural change until they were in their fifties in the years just before World War One. Put another way, those attitudes and preferences we learnt from our own parents may shape our beliefs as adults and reflect attitudes that prevailed even before we were born. Attitudes towards religion offer an example of this; “whether he liked it or not, every Englishman was moulded by Christianity to the depth of his being”, wrote the historian Francois Bedarida of the 1860s. And attitudes to class another; who a potential son-in-law’s parents were mattered as much to the middle class parents of an English girl in Victorian times as ever it did to parents in caste-conscious India. The shadows of such pretension still stalk English society more than a century later.

The Beginnings of Empire

It was overseas markets that provided the funds to keep so many people living on such a small island. England was the richest country in the world, even though that wealth was desperately uneven in its distribution. England’s industrial and commercial expertise seemed to know no limits. In 1870 the value of the UK’s foreign trade was nearly five hundred and fifty million pounds, which exceeded the total foreign trade of France, Germany, the United States and Italy put together. The population of Britain, on the other hand, at nearly thirty-two million, was less than that of Germany (forty-one million), the United States (thirty-eight and a half million), France (thirty-six million), and exceeded that of Italy (twenty-eight and a half million) by only three million. This nation of nearly thirty-two million people, traded as much as the one hundred and forty-four million people in the other countries combined. Britain was indeed extraordinary in its
creativity and the scale of what it produced. While agriculture was still the largest form of employment, with textiles in second place, all this was to change as the inventions of Henry Bessemer would transform the age of iron into that of steel. By the 1880s these innovations had revolutionised the shipbuilding industry and before the end of the century ninety per cent of the world’s shipping was British made, even in 1949 this figure still stood at more than fifty per cent. You could have gone onto a steamship anywhere in the world and opened the hatch to the boiler room and shouted “Mac”, and nine times out of ten an oil-stained chief engineer with a Glaswegian accent would emerge. That Britain was truly the world’s workshop was remarkable enough, but the country was even more successful at making money than it was at building ships or manufacturing cotton goods. In the latter part of the century London was to become the venture capital to a rapidly developing empire.

There was no more acerbic a critic than Charles Dickens of the side effects of such activity on the working people of England. As a youngster he had grown up amidst the under side of Victorian society and worked in a glue factory. Looking out further across the Victorian landscape Dickens admitted that while the creation of wealth was a social good, it was morally ambiguous, claiming and promising ever more out of life, while corrupting what he saw as decent human values. "This creed was summed up in the voice of Pancks in ‘Little Dorrit’: “Keep me always at it, and I’ll keep you always at it; keep me somebody else always at it. There you are with the whole Duty of Man in a commercial society.”

School was a sad place for many children. "Now, what I want is, Facts", declared Mr Gradgrind in Dickens’ “Hard Times”. “Teach these boys and girls nothing but Facts. Facts alone are wanted in life. Plug nothing else, and root out everything else. You can only form the minds of reasoning animals upon facts; nothing else will ever be of any service to them. Stick to the Facts, sir!” exhorted the single-minded Mr Gradgrind. Of the new student teacher, Mr Choakumchild, Dickens wrote “He and some 140 other schoolmasters had been lately turned at the same time, in the same factory, on the same principles, like so many pianoforte legs. If he had only learnt a little less, how infinitely better he might have taught much more!”

It wasn’t just school that was largely boring for the ordinary person, even more so was employment in a mill, factory or mine. It was a soul-destroying way of life, recognised by more than one-hundred thousand people who, on average, emigrated from Britain every year - a million people in total over ten years, ten million in a century. Britain was the richest country in the world, yet it was also where - at the very start of the twentieth century - more than a quarter of the population lived below the poverty level. It was a fundamentally unfair country.

It was the opening up of new markets overseas by these emigrants - recent school leavers with only the most functional of education behind them (but with plenty of the applied common sense of the practical working man) - that made all this wealth possible. There was nothing planned about such an economy, at least not initially, for England was still the land where opportunities were seized as and when they came up. It all started gently enough. For the first half of the nineteenth century the colonies - the West Indies, South Africa, Canada, Australia and New Zealand – had seemed merely a burden. Communication with them was difficult, and out of sight meant, for the most part, out of mind. The one exception was India, which had intrigued the English since the establishment of the East India Company in the early seventeenth century. Many traders had grown rich from importing silks and spices, silverware, copper, brass and exotic pictures and carvings. From India the British had then gone on to annex Singapore in the early nineteenth century, in a move to control the trade of the South China seas. British policy in India involved their armies in numerous battles on the North West Frontier, and much bloodshed; the tragedy of the Black Hole of Calcutta was known to almost every English pupil as having taken place in 1756, with the Indian mutiny following one hundred and one years later. This led to England stationing no fewer than sixty-five thousand troops in the sub-continent by 1862, more than half of the Army’s total strength. The move was seen as even more appropriate when, in 1876, Queen Victoria was proclaimed Empress of India, with the country soon becoming known as the ‘Jewel in the Crown’, while every schoolboy knew that there was a ‘green eyed, yellow eyed idol to the north of Kathmandu’, even if they did not know what it meant, or where it was. English soldiers returning home from India brought with them not only a love of curry, they substituted the word ‘chai’ for tea, pucker for smart, and when they were feeling sexually frisky they said they were ‘randee’... the Indian word for prostitute. They taught the Indians to play cricket, and referred to their wives back in Cheltenham or Wimbledon as ‘sahibs’.

In other parts of the world the English were slower to become involved. As late as 1865 the For-
eign Office was recommending that Britain withdraw from all her colonies in West Africa. “There is no case in this country for our African possessions,” wrote Lord Clarendon (the same man who had earlier investigated the Public schools); “I believe an announcement to get rid of these would be popular.” Within a year or so things suddenly started to look very different. Great reserves of diamonds and gold had been discovered in South Africa and by the early 1870s the idea of ‘empire’ was no longer seen as either a political or military embarrassment, but rather as a “Greater Britain beyond the seas.”

In a very short period of time, as if by a process of serendipity, here was the space for the grandsons of the earlier Victorian industrial entrepreneurs, brought up on the country estates created by their fathers, to prove their worth. Overseas they could become polished civil servants and administrators and go on to create the backbone of the new British Empire. Mix their classical public school education and evangelical zeal to spread the Gospel with the entrepreneurial fervour of those other men escaping from the working classes, and brought up on a three “Rs” curriculum in the schools but inspired by the gospel of Samuel Smiles. In that mixture Britain had the energy to create an Empire. Between 1866 and 1880, one hundred and thirty-seven former pupils of Rugby and Harrow emigrated overseas, nearly twice as many as went into the Church, and more than half of the number who went into the Army. Colonisation seemed a noble cause to follow. There were fortunes to be made and no exams to be taken, and suddenly for three and more generations, the expectations of ordinary Englishmen were no longer constrained by the restrictions of their tiny island. Even if there was an eventual limit to the prairies, or the trade potential of Africa, here was an immediate alternative to employment in an English factory. There was hardly a railway or shipping line from Berlin to New York, New Delhi or Shanghai in the latter part of the nineteenth century, that was not written by British capital, nor government stocks in Argentina, Peru or Australia that were not guaranteed by the Bank of England. This British dominance raises a fascinating point: if this investment by the London banks had not been made, say, in providing the steel and the machinery for the railways of South Africa or Australia, would there have been the money to pay the hundreds of thousands of English emigrants who were to create the colonies that, in turn, made the Empire still stronger?

The building of a railway that linked the prairie provinces (and eventually British Columbia) to Atlantic Canada stimulated English interest in that country, while the discovery of gold in Australia, together with the development of fast clipper ships, opened up both Australia and New Zealand to trade and further settlement. The growth of the Empire seemed unstoppable. In a diplomatic coup Britain purchased the Suez Canal from the French in 1869, and then went on to occupy Egypt two years later. In 1895 Cecil Rhodes established what was later to become the city of Salisbury in Matabeleland, and in the same year the British purchased a ninety-nine year lease on Hong Kong and annexed the Sudan. Five years later, to protect Middle Eastern oil from being seized by Russia, Lord Curzon grabbed control of Persia and the Persian Gulf. There seemed an insatiable demand for ever more Union Jacks. Wherever they went these enthusiastic young men took with them an English way of life, including the building of exclusive public schools which, as with St Peter’s College in Adelaide (1847), reflected a monastic idyll dead in England some two hundred years before Australia was even discovered.

They exported another assumption too – that of the separation amongst the ‘well educated’ of thinking from doing - straight from Roger Ascham. As an impressionable fifteen-year-old I was immensely excited to be awarded the school prize for woodwork. In front of the whole school I queued for what would be the last prize to be given out by a most famous Admiral - Sir Philip Viann. I stepped forward to shake his hand, awed by the experience. The Admiral looked somewhat dismissively at my prize and then turned to me; “Huh, carpentry. Me, I can’t even knock a nail in straight.” I was utterly confused. Was this an admission of failure, or a statement of twisted pride?

The British, who had never quite forgotten the naval glories of years gone by, fell in love with the concept of Empire. Diplomats and traders, missionaries, farmers, and school children in their tens of thousands were urged on by Rudyard Kipling to: ‘Take up the White Man’s burden/Send forth the best ye breed/Go bind your sons to exile/To serve your captive’s need’, while geographers hastened to produce maps to hang in classrooms with ever more of the world coloured red – the colour of the British empire.

How many children, one wonders, came to be even more adroit at repeating Kipling’s poetry than Shakespeare’s sonnets, or the fashionable biblical texts! To those who remained to toil at home, Kipling inspired them with the sheer scale of Brit-
ish enterprise: “Oh where are you going to, all you Big Steamers/With England’s own coal, up and down the salt seas?/We are going to fetch you your bread and your butter/Your beef, pork and mutton, eggs, apples and cheese.” To those convinced of the superiority of all things British, and with little media coverage of the horrors that also went with English imperialism, colonisation seemed a most noble cause to follow.

Those with the necessary social connections, personal wealth but little individual acumen, were encouraged by their compatriots to “go and govern New South Wales.” It was easier to be an entrepreneur overseas than try to rectify social injustice in their native land. The prospect of Empire filled the minds of countless young people. Like no other generation before or since each had a destiny - if they were bold enough to take it - that meant they need not go down a Welsh coal mine, work in a Lancashire cotton mill, herd cattle in Devon, till in a London office or grow corn in Tipperary.

It was not just the armies around the burgeoning Victorian Empire that sang ‘Onward Christian soldiers’ as they marched. It was the numerous missionaries and teachers who followed, and sometimes led, the traders; by 1882 the Church of England had established seventy-two bishoprics around the world, each administering a diocese of some several hundred churches. Those public school boys not leading an army or establishing a trading post to the north of Kathmandu, might well have been leading their choirs in a cathedral in India, on a South Pacific island or in a straw-built church in equatorial Africa. And their former headmasters, no less than six of them, went on from Rugby, Eton and Wellington to become Archbishops of Canterbury, while their old school friends filled nearly every high office of state in England and the Empire.

The really remarkable feature of this Victorian evangelicalism was that it made a sense of otherworldliness an everyday conviction of ordinary people and a direct business proposition for merchants. It induced a highly civilised generation of young people to put immediate pleasure and security into the background, to forsake the country estates of their fathers or uncles and put what was perceived to be its duty to the foreground. This duty often entailed setting out with their young wives to live as emissaries of English values in lands where their wives would often die in childbirth as would numerous of their offspring. To the cynical, rational world in which we now live this Victorian form of evangelicalism is hard to appreciate. It stressed the literal accuracy of the Bible (which the schools ensured pupils knew thoroughly), the certainty of an after-life and a conviction that our present lives are but a preparation for a future in Eternity. It was a faith that, to the faithful at least, explained everything. Honesty was a cardinal virtue for which they would be held accountable at the day of judgement. “An Englishman’s word is his bond (as good as a written contract)”, traders elsewhere in the world exclaimed and so, being trusted, English traders went on to become the richest of their kind. God, it seemed to wondering people in distant quarters of the earth, just had to be an Englishman for everything seemed to be moving their way. This set of fundamental beliefs was as much the conviction of the bankers of the City of London as it was of the bishop in his cathedral, or the young maid on her knees in the attic of some stately home. To ignore the importance of this religious passion in the lives of vast numbers of Victorians would be to misunderstand the energy and purpose that built an Empire they really believed could last a thousand years.

To maintain such an empire, Britain found it necessary to expand its navy. Although Britain in the 1880s had the largest and costliest fleet in the world, it was antiquated both in terms of its ships, and its battle strategies. In many senses it had not changed much since the great days of Nelson three quarters of a century before. “The Navy”, the Oxford historian Sir Robert Ensor commented acridly, “did not favour invention.” Indeed, in 1853 when Queen Victoria was invited to watch the navy perform a sham battle, not one of the ships was powered by steam. It was not until 1886 that the first all-steel warship - HMS Collingwood - was built.

In retrospect the fleet that assembled at Spithead for the Jubilee Review of 1887 looks remarkably small - only thirty-five fighting ships, of which nine were unarmed. The reason was simple. Britain had had no significant rival since Trafalgar. Our nearest rivals were the French, whose fleet was far smaller than ours but their gunnery better. The third largest navy belonged to Italy, which now seems most

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*18 We had intended you to be/The next Prime Minister but three;/The stocks were sold; The Press were squared;/The Middle Class was quite prepared./But as it is!... my language fails/Go out and govern New South Wales. Poem entitled ‘Lord Lundy’ by Hilaire Belloch, 1870-1953.
strange. This was the time of gunboat diplomacy when, as was said at the time, local tribes had to be kept in order – in other words conform to British expectations – and the sea-lanes kept clear of pirates who might have interfered with her merchant fleet. All this was to change dramatically after 1871 when the German states became united under the political leadership of Bismarck, and the economic and commercial acumen of the Prussians. Fearing its old adversary, France, Germany started to build up its navy and as it did so it started to seize the few remaining opportunities for colonial expansion - south west Africa (present day Namibia), Tanganyika (Tanzania) and a number of Chinese ports. Suddenly Britain found it had a deep-sea rival, defence had to be taken seriously, and by the early twentieth century the maritime rivalry between Britain and Germany was to have become one of the major causes of the First World War.

Inadequate Education

The expectations of the English, whether they were rich and well-established or part of the rapidly growing upper working classes espousing what had previously been strictly middle class aspirations, seemed to know no bounds as this massive world-wide empire continued to grow. Opportunities were there in plenty for those who had the confidence and skills to meet the challenge. But not enough people were able to take advantage of these circumstances, quite simply because England, having let apprenticeship systems fall into abeyance for many years, was still not taking the education of the majority of its population seriously. It was to rectify this situation that Forster’s Education Act of 1870 required every borough, or parish, to identify immediately each gap, and he then gave the voluntary societies six months - and the inducement of government grants - to establish their own schools. Where this was not done by the end of the year, arrangements would be made to establish locally elected School Boards with the power to levy local taxes sufficient to cover the building, maintenance and staffing costs of these schools.

The possibility of non-church controlled education quickly caught the attention of secular reformists, particularly in urban areas. Cities like London, Birmingham, Leeds, Newcastle and Bristol were quick to establish local Boards of Education. My wife’s great-grandmother, as a young woman in her early twenties was appointed headteacher of the second infant school, Jenkins Street, to be opened in Birmingham in 1873. Within a year she had six hundred children attending her school and, just one year later, nearly nine hundred. There were indeed big gaps to fill. So confident was government that their target of a school place for everyone was now close to being achieved, that in 1880 attendance at school until the age of eleven was finally made compulsory. By that date there were nearly as many children being educated in the board schools as there were in the voluntary schools. In comparison to many of the church elementary schools that were seventy or more years old, these board schools were modern, larger, often better built, properly equipped and able to pay their teachers higher salaries. This caused enormous antagonism as some church members found themselves paying twice over – through the collection plate for the church schools, and through a compulsory rate for the board schools.

By the mid-1890s there were two and a half thousand separate school boards in England, and no fewer than fourteen thousand separate managing bodies for the voluntary elementary schools. By simply ‘filling up the gaps’ Forster had created an administrative minefield. The problem was further compounded by the existence of three separate government bodies, each with a partial responsibility for different, but overlapping, aspects of schooling; these were the Office of Education, the Department of Art and Science, and the Charity Commissioners. First to have been established was the Office of Education which had been set up as a Committee of the Privy Council in the late 1830s. It was not a formal department of government and Forster, as Vice President of the Committee, had full responsibility for the service, but lacked ministerial status. This was a legal nicety that probably reflected pretty accurately the dismissive attitude of parliamentarians towards what they saw was simply a set of arrangements for the poor.

The Department of Art and Science was the second body to be established, just after the outstanding success of the Great Exhibition at the Crystal Palace. It was the Great Exhibition that had persuaded more people to agree with Matthew Arnold “that in nothing do England and the Continent at present more strikingly differ than in the prominence given to the idea of science there, and the neglect in which the idea still lives here.” Lyon Playfair, an eminent Victorian chemist, had recently returned from a study of continental technical education and warned that England was failing to respond to the increasing significance of science and technological knowledge, so that amongst English industrialists there “has arisen an overwhelming respect for practice, and a contempt...
for science.”22 Playfair went on; “We have eminent ‘practical men’ and eminent ‘scientific men’, but they are not united, and generally walk in paths wholly distinct. From this absence of connection there is often a want of mutual esteem, or misapprehension of their relative importance to each other.”

Playfair made his case well, for in 1853 the Board of Trade established the separate Department of Science and Art. This new Department initially confined itself to supporting the various technical and trade schools that had been established totally independent of the activities of the Office of Education, the latter being solely concerned with elementary schools. Some of these technical schools and colleges were well established, such as the London Mechanics Institute founded thirty years earlier by Dr. Birkbeck which had spawned no fewer than six hundred other such institutions all the way around the country. Then in 1853 the College of Preceptors was established, and in 1857 the Society of Arts. From 1870 the Department of Science and Art decided to expand its grant-making role when it found that in the new board schools, particularly those in industrial cities, there was a great enthusiasm to broaden the conventional elementary curriculum so as to include technical and science subjects. Receiving the bulk of their money from taxes, and having substantial grants from the Office of Education through the Payment by Results Scheme, the more imaginative school boards now sought additional grants for technology, science and art. Being less frugal than the Office of Education, the Board of Trade readily authorised such expenditure, funding this through the Department of Science and Art.

The perception of what was meant by elementary education was steadily changing. In practice, that was, but not in law. There had never been a consensus about the age at which elementary education should stop, for in the first two thirds of the nineteenth century children simply voted with their feet and responded to the need to supplement the family income frequently before the age of eleven or twelve. However, as the century wore on so more and more families recognised the value of academic qualifications and had just sufficient income for their children to stay in school, and many thousands of them did just that. Their numbers increased with every year.

The third body to be established was the Charity Commission, set up following the report of the Taunton Commission in 1868 to regularise the way in which the endowed schools were administered. Many of these schools were small and the majority were content to follow a grammar school curriculum but a tiny proportion of the schools so investigated saw themselves as being superior and so influential that they paid little attention to the Charity Commissioners. These included old grammar schools such as Dulwich, Giggleswick and Uppingham, and new schools such as Clifton, Cranleigh, Malvern and The Leys which would soon swell the numbers of public schoolboys in late Victorian years. Also coming under the auspices of the Charity Commissioners were those other old city grammar schools – Manchester, Leeds, Newcastle, Bristol and Birmingham – whose academic standards were on a par with the best that Eton or Winchester could achieve, but whose social cachet was nothing like as great.

While the privileged schools extended their privileges, an increasing proportion of the mass of the population wanted far more out of education than they had been offered in the past. Consequently, many of the school boards started to take matters into their own hands rather than waiting for parliament to act. If youngsters wanted to stay on longer, and had already reached grade six the effective ceiling for what had earlier been understood to be an elementary curriculum - then new subjects would have to be added to extend their learning. The board schools, if faced with a financial shortfall, simply made a bigger demand on the taxpayers who had no alternative but to pay up. The church schools could not do this. Soon some school boards were establishing what became known as ‘higher grade, or higher elementary classes’. T. H. Huxley, whose evidence to the Taunton Commission about the need for a curriculum that balanced thinking with doing had been so persuasive, was particularly successful in persuading the Department of Science and Art to put money into London higher grade classes for science teaching. He told an audience that if you went to a public school, “you shall learn not one single thing of all those you will want to know directly you leave school and enter business life…”23

The pressure for a curriculum that went far beyond the three ‘Rs’ so as to include science and art mounted as more and more people saw the need for education to move beyond a strictly functional curriculum into an education appropriate for a maturing industrial society. The Department of Science and Art responded with alacrity and provided grants for the installation of science laboratories and workshops, later extending their remit to include technical drawing and accountancy. The Department of Education recognised what had become a fair accomplishment and in 1882, even-
tually issued a directive of its own to school boards, which effectively opened the floodgates of innovation; “The course suited to an elementary school is particularly determined by the limit of fourteen-years-of-age”, said this directive, “and may properly include whatever subjects can be effectively taught within that limit.”

Having been blocked from all routes through to secondary education up until then, it seemed at last that the working classes now had a chance. In 1889 the Technical Instruction Act allowed the school boards to set up Technical Instruction Committees, and in 1890 legislation was passed to enable the boards to raise more money through a local penny tax on alcohol, known as the ‘Whisky Money Tax’. In retrospect this was the golden age for technical education, as many towns started to build their own Technical Colleges. The West Riding of Yorkshire even began to experiment with the training of pupil teachers through classes that would go to the age of eighteen, even though classified as being part of the elementary school. This golden age was, however, to be very short-lived, partly for reasons of envy and partly as a result of the most unpleasant form of institutional and social arrogance. It’s not a reassuring story, and certainly not an insightful one, but it is one that has affected, and continues to affect, every single inhabitant of this country right through to the present day.

The elite public schools had looked at this proliferation of technical and scientific education with disdain, and had concluded that technical education was none of their concern. However many of the grammar schools started to become envious of the higher-grade elementary schools, for they saw in pupils of thirteen and above, youngsters who they thought should have been attending their institutions and following their curriculum. At the same time the separate technical and mechanical institutions, who had specialised in industrial training for thirty or forty years, looked on with horror at what they saw as a dilution of standards, if technical education were to be taught by elementary schoolteachers.

Chaos ensued. The Victorians, who had struggled for more than half a century to accept that the state had responsibility for elementary education, now had to contemplate the demand by a moderately educated populace for secondary education, if not for everybody, then certainly for a far greater proportion of children than currently attended the remaining grammar schools. Impatient with the lack of progress many young people simply took matters into their own hands and decided to continue their education where it had started - in the local elementary school. Soon such schools were starting to look very much like Milton’s Academy, places with a broader curriculum and one that was very much rooted in the community. For a while it looked as if Milton’s ideas of two hundred and fifty years before was about to be realised.

The Birth of a National System of Education

The Victorian establishment slowly came to recognise that such ad hoc development had to be stopped if it were not to undermine the status quo. Unlegislated change would make the public schools look educationally irrelevant, weaken the position of the grammar schools and reduce the influence of the Church schools. As a result the next ten years, from 1894 through to 1904, saw the complete reconfiguration of English education. This most significant period falls neatly into two parts. First there was an administrative exercise, one which was long overdue and certainly logical. The tension between the Office of Education, the Department of Science and Art, and the Charity Commissioners, had previously frustrated all attempts to develop a coherent approach to education planning and in 1894 the Bryce Commission recommended that the three bodies be combined into a single Board of Education. This Board was to become effective by 1899. This would clear the way for a new structure for education. It is here that a range of influential personalities assumed a level of influence on the procedures of government that observers, even at the time, were to describe as ‘shameful’. Again, it was all about how to keep the lower classes in their place.

The upsurge of lower and working class hopes for the new higher grade elementary schools disturbed the officials in the Office of Education who were convinced that elementary education was assuming an importance that it did not merit, and had to be stopped. There were also some old scores to be settled, between the traditionalists in the Education Department and the progressives in the Department of Art and Science. Additionally there was the element of intellectual and social scorn on the part of the old grammar schools for a form of elementary education that would involve science and technology which they didn’t even accept as education. The spokesmen for this view were to become the heavyweights of the Headmasters’ Conference, even though their recent declaration of effective independence from state education meant that they themselves would not be involved.
In 1895 Sir John Gorst, an undistinguished liberal politician, was appointed Vice President of the Office of Education, with specific responsibility to carry through the final amalgamation of the three organisations. Gorst’s background as a lawyer, combined with a number of years spent in New Zealand, made him similar to Robert Lowe thirty years before in his cavalier attitude towards the ordinary man – and to the Victorians, teachers epitomised the ordinary man. Gorst assumed that teachers and school trustees had to be told what to do, preferably in forceful terms. But by now the professionals were more confident and better informed about what needed to happen. They would not be so easily brow beaten. Gorst was not a man who liked to be troubled with too much data and so he decided to set up a separate Directorate to give him technical support. This was not seen as a high-profile activity and its first Director was a secondee from the Education Office, an experienced civil servant and academic, Michael Saddler, and an administrative assistant was advertised for at three hundred pounds per year.

The person appointed was Robert Morant, then aged thirty-four, a man with no previous civil service experience, yet who was within seven years “through a meteoric career unprecedented in the history of the Civil Service” to become Permanent Secretary. His influence on educational policy, which extends through to the present day, has never been equalled. Quite simply, education in 2005 is still largely his creation.

His time in Siam came to a precipitous close with a palace coup in mid 1894, and he found himself back in London with ill health, no job and feeling mightily let down after the influential lifestyle he had enjoyed in Bangkok. Then in April 1895, with a reversal of fortune, he applied and got the job as assistant to Michael Saddler. Initially this seemed a humble enough post, analysing statistics, report filing and memo writing, and was sufficiently undemanding as to leave Morant with a lot of time on his own.

Born in 1863 to well-educated, but impecunious parents, Robert was an only child. His father, a man of artistic and literary instincts, died when Robert was ten and his mother, who suffered from continuous ill-health, struggled to find the funds to send her son to Winchester, rather than to one of the local London grammar schools. Morant was a sensitive, reflective and self-contained boy, who held his own with his tougher peers at Winchester by making himself a competent boxer. At the age of seventeen he was resolved to become a priest, and in the following year he went up to New College, Oxford, where he founded a group of intellectual Christian zealots called The Brotherhood. At Oxford he taught Sunday School and even preached in a local village twice a month. To augment his limited funds he tutored the sons of the rich during the vacation, suffering intense remorse that he was not spending time with his ailing mother. A surfeit of theology, in which he got a First, led to his increasing scepticism of Church doctrine, but the love of ritual and order filled an emotional vacuum in his life and motivated his future ambitions.

Shortly after graduating Morant set out for Siam where he was to become tutor to the Crown Prince. Over a six-year period he spent much time working within the Royal Palace in Bangkok, advising the King on a national system of education. The Siamese called this tall, rather lanky and self-contained Englishman Kroo Tai, “the big teacher”. His cool detachment from ordinary affairs and dedication to detail unnerved those around him; “I lately heard somebody remark”, he wrote in his daybook, “that I was ambitious. It never struck me before for one moment. I was only keen to do everything I could and to try and improve everything that I could get into my hands, simply because I hate to see things going needlessly wrong; and yet perhaps one is mixing up, unconsciously, a little human grasping at power. Yet it is most foolish, and I hope I don’t do it so much.”

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*19 An astute judge of character, the indefatigable Florence Nightingale, was asked to help interview Morant for the post in Siam. She wrote after Morant had successfully gained the post, “Mr Morant is a good genius. Whether in England or Siam, he would have a great future if he does not always strain at his tether in doing overmuch work.” As time was to show, Morant never heeded such advice.
resulted in many of the School Boards exceeding their financial authority in developing courses not provided for by Parliament.

In a short time Morant became a highly dangerous and single-minded mole within the Office of Education. Initially Morant’s status was so lowly that there was no opportunity for him to use such knowledge to challenge the Permanent Secretary. But Morant had learnt much about deviousness at the Court of Siam, and found a way of proceeding that led a contemporary to complain, “He was not unprincipled, but he was unscrupulous…one of the greatest autocrats who ever dwelt in the Civil Service.”

Strong language – what exactly did he do? In addition to the task of sifting through all the old office papers, Morant also made two official visits to France and Switzerland to study their systems of education. He was deeply impressed with the order that he found in the Swiss system, and wrote an insightful account of his findings. When he learnt that this paper was to be officially published, Morant went back into the text of his paper and inserted a number of footnotes to illustrate, by reference to the court cases that he had discovered amongst those dusty papers in the Office, just how far short of the Swiss experience the administration of English education was. Kekewick apparently read the text hurriedly, never thinking it necessary to follow up the footnotes, a very dangerous thing for a civil servant to do, and approved the paper for publication. It was a time bomb, and Morant knew how to pull the detonator.

Knowing how slow werely the negotiations proceeding for the merger of the three bodies into the new Board of Education - Morant proceeded to tip off certain people as to the significance of these footnotes. He acted strategically. On Boxing Day 1898, when the rest of the country was at its festivities, he very carefully briefed Dr. William Garnett, the zealous and indefatigable Secretary of the London Technical Education Board - and no friend of either the London School Boards nor of the higher grade schools - about the significance of the forgotten court findings enumerated in his footnotes. Garnett then wrote his own paper which, when delivered to a key meeting of the officials under Sir John Gorst negotiating the details of the merger, accused the school boards of persistently acting ‘ultra vires’ in providing anything other than the standard 3Rs education up to the age of thirteen. The politicians and bureaucrats were shown to be incompetent, while the school board members were disgusted at how a legal formality was being used to prevent the working classes from receiving the beginnings of secondary.

If the courts were to uphold the ruling that Garnett (in reality the mole, Morant) was quoting, it would mean the immediate cessation of all higher elementary classes and make the members of the school boards throughout the country personally responsible for refunding all the funds they should never have authorised. Elected school board officials everywhere were terrified. The official government auditor, Barclay Cockerton, confirmed that in his view the school boards had indeed acted illegally, and that the elected members of the Board were personally responsible for the repayments. The school boards appealed to the courts, but their appeal was twice rejected.

Sir John Gorst, knew that there was no way government could rethink the whole provision of higher elementary education in time for the new school year, and sensed that, in George Kekewick, the Permanent Secretary, was a man whose sympathies were so closely allied with the school boards that he could not be relied upon to work for their abolition. Gorst therefore took the highly unusual step of requesting that Morant - the man he remembered as always having delivered the clearest briefs and the most pertinent statistics – should become his personal secretary. He apparently knew nothing of Morant’s role in fuelling the crisis. Morant moved carefully, but shrewdly. That December the courts were to make a final ruling on the Cockburn judgement. We know from his biographer that Morant continued to brief the technical schools in their case against the school boards, and was probably highly instrumental in ensuring that Cockburn’s judgement went against them. As a result of the ruling there was a constitutional crisis - the school boards were shown to be in breach of the law, thousands of school board trustees were found to be liable for funds they would be unable to repay, while hundreds of thousands of children still had to be taught.

The case moved up to Cabinet level. A sub-Committee of the Cabinet met in March and Gorst was told to propose some temporary solution. Gorst, feeling very unsure of his ground, asked for, the permission of his Cabinet colleagues to bring with him his secretary, Robert Morant, an unprecedented move for a junior civil servant. At the meeting Morant personally put forward the proposal that a one-year stay of execution should be granted. His argument was persuasive, particularly with Sir Arthur Balfour, who was soon to become Prime Minister. Balfour was an autocrat, an aristocrat, and a philosopher of some distinction. He was also an immensely competent politician. Like Morant, he had “little faith in the common man, or in his abil-
ity to think about religious or scientific issues.”

Balfour is a personality who seems to straddle the centuries, with one foot in the social and religious prejudices of the mid nineteenth century and the other in the scientific enlightenment of the twentieth century. A lugubrious, drooping figure, he seemed dwarfed by the towering figure of Morant whose fanatical attitude to work contrasted strongly with Balfour’s intellectual detachment. Balfour instructed Morant to prepare an Act that would replace the cumbersome machinery of the school boards and the separate boards of trustees. Morant proposed a clear separation of elementary and secondary education. He consolidated the new Board of Education into what he - Morant - called the ‘directive brain centre’. Educational policy was from henceforth to be made by central government, but administered as part of local government by the newly established county councils.

The new Act had to deal with the vexed issue of religious instruction. The other contentious issue, that of the elite public schools, Morant contrived to keep off the agenda. Morant knew exactly what power politics would be involved: “The only way to ‘get up steam’ for passing any education bill at all in the teeth of school board opposition, will be to include in it some scheme for aiding the denominational schools”, the sceptical Morant told the Cabinet sub-committee in July 1901. Balfour the aristocratic old Etonian and Cambridge man, and Morant the dedicated civil servant from Winchester, Oxford and the Court of Siam struck up a most powerful symbiotic relationship.

Midway through the parliamentary process Salisbury resigned as Prime Minister, and Balfour succeeded him. Morant’s powers of persuasion were obviously considerable and Balfour agreed that, as Prime Minister, he would continue to take the Education Bill through Parliament. Then the incredible, and to civil servants of the time, unthinkable, happened. Balfour forced the resignation of George Kekewick as Permanent Secretary, replacing him in November 1902 with Morant, just seven and a half years after he had joined the Education Office as a mere administrative assistant.

While such shenanigans were going on amongst the civil servants, the debate in Parliament was frequently vicious. It was the religious issues that stirred the deepest passions, that and the suspicion that Parliament was being micro-managed by an upstart civil servant. Lloyd George eventually closed the case for the Opposition with a startling picture of what would happen under the Bill; “The Clergyman would come down to the school like a roaring lion seeking what little Non-conformists he could devour at the expense of the ratepayer.”

When the government imposed a guillotine motion the Opposition forced a vote on twenty-three occasions between 11.00 p.m. and 3.00 a.m. Many people never forgave Morant for his manipulation of Parliament or for what was soon to become just as clear, namely the way he had allowed the public schools - those schools totally left off the agenda of 1902 - to virtually take control of the secondary school section of the new Board of Education. Years later many members of Parliament shuddered as they recalled the acrimony of the debates. One of the youngest members at the time was Winston Churchill, who more than forty years later, when agreeing to R. A. Butler promoting what was to become the Education Act of 1944, made one condition - that it should not touch on the public school issue. That - Churchill predicted - would release the remaining venom from 1902. So, yet again here was an Act like that of 1870, that was too heavily weighed towards rectifying what politicians had assumed were the faults of the past, and was insufficiently prescient about future needs.
Chapter Eight

**World War, Social Confusion and American ‘Thinkers’**

British society in transition as atmosphere of hostility escalates. Subordination of individual to greater good makes unquestioning patriotism a feature of both British and German education systems. Fast growing British popular press incites Anglo-German arms race, a significant factor in road to war. Centralisation of all elementary education at the Board of Education and within County Councils drastically reduces numbers of locally elected people involved in educational administration. Secondary education virtually untouched, leaving it inaccessible to all but tiny proportion of those aged over fourteen. Influence of leading American thinkers, including F. W. Taylor on scientific management of labour, John Dewey on relationship between education, democracy and community, and J. B. Watson and the development of behaviourism.

1902 is little more than a century ago. Some of the High Street shops with which we are so familiar were already household names – Boots, Burtons, Freeman, Hardy and Willis, Liptons, who already had some two hundred and fifty branches selling their proprietary teas across the country, and the Coop, which had been selling quality food cheaply since the 1860s. For the affluent, shopping was starting to become something of a pastime as a Lady Jeune noted in 1896, “we go to purchase something we want; but when we get to the shop there are so many more things that we never thought of until they presented their obtrusive fascination”. Yet life for many was tenuous and short, and daily affairs were still a struggle. Janet Lawley, a colleague of mine in the Initiative, was headmistress of Bury Girls Grammar School in the 1990s and has subsequently worked with me on developing The 21st Century Learning Initiative. Her mother, born in 1908 and married to an estate factor in Staffordshire, was one of fifteen children of whom only five survived to be adults. Janet’s grandmother had been born in the early 1880s and her childbearing years bestride the turn of the century in the same way as Prime Minister Balfour’s influence did. While the great and the influential lived well in London at the turn of the century, Janet’s grandmother subsequently saw two of her surviving children die as teenagers from pneumoconiosis, contracted whilst working in the coalfields. Death came easily to working people even early in the twentieth century.

The civil service into which Morant had broken like a thunderclap was still relatively small, and certainly elite. In the years before the First World War twenty per cent of civil servants came from just four schools – Winchester, Eton, Rugby and St Pauls, nearly eighty per cent had been at Oxford or Cambridge and about sixty per cent had read classics. Specialised knowledge was not looked for in civil servants, what was expected was sound, all round judgement; highly educated gentlemen was what the civil service sought. By the 1888 Local Government Act sixty-two county councils had been set up across England and Wales, together with some sixty county boroughs, and it was on to this infrastructure that Morant was to impose responsibility for administering the 1902 Education Act. In one move the Act had removed the sole responsibility for education from two and a half thousand separately elected school boards, and twelve thousand five hundred boards of trustees, and made education simply one of the responsibilities of this much smaller group of multi-purpose authorities. Education was primed to be centralised and directed by civil servants, not by locally motivated enthusiasts.

Morant’s influence increased still further when he became Permanent Secretary. Much of the recent debate in Parliament had centred on three alternatives for secondary education. The first was to encourage the upward development of lower class elementary education through higher-grade elementary schools. The second alternative was to develop along middle class grammar school lines with watered-down public school characteristics. The third would have been an amalgam of the two. Once the Cockerton decision had been ratified and the school boards declared as having acted beyond their powers, the chance of the elementary schools expanding upwards was doomed, and with that the curtailing of any hope of a massive development in technical and scientific education for the mass of the population. At the same time any concept of the community school offering a wide range of both intellectual and practical instruction also
disappeared.

Balfour, Morant, and the Churches favoured the idea of the middle class grammar school, and with it the complete separation of the elementary from the secondary system, with eleven as the age of transfer, and in this they were much influenced by several of the heads of leading public schools whose prime interest, as recorded by Baron in 1955, seemed to be "the preservation of the dominance and independence of the headmaster in all matters relating to the organisation of his school, and hence in limiting the powers of the proposed LEAs as narrowly as possible".  

It was consistently stressed by such public school heads that there should be a sharp distinction between the secondary and elementary school systems. Why what that? As far as HMC and the better-established grammar schools were concerned, what happened to children below the age of thirteen was not of interest to them. Such children, and here the influence of the Greek philosophers still held sway, did not yet know very much; the job of filling up their minds had only just started. Furthermore the assumption about elementary schools being provided for those who could not provide for themselves, led to the arrogant assumption that these schools were mainly about social control and not about intellectual gravitas. A compromise between two alternatives had been favoured by Kekewich, the liberal old Etonians, but with his dismissal it became a choice between the two extreme alternatives – an upward expansion of elementary schools, or a scaled-down version of middle class grammar schools with public school characteristics.

"The result (of the 1922 Act) was a triumph for traditional thought, and the adoption of a public school cloak for the higher parts of the education system as a whole. The outcome may well represent the greatest single contribution of the Victorian Public school to the immediate post-Victorian era", recorded T.W. Bamford in his 1967 study of the rise of the public schools. Grammar schoolboys, whether they were from the poorest or the richest communities, would from now on be taught to think and act as if they were associate members of a great public school - always aware of their inferior position, but desperate to prove they were better than their colleagues left behind in mere board schools. "It is an attitude which has affected every single inhabitant in this country directly in one way or another".  

Morant was as tireless as he built a modern office of state as he had been earlier in manipulating the affairs of the Office of Education. No man less energetic, determined, or sure of his own opinions could have established the structures he was to put in place in the next eight years. He created a separate legal branch within the Board. He built up a team of inspectors and made the unusually inspired appointment of Maude Lawrence to be the first ever woman Chief Inspector in 1907. In the same year he also took the decision to create a School’s Medical Branch, a popular move with both politicians and the public at large who had been appalled at the awful state of health of young army recruits sent to Africa to fight the Boers.

Morant eventually succumbed to the persuasion of Mrs. Ogilvie-Gordon (as did also Winston Churchill at the Board of Trade) for the Board accepting responsibility for careers advice.

All that was positive, even excellent. But Morant’s disdain for elementary schoolteachers seemed to be reflected in everything that he did. In writing his elementary school code for 1904 Morant set out what Professor Eaglesham, emeritus Professor of Education at Durham, called half a century later a programme of ‘education for follower-ship’, while later his code for the secondary schools promoted an ‘education for leadership’. Such prejudice was to result in Morant’s eventual downfall. His high-handed dismissal of all things related to elementary education reached its apogee in 1910 when Edward Holmes, appointed Chief Inspector of Schools by Morant four years previously, issued a circular analysing the quality of local inspectors in comparison to central government appointed Inspectors. Holmes was an impulsive man and, what he wrote in that circular was quickly assumed to be what Morant himself also believed. “The difference in respect for efficiency between ex-elementary teacher inspectors and those who have a more liberal education, is very great. Very few of our (central government) inspectors have a good word to say for local inspectors of the former type. It is interesting to note that two local inspectors about whom our inspectors are really enthusiastic, hail one from Winchester and Trinity Cambridge, the other from Charterhouse and Corpus Christi College Oxford. Apart from the fact that the elementary teachers are, as a rule, un-cultured and imperfectly educated, and that many, if not most, of them are creatures of tradition and routine.”

When that memo became public it was the press, the teachers’ associations and all those members of parliament who felt that they’d been
manipulated by an upstart civil servant, who ensured Morant’s downfall. Robert Morant’s prejudice towards, and disdain for teachers, forced his resignation just as surely as similar feelings led to Robert Lowe’s departure forty years before.

With the 1902, Education Act, Morant had finally consolidated a national system of education but he did so in ways that perpetuated many of the singular and most undesirable historical characteristics of English education. “The hereditary curse of English education,” wrote R.H. Tawney, the historian and graduate of Rugby, “is its organisation along lines of social class.” In no other aspect of nineteenth century English social history is this truer than in the thinking that led up to this Act, and which formalized the elite position of the public schools as if the whole idea of such schools were rooted in antiquity. As the author C.P. Snow commented, “Nine English traditions out of ten date from the latter half of the nineteenth century.” The formalisation of the public schools as the yard stick by which all aspects of secondary education were later to be judged, casts its shadow deeply across twentieth century educational thought. As the historian Corelli Barnett wrote in 1975, “The English disease is not the novelty of the past ten or even twenty years, but a phenomenon dating back more than a century.” Morant, more than any other Victorian, fixed the British education system in a set of assumptions that were outdated even a hundred years ago.

Trans Atlantic Influences

Towards the end of the nineteenth century, as transatlantic travel became easier and cheaper, powerful ideas from America started to percolate into mainstream English thinking. Three Americans can be singled out for their influence: Frederick Winslow Taylor, the industrialist; John Dewey, the philosopher, and J.B. Watson, the “Father” of Behaviourism. Each of these exercised a major influence on English education; Watson because of his belief that a child’s mind was shaped entirely by its environment; Dewey because he believed the brain to be as much a product of evolution as the rest of the body, and Taylor because of his influence in shaping human behaviour to be ‘efficient’.

Frederick Winslow Taylor was born to a wealthy Baltimore family in 1856. His early education was conventionally academic and very similar to that of a privileged English boy of the same age. When he was eighteen he did the grand European tour with his parents, but then he did something that no English public school boy of the time would ever have done - he went off and became an apprentice pattern maker and, amidst all the grime and oil and dross of an iron foundry, learned the skills that had made his father successful. Pattern making was the most highly demanding of all the craft skills; apprentices had to be particularly quick thinking, accurate in everything they did and self-critical. For twelve hours a day the young Taylor laboured in the iron foundry, and shared his meals and talked endlessly with men who cursed, chewed tobacco and spat. Despite the social differences these were men for whom the impressionable Tayl ori came to have the greatest respect. “I remember very distinctly the perfectly astonishing awakening I had at the end of my six month apprenticeship when I discovered that the three other men I had been working with in the Pattern Shop were all much smarter than I was.” If it had not been for one man, Taylor was to write years later, he could not have seen it like this. “The very best training I had was in this apprenticeship when I was under a workman, John Griffin, an ordinary man of extraordinary ability, coupled with fair character. There I learned to appreciate, respect and admire the everyday working mechanic.”

Taylor discovered something else in that iron foundry, something that didn’t ring true to his sense of order and efficiency. These men, consummate craftsmen as they were, worked because they got great satisfaction out of doing a job well. While they needed the money to provide for their families, they sought a balance - money was not the only thing that mattered to them. They took enormous pride in their work and it was their skill that gave them their status. The employees’ sense of self-worth, however, was not something that mattered one jot to Taylor’s father. He was the boss, the workers drew a wage from him, and in exchange for money he bought their time - all of it. That the workers sought pleasure from what they did was not part of the employer’s equation. Pleasure was for leisure time. Taylor senior, in common with industrialists across America, was becoming deeply frustrated. While the spectacular inventions of the 1870s and 80s had given business a multiplicity of new and sophisticated forms of machinery, production wasn’t growing anything like fast enough in response. Employers were frustrated by this lag and couldn’t understand why it was.

Having finished his apprenticeship, Taylor entered his father’s company, resolutely determined to solve the problem that was causing his father such difficulty. It soon became obvious to
this quick-thinking young man that the potential effectiveness of the new machinery was severely constrained by the inefficient working practices of the very craftsmen he admired so much, men like John Griffin who preferred a job well done to a job done quickly. Starting at Midvale Steel Works in Pennsylvania in the 1880s, Taylor sought to apply objective scientific data to models of human labour, melding his experience as an apprentice with his early university training in maths and science. Taylor was to pioneer the treatment of manual work as something deserving study and analysis, and in so doing showed that the real potential for increased output was by people working ‘smarter’. By using his stop-watch to measure exactly how long a task took Taylor effectively invented Time and Motion studies.

‘Working smarter’ involved a small team of technical experts, people like Taylor himself, not craftsmen of the like of John Griffin, using their scientifically based insights to tell everyone else in a factory exactly what to do, how to do it, and when. For most people, scientific management came to mean following orders, not asking questions, and certainly not coming up with their own solutions. The fantastic increase in production that resulted - often at a rate of four or five per cent compound per annum – inevitably came at a terrible cost to the average person’s initiative, self-esteem and need for self-improvement. Under Taylor’s scheme of things, working people were simply to be told what to do in every detail. Thinking people, he argued, risked disrupting the system. Taylor understood as much with brutal clarity. “In the past man had been first. In the future the system has to be first,”11 he wrote. His thinking was vastly influential. The motto adopted for the 1933 Chicago World Fair was pure Taylorism; ‘Science Finds/Industry Applies/Man Conforms’. Craftsmen had never seen themselves as conformists; they thought of themselves as thinking, creative practical people whose motivations came from being fully responsible for their own produce.

Taylor recognised that the employees would have to be bought out by the offer of higher wages if they were ever to accept ‘boredom on the job’ rather than, as earlier, ‘learning on the job. In 1911 he wrote: “The primary, if not the only, goal of human labour and thought is efficiency; that technical calculation is in all respects superior to human judgement... the affairs of citizens are best guided and conducted by experts.”12 In a much-reported confrontation between Taylor and a skilled machinist we can hear the lament of that craft mentality: “We don’t want to work as fast as we are able to. We want to work as fast as we think it’s comfortable for us to work” said the machinist. “We haven’t come into existence for the purpose of seeing how great a task we can perform through a lifetime. We are trying to regulate our work so as to make it auxiliary to our lives”13.

The simple truth is that Taylor probably single-handedly did more than anyone else to destroy the craftsman attitude towards work. This is ironic given how important his own apprenticeship had been to him. In future young people would not be able to learn on the job, or have the social and moral support of responsible, thoughtful older men to help them develop a work ethic that could also help define them as social beings.

In many ways Taylor’s concept of scientific management was a product of its time. Economic factors - namely the ever-increasing numbers of unskilled immigrants arriving in America from Europe - gave American employers a continuous flow of men and women willing to be treated like machines in exchange for a step up the ladder in what was seen as the land of opportunity. “You do it my way, by my standards, at the speed I mandate, and in so doing achieve a level of output I ordain, and I’ll pay you handsomely for it, beyond anything you might have imagined. All you have to do is take orders and give up your way of doing the job for mine,”14 said Taylor. “Dumb me down please,” these desperately poor migrants from a Europe now experiencing what England had experienced fifty years earlier might just as well have said, “I’ll keep my creativity to myself”.

Taylor’s success at merging scientific management with the process of industrialisation had a profound effect on the relationship of learning to education, and how education systems were to be organised. For, as Taylor’s followers posited, is not education a system? Henry Pritchard, president of the highly influential Carnegie Foundation for the Advancement of Teaching, proclaimed just that in 1907 when he said, “It is more and more necessary that every human being should become an effective, economic unit. What is needed is an educational system that is carefully adapted to the needs of the economy. A system that sorts people efficiently into various positions that need to be filled in the stratified occupational structure.”15

It’s all very straightforward, the advocates of scientific management seemed to be saying, once you define what you want. You have to take the mystery out of education, stop messing around with the intangibles, and then we can help you design a perfect system. It sounded so very persuasive not only to the Americans but to those officials at the
English Board of Education, urgently seeking a cheap, effective model of education that would suit the ordinary man - the man, it was assumed, who did not need to have any self-esteem.

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While Taylor was primarily concerned with the efficient organisation of labour, John Dewey was determined to establish methods of learning that were congruent with human nature - learning that went with the grain of the brain. Dewey was three years older than Taylor. He had grown up in the small market town of Burlington some three hundred miles to the north of industrial Boston, surrounded by mountains and lakes of great beauty. A somewhat delicate and sensitive child, he had the freedom to grow up slowly and, for the first twelve years of his life, lived a Huckleberry Finn-type existence - "I never let schooling get in the way of my education" - wandering widely through the countryside and keeping the company of traders, craftsmen, and native Americans who still adhered to some of their traditional ways and customs. Burlington retained the air of a pioneer town, a place where Town Hall policy really did depend on public debate and argument.

John Dewey’s great affinity with nature and his deep empathy for the skills and attitudes of working people were exceptional. To his sensitive and gentle disposition he added a rare ability to think in a wide-ranging and coherent way. If his writings often seem convoluted it’s because of his determination to set everything in the widest possible context. As he developed his academic skills, and progressed from Professor of Philosophy at Michigan, to Chicago and latterly to Columbia University, he became for Americans ‘the Philosopher appropriate to his Time’, the kind of thinker that late nineteenth century and early twentieth century England had so sorely lacked. His philosophy spoke of the experience of everyone, with an intellectual sharpness which the advanced processes of the English craftsman had never found a voice capable of describing.

Dewey’s writing and lecturing life was to span nearly three quarters of a century. He frequently clashed with Taylor, for scientific management demeaned what Dewey saw as the very essence of our humanity, namely our ability to think things out for ourselves. Man lives his life in its entirety, Dewey argued, not in separate compartments called work and leisure. He believed that democracy depends on a continuous stream of thoughtful people who are developing their intelligence through everything they do. In this he was a devout follower of Thomas Jefferson who had written when President of the United States of America: “I know no safe depository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them but to inform their discretion.” If employers treat people as if they were automatons, explained Dewey, then they will cease to be inquisitive and personally responsible in their private lives. Community, under such a regime, becomes a nebulous concept, he reasoned, and democracy itself will inevitably be weakened.

It was while Dewey was at Michigan, at the age of forty, that he wrote his three most significant papers, in which he set out his key beliefs, ‘The School and Society’, ‘The Child and the Curriculum’, and later ‘Democracy and Education’. The educational process must begin with, and build upon, the interests of the child; it must provide opportunities for the interplay of thinking and doing within the classroom; the school should be organised as a ‘miniature community’, and the teachers be guides rather than task setters organising fixed lessons and recitations. Above all else, the goal of education had to be the growth of the child in all its totality.

Here was the authentic voice of a man able to reflect on his own youth, and distil his thoughts into a set of guiding concepts. This form of more inclusive learning set Dewey apart from most educators of his time who were deeply rooted in the logic and formalities of the classroom. Dewey readily accepted Darwin’s argument that all life is organic: “Nature has no preference for good things over bad things, its mills turn out any kind of grist indifferently.”16 Dewey went on to say in his essay ‘The Public and its Problems’, “Everything which is distinctively human is learned, not natural, even though it could not be learned without natural structures which mark man off from other animals.”17 In other words, we have the innate predispositions to develop the social characteristics of our species but, unlike other species, we have to learn them individually, and through participation with others.

Rather than leave children to their own devices as French philosopher Rousseau had recommended, or impose subject matter on pupils as traditionalists advised, Dewey proposed constructing an environment in which the child, while engaged in familiar activity, would be confronted with a problem solvable only with the aid of the knowledge and skills learnt earlier within with traditional
subjects. Dewey argued that such a task would require teachers of extraordinary skill and personal learning: which was true for this was not so much a child-centred as what he called a ‘teacher-centred pedagogy’. Teachers had to be very good indeed if children were to develop their full potential.

Dewey feared the impact of Taylorism while Taylor’s followers were quick to dismiss Dewey’s ideas as being unrealistic, romantic and of no utilitarian value. Dewey wanted to celebrate the creativity and uniqueness of the individual. Taylor believed that the skills of the few, imposed on the unquestioning masses, would eventually benefit everybody. Dewey articulated an early twentieth century vision for a people that would have been endorsed by the Founding Fathers in America, by John Milton in England and by the Czech philosopher Comenius, while Taylor, in arguing that economic efficiency should shape all actions, was speaking to a new kind of America. Would he also speak to a new kind of England?

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It was on a flight back to Washington one late autumn evening in 1997 that I was best able to capture the feel of life in the early years of the twentieth century, the time when Dewey and Taylor were expounding their views on human nature. I was sitting next to an American attorney, a woman in her mid-forties, and we fell to talking about our respective work. First she told me about a mentoring project her firm were involved in with a High School in the Bronx. “It’s quite frightening”, she said, “These youngsters have absolutely no role model with whom to compare themselves. They seem so lost and without any sense of ambition or excitement. They are terribly vulnerable to every passing fad, and I honestly believe very different to generations in the past.” I asked her what she meant by generations in the past?

“Well, let me explain”, she said, “let me tell you about my own grandfather.” For half an hour I was riveted by her story and subsequently wished that I had been able to record everything that she said. In essence her story went like this. In 1912 her father, then aged twelve, and his brother some eighteen months older than he, decided to leave the poverty of their home in Rumania and set out for America. They had no money. During the winter of 1912/13 the two boys walked across much of central Europe through Austria and southern Germany, earning just enough money for food from casual jobs on the way. Over the Easter weekend of 1913 the two boys became separated and never saw each other again. Her grandfather kept going and reached Calais with enough money to buy a ticket to Dover, from where he walked down to Devon, and got a job as a farmhand, earning sufficient funds to buy a ticket on one of the last ships sailing out of Plymouth for New York before the start of World War I. Landing in America, he then did what so many other penniless migrants did - he took a job in a sweatshop making shirts. At fourteen years of age he was strong, and knew exactly how to look after himself from his experience of walking across Europe. He worked hard, and put himself through night school, and two years later fell in love with the factory owner’s daughter and they subsequently married. Less than four years later the factory owner died and his young son-in-law took over the running of the whole establishment on his nineteenth birthday. He was a fighter and a determined man to the very tips of his fingers. Older, more experienced people had often tried to force him out of business but he was always just one step ahead of them. Steadily he built up quite a fortune, and eventually moved to Washington. He retired at the age of eighty in 1980, a multi-dollar millionaire living in Chevy Chase, Washington, and died twelve years later.

“I’ve arranged for my firm - you see I’m now the Chairman of the Board - to pledge a lot of time from our own staff to mentor young people. You see I have to admit to being ambivalent about schools. We can’t do without them”, she explained, “because of the enormous growth in knowledge, but we all too easily knock the stuffing out of youngsters at such a tender age that vast numbers of young people have their basic survival skills destroyed long before they’ve had the opportunity even to practice them. We need to see both sides of the coin”, she went on to explain, “for in the currency of education we have to recognise that it’s never about simple alternatives - it’s about both formal as well as informal learning, it’s about emotional and intellectual development, and it’s about practical and theoretical skills, all at the same time. I sometimes think”, she concluded, “that more people had these issues better balanced in the early twentieth century than we do now.”

England in the 1890s

To hold my story together I must return to the England at the late nineteenth century. It has been said that the 1890s in England were a period of unsettlement - “The nation was out of health” - but by the turn of the century the country seemed
to be losing its quarrelsome, adolescent nature and becoming more relaxed, if less convinced about what its destiny might be. Like adolescents whose rapid physical growth leaves them emotionally exhausted, sometimes lost and frequently over-confident of their abilities, so the country would inevitably start to pay the price for far too much having happened in such a short time. This was hardly surprising: “An entire world economy was thus built on, or around, Britain, and this country therefore temporarily rose to a position of influence and power unparalleled by any state of its relative size before or since”, wrote historian Eric Hobsbawn, and, “We have been profoundly marked by this experience of our economic and social pioneering and remain marked by it to this day.” If we are to learn how the English became the people they are, we need to understand this experience properly for it still accounts for much of our behaviour more than a century later.

For the middle and professional classes the years immediately before World War I were reassuringly comfortable, while, for the affluent, weekend parties in lavish country houses set a social style never previously seen. Yet there were deep social and persistent class divisions. One per cent of the population owned sixty six per cent of the national wealth, whilst one thousand owned a third of the wealth. By contrast three quarters of the population owned less than one hundred pounds each, and a quarter lived at a level close to starvation. Many people were starting to recognise that all was not well with British industry, but few were accepting the relationship of this to a national failure to take education seriously. Not only was Britain losing out to the apparently limitless growth of America, but countries like France, Germany and Italy were increasing their productivity far faster. Britain’s amazing earlier industrial achievements blinded politicians to the reality that other countries were educating the mass of their populations far better than we were. The Prince of Wales told a conference at the Guildhall, London, in 1901, shortly after his tour of the Dominions, there was a widespread feeling that England must “wake up commercially”. Alfred Marshall, the economist, complained in 1903 that Britain had lost her industrial leadership because of the very ease with which she had achieved commercial supremacy in the last quarter of the nineteenth century had bred lethargy, complacency and self-satisfaction; “We can ill afford merely to teach foreigners, and not learn from them in return,” he exhorted his audience. Few wanted to take him seriously for the outward signs were still apparently good, and not many understood the technicalities of economics and international trade, nor recognised the paucity of quality education amongst the masses. In early 1900 England even had to recruit bookkeepers from Germany.

Society was changing: in 1908 Baden Powell published his ‘Scouting for Boys’, much welcomed by fathers, and more especially grandfathers, who feared that the present generation of city dwellers had lost the survival skills of the countryman; it was subtitled ‘Instruction in good citizenship’. In the same year the Labour Party sensationally won fifty-three seats in the general election. Formal religious attendance had waned considerably as the nation became more concerned with the immediate problems of social justice, and on a weekend to weekend basis individuals and families were finding ever more relaxing alternatives to listening to sermons. The National Trust had been formed in 1895, at a time when the Music Halls were enjoying unparalleled popularity. The definition of what was, and was not, acceptable public behaviour was also changing rapidly; for five years the police tolerated the very obvious fact that the promenade outside the Empire Theatre was ‘universally and quite openly regarded as the regular market for the more expensive class of loose women’. Such women had not changed much in their attitude towards formal education, often retaining views similar to Harriett Wilson, one of the most famous courtesans in the early part of the nineteenth century, who later told her younger rivals, “I am very ignorant and can’t spell, but there is this advantage in not reading; you are all copies and I am the thing itself.” She intrigued such a literary genius as Sir Walter Scott who called her a ‘smart, saucy girl, with the manners of a wild schoolboy’. While the well to do enjoyed their passing pleasures the more politically astute and sober-minded sought to change the social order. They were to be largely successful partly because of their own energy and idealism, and partly because aristocratic England’s time had nearly come. The Labour Party, as it grew, developed the confidence to acknowledge the way it had been nourished by non-conformity, yet many, in all sectors of society, were becoming ever less certain of their beliefs. In church some congregations mournfully sang: “The human mind so long/brooded o’er life’s brief span;/Was it, O God, for naught,/For naught that life began?/Thou art our hope, our vital breath;/Shall hope undying end in death?”

The Victorian church, having surrounded itself with great rituals and evangelical fundamentalism, found it almost impossible to consider spiritual
truths that were not tied to certainties. You either believed everything or you believed nothing; and the majority were opting for the latter. As G.K. Chesterton, the writer and poet, observed in his own inimitable way: “The Christian ideal has not been tried and found wanting. It has been found difficult, and left untried.”

This was also a fair reflection on an education system that, while it had taught people to read, had done little to get them to think. At this point I need to cast back some twenty years and introduce an unlikely pair of characters whose influence on the day-to-day thinking of Englishmen was to be as immense, and indeed even more influential than the thinking of Frederick Winslow Taylor on individuals to the good of the larger group, meant education inadvertently prepared England for war and the same was probably true in Germany as well through its fascination with Prussian militarism. The emphasis on team games of a

Harmsworth - later elevated to the peerage as Lord Northcliffe - saw his papers derided by Lord Salisbury, the Prime Minister, who described them as “written by office boys for office boys”. His condemnation was basically accurate and troubled Harmsworth not a jot. As his biographer recorded of him, he was “boyish [in] his irresponsibility, his disinclination to take himself or his publications seriously; his conviction that whatever benefits them is justifiable, and that it is not his business to consider the effect of their contents on the public mind.” By the 1890s newspaper boys, with the aid of the newly popular bicycle with pneumatic tyres, ensured a widespread distribution of the papers early each day, while W. H. Smith opened a ‘news agency’ at every station and major road intersection.

The fact that Harmsworth’s papers sold so incredibly well had to be a measure of the limited achievement of elementary education by the 1880s. Such writing would have vastly disappointed William Lovett fifty years earlier. The Harmsworth presses exercised an enormous influence on ordinary Victorians, which largely reflected social and political attitudes and aspirations, rather than challenge them. The simplistic nature of early twentieth century journalism was to have disastrous consequences as, in the build up to 1914, the British public were more influenced by the newspaper proprietors than they were by their elected politicians. A good illustration of this was the shaping of British naval policy. In the 1890s Britain started to build two classes of large battleships, the Dreadnoughts and the Invincibles. The Germans responded by announcing that they would build four battleships for every two built by Britain. The scene was being set for a European war largely caused by colonial jealousy, dreams of economic imperialism, German bellicosity and English military naivety. In 1909 Germany announced it would build four more battleships. Immediately the British press, led by The Daily Mail clamoured “We want eight and we won’t wait,” which quickly became a Music Hall refrain. Public opinion, manipulated by the press, effectively plunged the navy into laying down still more keels.

The way in which the late Victorian schools (public schools in particular) subordinated individuality to the good of the larger group, meant that education inadvertently prepared England for war and the same was probably true in Germany as well through its fascination with Prussian militarism. The emphasis on team games of a
tough physical nature, originally promulgated by the heads of boarding public schools as a way of exhausting boys so that they would not have the energy to think of other physical pleasures, spread deeply across late Victorian England. It placed on a pedestal the village cricket match as an example of Englishness, played out on the ‘squares’ in front of imperial clubs from Poona to Singapore, to Yokahama and Cape Town, as much as it was in Worcestershire or at the Marylebone Cricket Club. More than a quarter of the pupils from Wellington College entered the army, as did one-fifth of those from Rugby and Harrow in the early years of the century. Boys were, and still often are, motivated by stirring military tales and there was a plethora of these. G. R. Henry churned out more than a hundred such novelettes between 1868 and 1902 and – so mixed were the motives of adults that these were often used as a form of propaganda. Some of the most popular pieces such as ‘With Wolfe in Canada’ or ‘With Roberts in Pretoria’, were frequently given as prizes in Sunday School. God was undoubtedly an Englishman it seemed. Meanwhile London was slowly being rebuilt in the grand imperial tradition with the refacing of Buckingham Palace and the broadening of the The Mall providing a grand setting for imperial displays, while Eton College led the way in establishing a school officer cadet force. In both England and Germany the wealthier the parents, the more certain it was that their sons, and sometimes daughters, would wear some form of uniform while at school, and be taught to merge their individuality into the uniform glory of a perfect marching column. History books were rewritten to reflect highly nationalistic interpretations of former events; one of my mother’s treasured early possessions was Arthur Mee’s ‘Our Island Story’ in which the author succeeded in positioning the story of the British in such positive terms that only one picture – that of the burning of Joan of Arc – was labelled ‘A stain on our national flag’.

The word ‘jingoistic’ came back into public use to describe this aggressive patriotism. Stirred up by such patriotic zeal - and it was the same in Germany - war started to look inevitable by the summer of 1914; war of a kind that no one could fully comprehend, for it had never before been possible to assemble such fire power. ’The peoples of Europe did not have to be whipped up by government propaganda. It was in a spirit of patriotic duty that they joined the columns and went to war” in 1914 wrote the historian Michael Howard in 2003.26

On August 4th war broke out with Germany; not many people clearly understood why, but given the prevailing attitudes relatively few questioned its morality. The generals did not know what to do with the armies for, apart from fighting the Boers in Africa; England had not fought a major war since the Crimea, fifty years before. Field Marshall Kitchener, aged sixty-four when the war started, pointed his finger from every billboard: Your country needs YOU. This was a war that was confidently predicted would be all over by Christmas. Emotions ran high. Women gave white feathers to any young man not contemplating enlistment. The Army Council set out to raise a large army of infantrymen, and Kitchener asked for one hundred thousand men. In the first week of September alone one hundred and seventy-five thousand volunteered; three quarters of a million more had enlisted by the end of the month, probably as much a reflection of high unemployment as it was of idealism. Before conscription became necessary in March 1916, two and a half million men had volunteered. Rupert Brooke spoke for the idealism of hundreds of thousands of volunteers when he wrote: “Now God be thanked who has matched us with His hour.” War with another Christian, largely Protestant, country was framed by many as a crusade; as memorials in so many village greens stated in years to come, these young men died “For God, King and Country”. The King of the Germans, Kaiser Wilhelm, was second cousin to King George V - each being grandchildren of Queen Victoria and Prince Albert. The war saw largely eighteenth century military strategy fuelled by early twentieth century firepower, and the results for both sides were devastating.

To support the British army it became necessary for women to take on many of the jobs previously done by men. This was a challenge willingly accepted by the Suffragettes who, in the years before the war had unsuccessfully demanded the right to vote, and saw in the war-time emergency a unique opportunity to demonstrate their equality with men. Without women workers the war effort would have ground to a halt. Women quickly came to dominate not only in nursing, welfare services, offices and in elementary teaching, but also in agriculture and in the armament factories where they almost totally replaced the men. The long term effect of such a gender shift was enormous; not only was it to be seen in the future that women could fill such posts, it was grudgingly accepted by men that to be a wage earner gave a woman dignity and independence, a realisation which was to change the social face of the country. By the end of the century England would have women soldiers and sailors as well, and a woman prime minister.
By 1918 a new Representation of the Peoples Act granted the vote to women over the age of thirty (note how, even then, men could not accept that a woman of, say, twenty nine, had parity with a man of twenty one) that extended the vote from seven million to twenty one million people. It also effectively – at least in the minds of many – implied that women too had a right to secondary and higher education. But the fruits of this were still to be a long time in coming.

Within four years nearly a million English and Commonwealth troops would be dead, and two million wounded. Recruitment meetings built up an exaggerated hatred of the Germans and raised unrealistic expectations of a better world that it was anticipated would follow victory. Boys as young as fourteen enlisted. The Public schools organised Officer Training Corps from which boys straight from its schools automatically enlisted as officers. At one point in the battle of Ypres the average life expectancy of a young officer on joining his battalion was just six weeks. In ‘Testament of Youth’, a book that bears witness to the horror, waste, heroism and the hypocrisy of modern war, Vera Brittain spoke for a whole generation of broken dreams when she wrote,

*We, whom the storm winds hattered, come again,
Like strangers to the place we have known,
Who sought men’s understanding all in vain,
For hardened hearts to grief’s dark image grown;
So, passing through the careless crowd alone,
Ghosts of a time no future can restore,
We desolately roam for evermore,
An empty shore.*

The outcome of the war was uncertain up to the very last weeks. Once America had decided to join the Allies it was nearly a year before she could mobilise an army and transport and equip it to go to Europe. The Germans knew that they had to defeat the British and French before the Americans arrived. With the withdrawal of the Russians from the war following the Communist Revolution in late 1917 Germany was able to concentrate all its military might on the Western Front. In May the Germans launched a massive offensive getting close enough to be able to shell Paris. In July the Allies mounted a counter-offensive forcing the Germans back to the prepared Hindenburg line and in September the Allies with the American Army now coming on stream, broke these lines. The German High Command knew that there was now no alternative but to sue for peace. Just as it had been unclear to many people as to who was responsible for starting the war, so the general mass of the German people did not accept that they should have lost and became incensed when they were forced by the Allies to pay punitive reparations that would cause suffering to Germany for several generations.

“The war to end all wars”, Sir John French, the Commander-in-Chief, had said it would be. “A land fit for heroes” upon the soldiers’ return, promised the politicians, knowing neither what this would mean or how it would be realised. Time was to show that this was an empty dream. Worse still, the broken dream stoked the fires of an even more terrible war to come.

The theologian Richard Holloway, in a remarkable little book called ‘On Forgiveness’ published in 2002 describes how the culture of blame that the triumphant allies attributed to the German people en masse effectively sowed the seeds for the Second World War. By brilliantly drawing together the memoirs of the two men who were to be key figures in this next war around his own personal understanding of the significance of forgiveness, Holloway shows the need for an effective closure to human misplaced passions, if there is ever to be hope of a fresh start.

A few minutes before 11 o’clock on the eleventh of November 1918, the exact moment on which hostilities were due to cease, William Manchester, Churchill’s biographer, recalls that Winston Churchill was standing in his office watching the excited crowds assemble in Trafalgar Square. Churchill recorded that he could not feel jubilant for victory had been “bought so dear as to be indistinguishable from defeat”, and proposed to his wife that they should go to Downing Street to congratulate the Prime Minister. They arrived to find the other members of the cabinet excitedly discussing the possibility of calling a quick General Election. Churchill interrupted to suggest that as the ‘fallen foe’ was close to starvation England should now rush ‘a dozen great ships crammed with provisions’ to Hamburg to alleviate starvation. “His proposal was coldly rejected” records Holloway, who went on to record that, at the very moment Churchill was making his suggestion, a twice decorated German non-commissioned officer was recovering from a gas attack and was being comforted by a sobbing pastor in a Pomeranian military hospital. Years later that soldier set down a description of his reaction to the events, “I knew that all was lost. Only fools, liars and criminals could hope for mercy from the enemy. In these nights hatred grew in me, hatred for those responsible for this deed... the more I tried to achieve
clarity on the monstrous events in this hour, the more the shame of indignation and disgrace burned my brow. What was all the pain in my eyes compared to this misery? In the days that followed, my own fate became known to me...I resolved to go into politics”. 29

That soldier’s name was Adolf Hitler. It seems as if the graduates of the public schools had learnt more from team spirit, playing the game and observing an uncritical belief in the superiority of their nationalistic conception of civilisation, than they had understood the basic tenets of Christianity. Doctor Arnold would have been appalled, but if he had been honest with himself he shouldn’t have been surprised.

Post War Education

The war did nothing to solve the social problems of the world’s earliest industrial nation as it started to pass into mature middle age, and further fuelled the dream of Empire as a way of escaping from the reality of home. The Empire expanded still further as Britain was given a mandate from the Treaty of Versailles to administer German South West Africa and Tanganyika, and took control of Mesopotamia from the Turks. Now the Union Jack even flew over the Garden of Eden on the banks of the Euphrates. But the mood of the Empire was changing. Although it was unmistakeably a British way of life that was now being celebrated in the hotels of London and in officers’ clubs across the scattered colonies and dominions, it was one that involved dancing the Charleston rather than contemplating a selfless eternity as Christian soldiers marching ever onward to civilise the world.

In the last months of the war an Education Act had been introduced by H.A.L. Fisher, another former pupil of Winchester and an eminent historian who later became Warden of New College Oxford. With this Act Fisher did four things: he raised the school leaving age for everyone to fourteen, and abolished the part-time schooling that had existed in parts of the country. He set up arrangements for continuation schools for mixed school/work place education for youngsters up to the age of sixteen, a kind of modern form of apprenticeship, and introduced better salary scales for teachers. Most of these reforms were very short-lived though, for a financial crisis in 1922 resulted in what became known as the ‘Geddes Axe’ (after the civil servant responsible) which not only cut teachers’ salaries, but destroyed the continuation schools before they even got started. This was a particular blow to the hopes of the working classes, and to the advocates of the Workers’ Education Association (WEA), especially to one of its most articulate proponents, the classical scholar, Sir Richard Livingstone, who later became Vice Chancellor of University.

During the 1930s Livingstone lectured widely on what he called ‘An ignored educational principle’. “If our education is to be really fruitful”, he said, time and again, “we must recognise a principle which has been almost wholly ignored in education - the cross-fertilisation of theory and experience.” Livingstone quoted Aristotle to support his thesis; “The young are not fit to be students of politics, for they have no experience of life and conduct. The young can only repeat (what their teachers have told them) without conviction of their truth.” Youngsters in their early adolescent years are full of ill-directed energy, Aristotle had noted two and a half thousand years earlier, but have little experience of real life. It is the same now, Livingstone explained for “without such knowledge of life the lessons of school can mean little to them”. As a result of this, Livingstone said: “Raising the school leaving age may help our economic difficulty by reducing the supply of children in the labour market. But, the value is moral and economic, rather than educational. Forced feeding is not education.”

Livingstone strongly supported Fisher’s plan for continuation schools, because if we lived in Utopia he wrote “and could reconstruct education, the ideal would be for everyone to leave school at fifteen, and then to begin a programme made up partly of earning a living in some practical occupation and partly of some school-based theoretical subjects, especially in the humanities.” Once through adolescence, and with a good grasp of human passions through the study of literature, history and arts, argued Livingstone, “by the age of eighteen far greater numbers of youngsters would be enthusiastic to participate in a very broad range of Adult Education programme than currently proceeded (somewhat half heartedly) to secondary education.” Here spoke a Classicist, and a leading academic. His views were similar to those of Milton and Comenius, and far removed from those of Morant and the heads of the public schools. Regrettably, England in the 1930s was no more ready for such radical thinking than it had been in the 1650s. Nor it seems was it to be ready at the dawn of the twenty-first century.

Between the two world wars attitude towards education changed little, and schools and their teachers were largely left to their own devices. The children of the masses went to free day schools...
until the age of thirteen, while the children of the privileged went to expensive preparatory schools until the age of thirteen and then to ever more expensive public schools until the age of eighteen, whilst their poorer contemporaries were already earning a living. “The dividing line here was as hard as that between the Hindu castes,” observed the historian, A.J.P. Taylor. “No child ever crossed it”, nor indeed understood the world of the other. Having struggled this far in setting up a full national education system it was as if the energies of politicians had run dry. No one asked, or appeared to care, about what children were actually taught. “This was a stroke of unexpected good luck,” continued Taylor, the historian, “for although the state paid the bills, it was the teachers who called the tune.” Teachers and examining boards it seems, each came up with their own, often contradictory conclusions. The records show roughly how many children were educated, but little is known of what they were actually taught and virtually nothing of its underlying character. We know little, for instance, about how religious education was organised, and not much about the teaching of current affairs. Were children taught to respect their betters or to criticise them? “At a guess”, says A.J.P. Taylor, “it’s likely that teachers inclined to right wing policies in the 1920s, and left wing policies in the 1930s.” So, by omission, a new ‘tradition’ was established. Only teachers, it was generally accepted, understood the rationale of what went on in the classroom. Teachers were largely left to their own devices for the better part of forty years, until, that was, James Callaghan, in 1976, invited an uncertain public to investigate the ‘Secret Garden of the Curriculum’.

By the late 1930s classes of sixty pupils in elementary schools had virtually disappeared and there were few classes of fifty. Two thirds of children over the age of eleven were in some form of senior department, which meant that one third weren’t. Yet in 1931 only one child in five aged thirteen or over was in secondary school, and only six out of every hundred pupils in secondary school went on to university. The figure is even more worrying when seen from the elementary school perspective, for out of every thousand pupils starting at the age of five, only four went to university and only one went to Oxford or Cambridge. I would not argue that to go to Oxbridge in the 1930s – or at any other time - was the best or only, definition of success. Far from it. However it is appropriate to judge an age by how open are the opportunities for all young people to go in a variety of directions. By that standard, the 1930s must have been a time of restricted opportunities for, in 1937/8, only a year before I was born, only twelve per cent of boys leaving elementary school at fourteen went on to secondary school, with a further five per cent going on to junior technical school – while a staggering eighty two per cent went straight into employment. It is this generation that, in the past few years have excelled in the degrees they have gained as mature students through the Open University, and it is they who seem to take democracy seriously enough to turn out to vote in elections – be they local, national or European – than do the present younger generation.

How Behaviourism led to a Faustian Bargain

In the 1920s a new, strident, voice started to emerge in America that seemed to vastly strengthen Taylor’s case for the techniques of scientific management to be applied to schools. It was the theory of Behaviourism, advanced by J.B. Watson, Professor of Psychology at Johns Hopkins University in Baltimore and a direct challenge to the classical and liberal philosophical thought expressed by Dewey. “Behaviourism claims that ‘consciousness’ is neither a definable nor a useful concept; it is merely another word for the ‘soul’ of more ancient times” stated Watson. Behaviourism, he went on to argue, attempted to make a clean start. Introspection and speculation, the very qualities that Dewey cherished, should be abandoned. “Only such observations were to be considered admissible as could be made by independent observers upon the same object or event,” said Watson, articulating precisely the empirical methodology of the laboratory studies of physics and chemistry. Psychology, he argued, had to become a purely objective, experimental branch of natural science. Anything that couldn’t be measured, Watson stated regularly and emphatically, either did not exist or was not significant.

Here it is useful to refer back to the decision taken by the newly established science of psychology back in 1859 when Darwin published his Theory of Evolution. While medical science relatively quickly came to see in evolution a theory that created a framework in which discoveries about the body - including genetics, inheritance, DNA, or the origins of disease - could be fitted together, psychology had held out against any acceptance of the mind as being a product of evolution for a hundred and more years. From a twenty-first century perspective this may seem extraordinary, but we should remember that the studies of the brain with
which we’re now reasonably familiar, are largely the result of technologies only developed in the last twenty or thirty years. To the late Victorians the brain was largely a complete mystery, as it was to my class of postgraduate students of education in the mid 1960s. In this context the seemingly wholehearted acceptance of behaviourism, for so long an explanation of man’s actions, should not seem so extraordinary. Psychologists were operating at the limits of the methodology then available to them.  

With the continuing assumption in the 1920s that evolution had no part to play in understanding the function of the human brain, Watson would tell his audiences in 1925 that only when every aspect of the learning process could be quantified would educators be taken seriously. He made an extraordinary claim. “Give me a dozen healthy infants, well formed, and my own specified world to bring them up in and I’ll guarantee to take any one at random and train him to become any type of specialist I might select - doctor, lawyer, artist, merchant chief and, yes, even beggar man and thief, regardless of his talents, penchants, tendencies, abilities, vocation, and race of his ancestors.” That was all there was to it, Watson claimed: control the environment, discard all aspects of inheritance, provide the theoretically correct training and you could define the end product. Schools that do their job properly, his followers claimed, would be bound to achieve the desired outcome. Children should fit the system, rather than the system being adjusted to suit the individual, anything else would be inefficient, and inefficiency was to be avoided at all costs.

The idea was persuasive, particularly in an America already almost convinced by Taylor that it was the vagaries of human nature that were the biggest threat to economic success. “What the hell,” up and coming young Americans would say, if that leads people to feel bored and under appreciated, well, they can have all the fun they want in their leisure time! Yet the practical wisdom of Eliot’s fictional Mr Tulliver back at the ‘Mill on the Floss’ would have seen this as theoretical moonshine. He knew that people were more complex than such a simple explanation would suggest. The struggle to understand human behaviour still divides psychologists into several different camps, and it remains the single biggest cause of tension amongst educationalists.

Dewey’s thinking on education, on the other hand, resonated strongly with those Americans who had themselves grown up in stable communities with well-established values. Many of them were looking at the endless waves of immigrants coming from every corner of a collapsing Europe, and starting to panic. Dewey was right, they thought, in the long run, but such reforming ideas would have to wait a while. In the short term something more immediately manageable and practical was needed. School might be the only common experience such immigrants would have of America. Their own home life might be tenuous and their parents inadequate mentors for new young Americans, so school had to assume that little, if anything, of life outside the classroom would have any beneficial impact on the children. School increasingly had to ‘do it all’, and do this quickly, efficiently and cheaply. The inevitable started to happen in response: once people saw that schools could be required to do something that had earlier been done informally by others, then why should those ‘others’ bother to do it in future?

Taylor’s system of management was good at delivering specific results, but it was indifferent to what it failed to produce, namely thinking people who could do things for themselves. Self-sufficiency, as Dewey always argued, was what humans are all about – which, of course, is what that slightly earlier observer of the human condition, Samuel Smiles, had argued in ‘Self Help’. Deny that impulse, and society is in trouble. However hard you try to push people into ‘unthinking’ systems it doesn’t work for long. Henry Ford, an avid supporter of scientific management, understood this, but couldn’t accept the consequences. “The trouble is, every time I hire a pair of hands I actually get a thinking person”, he moaned knowing that humans delight in having problems to solve, and quickly become bored and inefficient when insufficiently challenged. “You leave your brains at the door when you go to work at Ford”, groaned a distressed worker outside a car assembly plant.

Scientific Management was, in reality, a terrifying Faustian bargain both for education and for society at large. It was as if Taylor and others had said: I’ll give you all that you could possibly wish for in the short term but this will come at the cost of your losing those skills that made the craftsman of earlier times such remarkable people. The Behaviourists’ model of learning created a classroom environment that reflected this pragmatic approach. It was moderately successful in equipping most young Americans with sufficient basic skills to survive in a world of systems. “It was fine,” I was told one gloomy afternoon in Pittsburgh in the early 1980s by a recently made redundant foreman, “The back door of the high school was directly opposite the main gate of the factory. You didn’t
need many skills to travel that short distance!" The same was true in England, and explains why it was that in the early 1980s, as manufacturing industry crumbled and the smokestacks fell, so many workers in England and America felt themselves unable to adapt, be flexible or even consider learning new skills. Years later in the West Midlands people told me of the impact of old, industrial age repetitive skills as having created generations of 'learned helplessness'.
The Labour Party made a spectacular rise to power in the years following the First World War. In the General Election of 1923 Labour gained one hundred and forty-two seats and, in the following year with slightly more seats, held the balance of power. Ramsay MacDonald became the first Labour Prime Minister, a post that he was to hold intermittently until 1935. The Establishment was shaken to its core by this swing to the left. “Today” wrote George V in his diary, “twenty-three years ago dear Grandmamma died. I wonder what she would have thought of a Labour government!” Later, to his mother, he wrote, “They [the new Ministers] have different ideas to ours as they are Socialists, but they ought to be given a chance, and ought to be treated fairly.” A new world order was emerging, but its gestation was to be long and painful.

MacDonald was the son of an unmarried maidservant, who had ended his formal education at twelve, but then continued to work for six years as a pupil-teacher. Fascinated by politics, he joined the Fabian Society where he was employed in a number of demeaning office jobs. He stuck at these, which gave him the opportunity and the money to study for a science degree. In Ramsay MacDonald was a Prime Minister who understood the underbelly of late Victorian and Edwardian Britain. His mission in life was clear: to provide better opportunities for working people within a more socially just and open society. One of his first acts was to appoint Sir Henry Hadow to submit a formal report to Parliament on secondary education for all pupils, a report that would twenty years later provide R.A. Butler with the agenda for the 1944 Act.

The Hadow Report in the late 1920s took a more conventional view of post elementary education than that envisaged by thinkers like Sir Richard Livingstone. Hadow proposed that elementary education should cease at the age of eleven and that the most effective leaving age for all pupils should be at least fifteen, necessitating secondary schools for everyone for a minimum of four years. Here was a clear recognition, not shared by everyone at the time, that education would simply have to go beyond the ‘Three ‘R’s’. Just what this extended curriculum would consist of, however, was left unclear. Sir Henry Hadow wrote in his report “The Education of the Adolescent” in 1926 that “there is a tide which begins to rise in the veins of youth at the age of eleven or twelve. It is called by the name of adolescence. If that tide can be taken at the flood, and a new voyage begun in the strength and along the flow of its current, we think that it will move on to fortune. We therefore propose that all children should be transferred at the age of eleven or twelve, from the junior or primary school either to schools of the type that is now called Central, or to senior and separate departments of existing elementary schools. Transplanted to new ground… we believe that [pupils] will thrive to a new height and attain a sturdier fibre.”

This was the first sign, in a government report, that civil servants were becoming aware of the biological constraints and opportunities for effective learning. Hadow went on to express an opinion that sounds reasonably like that expressed by John Milton nearly three hundred years earlier; “a humane or liberal education is not one given through books alone, but one which brings children into contact with the larger interests of mankind. It should be the aim of schools... to provide such education by means of a curriculum containing large opportunities for practical work, and closely related...
to living interests.”

Having made such a significant observation it was to be a further dozen years before this was followed up by another Report, that of Sir William Spens in 1938, which stated that: “the existing arrangements for education above the age of eleven plus, have ceased to correspond with the actual structures of modern society and with economic facts.” Just what did the Spens Report mean by this? Was it a muted version of what Henry Pritchard was saying in the US, or a possible reflection of Taylor’s concept of economic efficiency? In a key passage Spens wrote: “Intellectual development during childhood… varies in certain important respects”. Segregated education starting at the age of eleven and arranged according to ability was what the Spens Report eventually recommended. That took thinking about secondary education right back to Plato.

Writing his political treatise ‘The Middle Way’ in 1938, Harold MacMillan who, later as Prime Minister between 1957 and 1963 was seen as the last of the Old Guard Tories, expressed a far more inclusive view of education; “It would do nothing but good to the children of every class if the early years of life were spent in the same school. Even when some children went to higher education and others directly into manual or clerical employment, the early association would not be forgotten.” This more conciliatory note might be taken as implying that there was soon to be a softening in the attitude to education as segregated along class lines. The TUC picked up on it in 1943 and noted that the argument was often heard that the children of every class if the early years of life were spent in the same school. Even when some children went to higher education and others directly into manual or clerical employment, the early association would not be forgotten.”

For segregation at the age of eleven to be effective the officials at the Board of Education had to have confidence in the tests that would sort children into ability groups. These tests had their origin in the enthusiasm that had been generated earlier in the century for eugenics, which used a highly simplistic but deeply fallacious understanding of genetics to promote a biological justification for the so-called ‘division of the races’. Henry Goddard had translated the Frenchman Alfred Binet’s intelligence tests into English in 1916 and had enthused about the way they could help clear ‘high-grade defectives’ from the streets, curtail “the production of feeble mindedness” and eliminate crime, pauperism and industrial inefficiency. Goddard argued that feeble-minded people must not be allowed to reproduce, and maintained that the intelligence test was the crucial instrument with which to achieve this.

Within a few years this thinking had become so influential that a number of American states legislated for the compulsory sterilisation of whoever they chose to define as being feeble minded. Within the British government meanwhile, the psychologist Cyril Burt was highly influential. Burt argued that intelligence was innate and social class differences were due to heredity, while the Encyclopaedia Britannica at the time went on to state that “it is cruel to the individual, it serves no useful purpose, to drag a man of only moderate intellectual power from the hand-working to the mind-working group”. Even if intelligence could be measured, the tests as understood in the late 1930s certainly could not achieve such accuracy. An individual child’s performance could be so variable on any given day that such tests frequently showed more than a ten per cent variation. This shortcoming was to cause misery for literally millions of schoolchildren over the next twenty years for, depending on the circumstances on the day of the test, a borderline child could be assigned to either the bottom stream of a grammar school, a technical school, or the top stream of a secondary modern school. Once assigned, few later moved between schools; children rapidly sank into levels of performance that reflected the expectations of the teachers for that class.

*20 Why the split at the age of eleven? There appear to be two main reasons. Firstly because government were shifting uncomfortably from the earlier assumption that elementary education ended at the age of thirteen and a new proposal to establish secondary schools that might initially terminate for many pupils at the age of fourteen. It would be nonsensical for pupils to be in secondary schools for only a single year, consequently two years were ‘lopped off’ the elementary school to create the new primary school. There is a second reason that goes back to the bitter controversies of 1902 between the public schools and the soon-to-be established state grammar schools. The independent schools urged government to establish a separate age of transfer to theirs at the age of thirteen and a half so as to restrict any movement between the two systems. At the time no argument was advanced to transfer at the age of eleven on either social or educational goals.
In the 1920s and 30s, as academics struggled with many new ideas which might help them to understand better how to create appropriate structures for formal schooling, most people just got on with what they had always done - they tried to think things through for themselves, and when confused asked the advice of someone else and always used multiple ways of trying to understand an issue. School had not yet reached the stage where its mechanical structures swamped older ways of thinking.

Take the fascinating case of Barnes Wallis, a highly qualified engineer who had to struggle to break away from the constraints of logical thinking. Wallis was a British aeronautical engineer who, in the late 1930s, was responsible for designing the Wellington Bomber, the eventual workhorse of R.A.F. Bomber Command. When war broke out in 1939 Wallis was on holiday by the sea with his family. He was intrigued, he wrote later, at how his children could skim pebbles across the surface of the water, and tried to ascertain what the dynamics were that set up such a motion. In the early months of the war Wallis tried to develop a bomb that could cause enormous devastation if impacted from the side of a dam rather than from above the surface of a reservoir. He envisioned using such a bomb to crack the massive dams above the Rohr Valley and destroy many of the German munitions factories. There were a number of logistical difficulties to tackle though; not only would the bomb have to hit the side of the dam, but the explosion had to be sufficiently far below the water to exploit the elastic quality of liquid to reinforce the initial shock.

Employing the mathematics he had formulated for skimming pebbles, Wallis eventually designed a bomb, which, if dropped at a certain angle over water, at a certain speed, would skim for a predictable distance before continuing on the same trajectory under water and then sink also at a predictable speed. What was critical, however, was that the bomb had to be dropped at the right distance from the dam - at exactly sixty feet above the water - and at an exact speed of one hundred and sixty miles an hour. Because the dams were heavily fortified, the attack would therefore have to take place at night, preferably with dense cloud cover to protect the planes from enemy fire.

Wallis and some highly qualified engineers experimented with all the technology known to them, but they were completely baffled. There was no way that they could guarantee the required precision. Neither could they work out how to ensure that the pilot dropped the bomb at exactly the right distance from the dam. For weeks the success of the mission hung, quite literally, in the air. Then an airman in another division saw an incredibly easy solution to the second problem. He had been watching his son with an old-fashioned catapult. He picked up the catapult, held it directly in front of his eyes, and observed where the two arms of the catapult dissected the landscape in front of him. Then he moved a few paces forward and noted that the arms of the catapult dissected a different aspect of the landscape. The airman realised that a simple sighting device could be created from just two pieces of suitably calibrated wood that would enable the pilot to know exactly where to drop the bomb.

But how to guarantee that the bomb was dropped at exactly sixty feet above the water? The RAF experimented fruitlessly for weeks with height control mechanisms but could never improve on a ten per cent tolerance, which meant that the bomb could either jump straight over the top of the dam or simply fall to the bottom of the reservoir. Then, one morning, one of the technicians burst into Wallis’ office. “Here’s the solution to the height problem!” All that was needed, he explained to the astonished Wallis, was to fix one searchlight on the nose of the plane, and another at the tail. Calibrated with the right calculations and the two circles could be guaranteed to coalesce at the right height.

Wallis gulped. “How did you think of that?”

There was an embarrassed silence as the technician explained that the previous night two of them had gone to see the ENSA show and when the girl there was doing her striptease, two spotlights moved across the stage and focused their combined light on her. They then realised that it would be possible to do the same thing with the bomber, but focused on water, not on the striptease artist.

Little more than two weeks later, on May seventeenth, 1943, 617 Squadron - with a bomb based on the trajectory described by a child’s stone skimming over the sea, from a plane whose navigation was inspired by the spotlighting of a striptease artist, and located with little more than a boy scout’s catapult - breached the massive Mohne and Eder dams. Three hundred million tonnes of water crashed down into the valleys of the Rohr, devastating the German war effort.

Wallis is frequently referred to as the architect of this military coup, but he was quick to correct the record. With all his brilliance in aerodynamics and his ability to build a bouncing bomb, he had been blinded to simple solutions by the complexities in his own brain. 617 Squadron (quickly to be known...
as the Dambusters) and Wallis himself owed their success as much to the informal experiential learning of people outside the design team as they did to the technical knowledge of aerodynamic studies. Minds of very different kinds working together can achieve more than any single specialist, however brilliant. Learning at this level - learning that involves breaking new ground, and which is truly generative - is nearly always a collaborative activity.

I'm fascinated by the story of Barnes Wallis, as I was the earlier by the stories about William Smith, George Harrison and Thomas Paine - because for all of my adult life I've been confused as to why extremely well-educated people can so often be so blind to the practical problems of the world. It's as if having developed the sharpest possible focus on an aspect of a particular issue they lose the ability to see the relationship of this to the greater picture. But Barnes Wallis was different; he was a brilliant mathematician who was also able to see in his children's attempts to bounce stones on the water a phenomenon that excited his mathematical inquisitiveness. He was able to accept that the unschooled mind of a technician could see something in a catapult that had a totally different relevance to its original purpose, and also realise that by adjusting the position and angles of a pair of spotlights he could calculate their distance above the stage, as easily as over the water of the reservoir. Genius so often lies in the ability to see how ordinary things can relate to others in unusual ways.

World War, and ambitious educational proposals

When war had broken out in 1939 it was followed by the imminent threat of aerial bombardment of major cities and industrial conurbations. Children's lives were at risk and evacuation appeared to be the only answer. The ensuing disruption was so great that by January 1940 over half a million children were no longer in school. The conditions of many of these evacuees from the industrial towns - their physically stunted bodies and obvious lack of earlier education - shook the national consciousness, stirring memories of Disraeli's warning a century earlier that England really was a 'two nation' society. Within a short time many of the teachers had joined the Forces and staff rooms slowly emptied. "It was interesting," I heard a pupil of those times muse years later, "for it seemed that we achieved better grades in the Higher School Certificate in those years than have other pupils at any time before or since. Without a teacher, pupils just shared out the syllabus between themselves, and then taught each other. "Not only did we get good grades but now, fifty years later, I can still remember everything we taught each other far better than I can remember what teachers taught me subsequently at university."

In May 1940 Winston Churchill became Prime Minister and a year later he appointed R.A. Butler to head up the Board of Education. Churchill did not rate this an important post saying to Butler as he was appointed, "I think you can leave your mark there. Besides, you will be in the war. You will move poor children from here", he said, "to here," 8 evacuating imaginary children from one side of his desk to the other. "This will be very difficult. You must make all the young boys cadets. Call them Gentlemen Cadets if you like. I shall call them powder monkeys. They will relieve the pressure on the gun sites. I am too old now to think that you can improve people's natures. Everyone has to learn to defend himself. I should not object if you could introduce a note of patriotism into the schools."

When Butler received his seal of office as Secretary of the Board even King George VI asked quizzically, "I suppose you want to go there?" Butler certainly did want this job. In fact, he wanted it so much that he turned down the offer of going to India as Viceroy, a position that he had earlier greatly coveted. Butler's own life had been largely conventional and comfortably upper middle class. On his mother's side several past generations had lived interesting lives in India, while on his father's side various members of the family had been dons at Trinity College, Cambridge since 1794. Both his uncle and great grandfather had each been headmasters of Harrow at the age of twenty-six, but the young "Rab" Butler failed the entrance exam to Eton. He subsequently went to Marlborough and then on to Cambridge, where he got a First, and was elected President of the Union Society.

Butler had reservations about his own about boarding school experience and later in life he was to question the appropriateness of examinations, when taken so young, as being of any realistic use in assessing future potential. He wrote in his autobiography: "The advantage of day school education... is that children are half the time in the world; the great need of a public school is to look outward and not into its monastic self." He quoted his older cousin who had been killed in the war as saying, "The penalty of belonging to a public school is that one plays before a looking-glass all the time and has to think about the impression one is making. As public schools are run on the worn-out fallacy that there can't be progress without
competition, games as well as everything degenerate into a means of giving free play to the lower instincts of men.”

Butler was certainly an establishment figure but one with more enlightened views than most about what should constitute a well-rounded education. He was a conventional, comfortable member of the Church of England with a social conscience, a good friend of Archbishop William Temple and though a Tory in today’s parlance he would probably have best been described as a Christian Socialist. Butler was a man of many parts, all of which he lived to the full; he was churchwarden at Stansted in Essex for many years, right through his active political life, and on his retirement from Westminster became Master of Trinity College, Cambridge. At the Board of Education he had found an energetic team of civil servants willing to follow a determined minister strong enough to take up the challenges left over from the 1902 Act, together with the reports from Hadow and Spens, which still awaited implementation. Leading this team was the permanent secretary, Sir Maurice Holmes, a man whom Butler described in his autobiography ‘The Art of the Possible’ as “brilliant” yet “derisive of many of the persons and fatuities that came our way, yet acute in ideals and practices.” Holmes in turn described himself perceptively as “a very hardened administrator”. He was a classicist by training and contemporaries noted how he and his colleagues made constant reference to the Platonic tripartite description of mankind, which they saw as their duty to protect and perpetuate. Holmes was a man very much in Robert Morant’s image; the Department retained its pledge to perpetuate the status quo, and with its cavalier attitude towards state school teachers, whilst senior civil servants invariably sent their own sons to public schools. Of the seventy leading figures involved in the administration of education in the ninety odd years between 1870 and 1963, fifteen were educated at Eton, twenty-six others came from the nine ‘Clarendon schools’, and eight from other public schools, thirteen came from schools in Scotland, Wales or outside the system and just seven (ten per cent) from State schools - the very schools that they were administering.^

On 12th September 1941 Butler wrote to Churchill stressing “the need to adopt an education system to meet present social requirements” (a direct reference to Hadow and Spens). Butler went on “I instanced the need for industrial and technical training and for a settlement with the Churches about their schools and about religious instruction.” The following day Butler received a blunt rejection of his proposals. “It would be the greatest mistake to raise the 1902 controversy during the war... I think it would be a great mistake to stir up the public schools question at this time. Your main task at present is to get the schools working as well as possible under all the difficulties of air attack, evacuation etc.” wrote Churchill. “If you can add to this industrial and technical training, enabling men not required for the Army to take their places promptly in the munitions industry or radio work, this would be most useful.” Holmes saw this rebuttal before Butler and added his own memo, concluding: “The delay is of course disappointing, particularly to those of us who, like myself, cannot hope to accompany you into the Promised Land, but that you will lead the children of Israel there, I do not doubt.” A “Yes, Minister” scenario if ever there was one.

Butler’s reaction to being put in his place by Churchill was fascinating. It says much about the man, and the character of civil servants in the 1940s, that he could respond with an obscure reference to the Old Testament at a time when London was suffering almost nightly bombing raids from the Luftwaffe. “Having viewed the milk and honey from the top of Pisgah,” Butler wrote, “I was damned if I was going to die in the land of Moab.” I therefore decided to disregard what he said and go straight ahead. I knew that if I spared him [Churchill] the religious controversy and the party political struggles of 1902, and side-tracked the public school issue, I could win him over.” And that is just what Butler did. By a sleight of hand he put the public school question off the agenda by creating a separate Commission - led by the Scottish Judge, Lord Fleming, that was not to report until after the new Act became law. Butler negotiated intensively with the Church leaders outside Parliament in a way that deflected the viciousness of 1902. With the help of his permanent secretary, Maurice Holmes, it took Butler three years to earn a genuine endorsement from Churchill. “Pray accept my congratulations,” Churchill wrote in a personal note, “You have added a notable Act to the Statute book and won a lasting place in the history of British education.”

How did Butler do it? A committee was set up under Sir Cyril Norwood in 1943 to further refine the proposals for a tripartite form of secondary education as sketched out in the Spens Report. Norwood, Headmaster of Harrow and another classicist from Winchester (he had earlier been Butler’s headmaster when he was a boy at Marlborough) endorsed Spens by concluding that individuals had enough in common in terms of capacities
and interests to justify separating them into three groups. The first group would contain those “who can grasp an argument or follow a piece of reasoning”, and are interested in language as expression of thought. Youngsters who could see “the relatedness of things, in development, in structure or in a coherent body of knowledge.”24 The kind of pupil, in short, Norwood would have expected to attend Harrow, pupils of a kind senior civil servants were sure they had once been themselves.

The second type of pupil were those “whose interests and abilities lie markedly in the field of applied science or applied art” and who should therefore follow a technical education. The third group, as defined by the committee, were pupils who “deal more easily with concrete things than they did with ideas”. The mind of such a pupil must turn its knowledge or curiosity to an immediate test, argued Norwood. “Because he is interested only in the moment he may be incapable of a long series of connected steps; relevance to present concerns is the only way of awakening interest; abstractions mean little to him.” Norwood recommended that this third group - the bulk of the population - needed an essentially practical, work-based education. Holmes and his civil servants appreciated this perfectly. It had been the case made before by Spens, Hadow, and Morant and was what Roger Ascham had had in mind back in 1570, but by making such differences as defined by Plato seem natural, it followed that it was necessary to reinforce them through education to ensure social order. That is exactly what the civil servants set out to do in their drafting of the 1944 Act, and in this they most certainly succeeded.

Once all the negotiations had been completed, the Bill designed, debated and eventually passed into law, did Butler actually approve of the outcome. Indeed is that even a reasonable question? The way the Act was carried through is a classic illustration of the different, but complementary roles, of politicians and civil servants. From his memoirs it seems that Butler had a grand vision that was informed, liberal and Christian. But his view of life was patriarchal. The first and only time I met Butler may serve to illustrate this. It was Christmas Day, 1965, in the tiny church in the village of Dervaig on the island of Mull in the Scottish Hebrides, where I was doing some research. That afternoon there was a service of seven lessons and carols. The church only seated some forty people. The lessons were read by Butler, then Home Secretary; Walter Hamilton, the Headmaster of Rugby and Chairman of the Headmasters’ Conference; Sir Charles Maclean, the Chief Scout; the librarian of the House of Commons; a gentleman farmer who was a distant cousin of the Queen, and Lady Congleton, the granddaughter of Lord Strathcona who had built the Canadian Pacific railway. The only ‘local’ was the village postman. Yet, in the atmosphere of twenty years before, when Butler was patiently negotiating the details of the 1944 Act, it had been his very patriarchal ability to negotiate with the teachers, with the leaders of the Anglican, Nonconformist and Catholic churches, and even with the more conservative members of his own party, that enabled him to achieve a system of universal secondary education after nearly a century of fraction and indecision.

When Churchill had suggested to Butler that he should tell the teachers what to teach, Butler responded sharply that this was most certainly not his responsibility. He recorded that Churchill looked “very earnest”, and responded apologetically; “Of course not by instruction, but by suggestion”.25 This was the working partnership and respect for professional opinion that Butler, the nephew and great grandson of two Headmasters of Harrow, fully understood. As far as Butler was concerned it was the job of the politicians to provide the structures for education; it was most certainly not for them to tell teachers what to teach, at least not the teachers at the public schools, for such men were assumed to be people of considerable intellectual and moral authority, entirely able to decide upon curricula for themselves. Sir Maurice Holmes would have respected that code as far as the heads of the public schools and the old grammar schools were concerned, but not as far as the heads of primary schools or the new secondary modern schools (the schools set up to deal with the third category of young people, those it was thought who could “deal more easily with concrete ideas”). Their Heads were, from the very start, seen as lesser beings. At this level, education was to be more about social control than it was about the development of the mind; in this orderly, classical view of the universe pupils in their schools would always be under instruction and therefore not be expected to think very much for themselves.

So what did the 1944 Act achieve? It met its stated aim of providing education for all up to the age of fifteen on the basis that the nature of a child’s education should be based on his capacity and promise, not by the circumstances of his parents. Education for all except, that is, for those who wanted to buy out of the system. Much to the surprise of the public schools - during the war many of their Heads had seen themselves as a threatened species26 - Butler succeeded in keeping the ‘public
school question’ out of the parliamentary debate.

Primary schools for all pupils up to the age of eleven were to become universal under the provisions of the act, and secondary schools provided for all pupils up to the age of fifteen, eventually raised to the age of sixteen in the early 1970s. Elementary schools, which had earlier catered on a single site for pupils as old as fourteen, were abolished. This formal recognition of two stages of education was largely welcomed at the time as an advance. Years later Butler himself was not so sure. If there had to be a split it was not thirteen a better age at which to impose it? This was after all the age at which children educated privately took the Common Entrance Exam and went off to public school. Robert Morant in 1902, and subsequently Maurice Holmes knew this, but they actually wanted to keep the two systems apart. They had no intention of seeing movement between state and private provision. It upset their sense of social order. In addition, Butler noted with regret, it meant that large numbers of children had to move from their local primary school to a much larger secondary school often some distance from their home. At the impressionable age of eleven children were forced out of the security of a community which they knew, and which knew them, into a much larger and often anonymous school-based community with few, if any, direct links to the rest of the world. Despite good intentions the 1944 Act further undermined England’s already weakened sense of local community.

In splitting education into two self-contained sectors the Act virtually ensured that each would go their separate way, a dichotomy often simply expressed as primary schools teach children, secondary schools teach subjects. English education has suffered ever since from the structural difficulty of seeing the significance of different, but individually idiosyncratic, stages of development across the entire life span. It has also meant that primary schools inherited the dismissive attitudes associated with the charitable provisions of the nineteenth century, while secondary education started to assume the more favourable status associated with the old grammar schools and - but to a lesser extent - the newer public schools.

Butler achieved what Churchill had thought was impossible. He had brought about a religious settlement between the churches by which all their schools came under the control of the Board of Education and, in exchange for surrendering their autonomy, had relieved them of what had become crippling costs of maintaining more than twelve thousand ageing sets of school buildings. For his part Butler pledged that religious education and a daily act of worship would become essential features of all state schools. After the battles of the previous one hundred and forty years the Church now had everything it originally wanted - but had got it, or so it seemed, because the majority of the population was no longer seriously interested in formal religion. At least not sufficiently interested to teach their own children, but still with a vague fear that, without such instruction, their children would somehow miss out. It was a bad deal for religious education, as it quickly came to be seen by pupils - unless it was well taught, which too frequently it was not - as a form of social control.

Twenty five years later, as Master of Trinity College, Cambridge, Butler wrote regretfully in his memoirs: “Most important of all, in the long run, is that the perfunctory and uninspired nature of the religious instruction provided in all too many local authority and controlled schools had begun, on the opinion of people well qualified to judge, to imperil the Christian basis of our society.” Nearly half a century later Alistair Campbell, the Director of Communications in Downing Street in 2002, stridently told reports, “We don’t do God; in England we don’t do God.”

Post War Realities

Of course, it’s easy to be critical with hindsight. All of this was sixty years ago at a time when World War II seemed to be coming to an end. Churchill had roused the energy of the nation in 1940 by declaring that “if the British Empire were to last a thousand years, men would say that was their Finest Hour”. We now appreciate how crippled England was to be by its under-investment in new technology and that, within a few short years, the ‘workshop of the world’ would no longer be housed in Britain. We also know that civilisation in a democracy is dependent on a thoughtful and knowledgeable society able to make long-term decisions that often require the deferment of gratification. Looking back we can see that England was about to lose confidence in itself to the extent that, within twenty years, the American Secretary of State, Dean Acheson, could taunt, “England has lost an Empire, but not yet found a role.” We also know that a socially divided education system really is our country’s Achilles heel. As the election campaign got under way in May 1945 Churchill saw the imminent collapse of the world as he understood it. “I dreamed that life was over,” he confided to his doctor.
When the votes had been counted on 26th July 1945, Labour had won a massive majority. Churchill resigned, as did Butler. That evening Clement Atlee became Prime Minister of a Labour government that was to last until 1951. He appointed Ellen Wilkinson to be Minister of Education and the task of implementing the proposals of Butler’s Act fell to her.

It would be hard to imagine two people more different than Butler and Wilkinson. Ellen Wilkinson had, in her own words, “fought her way through to university from a working class home” and in the process, like many other Labour politicians, built up a strong personal loyalty to the selective grammar school which had made her success possible. A passionate worker in the cause of developing life opportunities for the working classes, she joined the Communist party before becoming a member of the Labour party. As MP for Jarrow she led the Hunger March of 1936. It also fell to her to justify the newly defined tripartite structures for secondary education. “The three different kinds of schools reflect the uniqueness of each child,” Wilkinson told an uncertain Parliament, “and will help to revalue the dignity of labour. They will have parity of esteem. The grammar school is now a specialised type of secondary school and not the real thing.” She had a hard time in explaining this. Many in her own party felt that this was not parity but three social grades “arranged in order of prestige and performance”, which, as time was to show, would soon prove to be the case. “These plans we are putting forward,” Wilkinson went on to tell the House, “put the child first. This variety is designed to suit different children, not different income groups.” Turning on her own colleagues who wanted “grammar schools for everyone” she argued forcefully and with common sense on her side. “No child must be forced into an academic education that bores it to rebellion merely because that type of grammar school education is considered more socially desirable by parents.”

“All kinds of employment are honourable,” the minister declared elsewhere, trying to throw back the tide of attitudinal change that had flowed with the Industrial Revolution. “The British people are learning the hard way how dependent is a civilised community on its farmers, transporters and miners, and its manual and technical workers.” Eventually”, promised the minister in a note she wrote when she was already dying of cancer, “parents will see that [the secondary modern schools] are good.” Unfortunately most people hardly ever did. It was not the fault of the teachers. Everything around the child told them that, at the age of eleven, by the standards the English valued, they were nothing more than labourers; they were conditioned into thinking it, and the intelligence test, they were told, had proved it.

Ellen Wilkinson died before she could complete her difficult, and probably impossible, task. Her death was a tragedy for the creation of this new kind of secondary school, which presented a unique opportunity to think about the way in which adolescent energy could be positively harnessed. As the minister was dying her civil servants attempted to expand on the case she was making. They did so by drawing heavily and unapologetically on the work of John Dewey; “The focus of the secondary modern school,” they wrote in a departmental pamphlet, should be on “the development of the whole child”, and “everyone knows that no children are alike.” Departmental officials cautioned: “This requires extraordinary skills in teachers for this is not so much a child-centred as a teacher-centred pedagogy.” It was hard advice to swallow for a country that was uncertain whether such schools even merited serious attention.

George Tomlinson, who succeeded Wilkinson, added his own perspective, drawn from his childhood where he had left elementary school at twelve to work in a cotton mill. He saw in the curriculum that could be shaped up for the secondary modern school, a chance of turning the social clock back to an earlier, simpler concept of community. “The rapid industrialisation of the last century has brought with it many material benefits, but these have come at a cost. For the town dwellers it has entailed a loss of standards of behaviour and of craftsmanship, a loss of directness and simplicity”, it was noted in a departmental note of 1947. The same note went on to show how the closeness to nature enjoyed by those brought up in traditional communities had been lost, in language strongly reminiscent of Dewey.

The secondary modern school set out to create its own self-contained community in which children’s growth could be balanced and harmonious, and where the disintegrating processes of an industrial economy did not operate. Schools should create within their walls the image of an idealised home as haven from the pressures of society, and the “deadening routine of much industrial work.” “Behind the new secondary school stood the lost village,” wrote Ken Jones, Professor of Education at Keele, in 2003, in his commentary on education in England since the Butler Act, “or, to put it another way, the school was encouraged to turn its back on the industrial world.”

That was the dream of civil servants and politi-
cians little more than fifty years ago, in the times of the parents and grandparents of many of the readers of this book. What happened as a result of the collapse of this dream lies at the heart of the rest of this book.

The other voice to whom the architects of the 1944 Act could have listened was that of Sir Richard Livingstone. What Livingstone wrote in ‘The Future of Education’, published in 1941, remains highly relevant at the start of the twenty-first century. “Why are we an uneducated nation, and how can we become a better educated one?” he asked. He went on to answer his own question; “The chief uses of our present elementary education, it seems to me, are to enable a minority to proceed to further education, and the rest to read the cheap press. To cease education at fourteen is as unnatural as to die at fourteen. The one is physical death, the other intellectual death. We have shown (the vast majority) of the population a glimpse of the promised land, and then left them outside it...We have treated the majority as if they were to have no leisure, or as if it did not matter how they used what leisure that had. They might be machines, or animals; men, in the full sense of the word, they could not be. That is the type of democracy with which we have been, and are, content. 18

“In education, as in life, we are formed by our atmosphere without knowing it”, Livingstone continued. “We store up, unconsciously, spiritual tissue of whose nature and importance we are unaware...For the mind is like a garden. Seeds are scattered on the soil and some are lost but some lie inert until the outside influence of sun and moisture waken them...That is a parable of education [in which] is a law of delayed action, by which seeds sown long forgotten only grow in later years. The most precious fruits of a good teacher’s work are those he is never likely to see.19

If the school sends out children with a desire for knowledge and some idea of how to acquire and use it, it will have done its work. Too many leave school with the appetite killed and the mind loaded with undigested lumps of information. The good schoolmaster is known by the number of valuable subjects that he declines to teach.”20

That was a vision of education that Rab Butler truly appreciated. So had John Dewey, and so would have Milton long before him. Adam Smith saw the limitations of formal schooling, as had Doctor Arnold and even more so his son Matthew. Robert Morant, Roger Ascham and Edward Thring and many others, accepted much of the argument - but therein lies the problem. We now call this ‘cherry picking’ - looking just to the fruit of a new idea without realising that the fruit is a product of a new kind of tree or, as Einstein is reputed to have said, you’ll never solve a problem by using the same thought processes that created the problem in the first place. Those who only see part of the problem and proceed with great energy to solve it as if it were the whole problem create endless further difficulties. There have been many men in recent times who see only part of a complex picture, men like Frederick Winslow Taylor, J.B Watson, Kenneth Baker, John Patten, David Blunkett and most recently Chris Woodhead. The present Secretary for Education, Charles Clarke, has even suggested that subjects such as philosophy, classics and medieval history are simply ornamental and ought not to be supported by government grants. 41 William Lovett as the practical man, and Richard Livingstone as the intellectual, probably saw most clearly the muddles we would get into if we fell foul of such ideas. Now we have to clear this mess up again, as a matter of the utmost urgency.

* * *

This conviction takes me back to where the present part of this book started, for it was in the summer of 1947 that I heard my grandfather and great grandfather ponder the question of inheritance. It was a time of great austerity in England; the war had to be paid for, the miners were on strike and there was a crippling shortage of building materials needed to restore the country’s shattered infrastructure. To add to all this England had just experienced the coldest winter in living memory, and a summer so wet the combine harvesters could not get into the fields. Livingstone could dream of an educational utopia, Atlee struggle with the details of a faltering economy, and George Tomlinson argue over the logistics of implementing the 1944 Education Act; meanwhile the rest of the population were thrown back on their own devices, devices which suggested that, at least in part, the attitudes of pre-industrial times still survived.

I have in my possession copies of ‘The Woodworker’, a monthly magazine that spoke about practical ideas to people in the 1940s ‘keen to make ends meet’, men who saw beyond the tools they used to work a whole philosophy of life. Ponder the attitude expressed in the quotation that follows as this history of social and intellectual change in England over two and a half centuries comes to an end. The editorial read: “Now and again we get sharp reminders of the value of a skilled pair of hands in an emergency, even of those ancient skills which are fast dying out. We saw it in this
year’s harvest when elderly farm workers, accustomed in their younger days to the wielding of sickle and scythe, came for a brief while into their own again. They must have loved it, in spite of the ache of bodies growing old, because to be able to do well and neatly any piece of skilled work stirs a man’s pride and satisfies something deep down in his nature as nothing else does. In the modern world this need is too often left unfulfilled, and not only unfulfilled, but often is so overlaid with an easier type of pleasure that a man may hardly be aware of its existence. If he feels restless and discontented he tells himself that he needs more money, more opportunities, more leisure, more anything, rather than face the hard fact that only in one’s own ability to do a job well can one hope to find any sort of content.”

I don’t know who actually wrote this, it was simply signed ‘Chips from the Chisel’. This homely but deeply reflective tradition of what I can now only call the fully integrated person was still alive little more than sixty years ago. This kind of person internalised the thoughts of efficiency experts, philosophers, and psychologists, but knew that only as individuals could they make up their own mind.

It’s why I’ve called this book ‘Master and Apprentice’, for in the relationship of the two is the natural rhythm of human learning, something so deeply etched into human nature that we ignore it at our peril.
In a story as considerable as the one I’m telling, it’s important to define what I mean by the ‘here and now’. It’s a subjective classification. It refers to the events I’ve observed for myself, though only recently with sufficient maturity and a sense of proportion have I been able to make sense of often disconnected and messy learning experiences. As far as the recent past is concerned all the events described in the previous chapters happened before I was born – I had to learn about them from others. When I was young I was content to know just enough to satisfy my childlike curiosity. As I became a teenager I started to connect limited parts of the story to what I heard my parents talk about, and became fascinated about the life of my ancestors as recorded in the family bible. At university I was naive enough to think that I’d already gained a pretty exact understanding of history, and indeed my own belief system. Thankfully, in every year since then, daily experience has shown me how much more complex and problematic life actually is. I have learnt that the telling of history, unless one is very careful, is sometimes little better than the creation of fiction. Of all the characters alluded to in the past chapters I met only three – R.A.Butler, my grandfather, and my great grandfather, though I vividly recall seeing the ships gathering in Lyme Bay prior to the Normandy landings in June 1944, and the bitter cold of the winter of 1947.

The world I was born into, a world of adults who – by our present standards – had only a limited view of our biological origins, was one where people still told stories and tried to work things out for themselves. That is what I was taught to do; I tried to understand the pattern of everyday life by distinguishing between, as it were, the warp and the weft and the little tufts of wool in between. I was expected to be inquisitive.

It’s only as I’ve written the past six chapters that I’ve realised that the more doors history opens the more numerous it seems are the alternative questions that beg for answers, I deeply regret that I did not have this knowledge when I became a headmaster thirty years ago, and regret even more my earlier inadequate appreciation of the inner politics of education. Inevitably what I write is a highly abbreviated account of a most complex story, and a highly subjective one at that. No two people would record this in the same way, nor probably share my same view of events. But that doesn’t matter. What does matter is that I hope you’ll use this account to tease out your own understandings of how we’ve each been shaped by cultural events long past, whose shadows still give form to things we observe every day.

Hopefully these chapters will help you recognise in the sometimes maligned idealist down your street a mute John Milton; in the young ‘efficient’ and highly energetic bureaucrat is maybe another Robert Morant in the making, and in the assessment expert someone whose plans for accreditation don’t actually go much beyond the ‘payment by results’ legislation that inhibited a proper education for forty years in the nineteen century. With luck this account will help you recognise a latter-day Richard Livingstone, a future John Dewey, and to recognise in the tensions as played out between politicians of the ilk of Ellen Wilkinson and R.A. Butler the rightful political struggle to provide the appropriate political response to the needs of successive younger generations.

Here, in the two chapters of this part of the book, I take the same personal approach to an understanding of my own time and how these have lengthened some of the earlier shadows, obliterated others, created new shades of meaning as well as letting in the bright sunlight of some brave new ideas. To start with, in Chapter Ten, I’m largely reacting to what I saw around me, having been moulded by the culture that I was born into. In the following chapter I recount how I started to become one of the players, in a small way to start with, but as I came to understand better what was, and what was not happening, I started to make decisions that changed what seemed to have been expected of me. But not as many as I would have liked because, to an extent, I was trapped in my own past - very simply for too long I was too defensive to those senior to me who I sensed were prevaricating in the face of challenges. Maybe, having got the bit between my teeth, as you will read in Chapter Eleven, I had earlier been a little too scared by earlier ‘put downs’ to have the confidence, (and the necessary friends) to push my ideas hard enough. I don’t know and never will know. That doesn’t matter, for that too is in the past. But Part Three is not the end of the book, and
in the following section - “Our possible futures” - may well be the seeds of something far more significant than any one person, however well assisted by a splendid organisation around them, could ever achieve. Perhaps the book is best understood with a horticultural metaphor; first there is the base soil – our origins as a species and a planet; then the humus, the history of our culture, that makes the soil fertile. Then there is the way we till the soil in the Here and Now so that, in the fourth part, new kinds of plants can emerge. Treat the Postscript as being the gardener’s after-care service!

To those readers who are already familiar with my earlier book ‘The Child is Father of the Man; How Humans learn and Why’ it is possible to skip through chapters ten and eleven which largely summarise the former book.
Chapter Ten

"THE CHILD IS FATHER OF THE MAN"

Moving from historical treatise to personal experience; my interaction with a world of constant challenges. My attempt to live with and then to alter the impact of events shaped long before I was born. Young children learn about history in strictly abstract terms ("Once upon a time...") but as they grow they increasingly interpret this through the insights gained from daily experiences. Steadily, imperceptibly, the abstract merges with early subjective experiences and then we find ourselves to be actors in a drama conceived long before our time. We start to experience a tiny part of life's enormous drama in microscopic detail. This chapter attempts to explain how I think I became the young man confident enough to start doing the unusual, a sequence of questioning, experimenting and hypothesising which eventually resulted in the story told in this book.

I was born, the eldest of three children, just before the start of World War II. Circumstances favoured the development of deep familial roots: all four of my grandparents were alive, as were two of my great grandparents. When I was taken for walks around lanes in south Devon many a farm was pointed out to me as the home of some second or third cousin. There was a family Bible detailing my mother's side of the family back to the 1790s, and the tradition from my father's side that Francis Drake was a distant relative, gave me an immediate grasp of community and continuity. It might have anchored me too firmly in the past, had not my comfortable security been shattered when I was twenty. Looking back I'm unsure whether my earlier stability would have trapped me in an essentially pre World War II middle class tradition, or enabled me to grow and explore totally new ideas.

My parents, both in their early twenties, had been married in the month that Chamberlain flew back to England from Munich waving that worthless piece of paper saying, "Peace in our time". With the imminent threat of invasion, of nightly bombing raids from the Luftwaffe and near national starvation as German U boats virtually destroyed our sea links with the rest of the world, this must have seemed a highly inauspicious moment for my parents to give birth to their first child.

A few months after the war ended we moved to Portsmouth, the home of the British Navy, where my father was to become vicar of a large Victorian church. The bombs had stopped falling by the time we arrived, but the devastation was all around us. For three hundred and more yards, over an arc of over one hundred and eighty degrees from my new bedroom window, not a house or a shop remained. War's aftermath cast a cold, grey spell over the city. It was nevertheless a great place for a young child to grow up, as after the horror of the war there was a mood of optimism; things had to be getting better. We were, we heard everyone reminding each other, the victors. Adults might have experienced horrific suffering that I could only dimly comprehend, but as children we were the country's future, and were to be cherished.

Displaced Persons (D.P.s.) were everywhere. A Polish Count eked out a living mending clocks. People of different nationalities worked together to rebuild an almost flattened city. Junk shops, still to be dignified with the title of antique, were full of remnants rescued from the fires of the blitz, some still with a faint smell of smoke. All of these sights fascinated me as a seven-year-old. Maybe war might break out again, maybe I too would become a refugee. If that were the case I would need to be strong and be able to look after myself. If there was anything I needed to know, but didn't, then I had better be able to find it out for myself.

My parents sent me not to the church elementary school, a five-minute walk from our home, but to a newly opened private preparatory school that meant two separate bus rides and a ten minute walk twice a day. At the time I never questioned why this was but now know that this fateful decision meant I would study Latin. That in turn meant that it would later be possible for me to take the Common Entrance Exam, go on to a public school and then to Oxford or Cambridge. All this would have been impossible from an elementary school,
about to be reclassified as a primary school. It seems extraordinary that I, a man whose ideas on education are taken seriously enough in the twenty-first century that people will trouble themselves to read my books, was profoundly shaped in my own education by policies and political compromises made half a century or more even before I was born.

Directly after the war children were safe in a largely middle class community that still respected the significance of the individual. My parents never seemed to worry when I set off at the age of ten for long walks by myself to explore the decaying but still genteel seafront, the bustling dockyard, the fascinating building sites, or the historic area of Old Portsmouth. I was full of questions and there were always people to talk to. Few had petrol coupons, and those who did would stop their cars for anyone stranded after the last bus had gone. The camaraderie engendered by the war lasted for a number of years, and it was great. It was still there when, at the age of fifteen I was hitchhiking some fifty or sixty miles a day. By sixteen I’d headed for Scotland, four hundred miles away, by myself, and arrived home with just sixpence in my pocket - the money for a ‘phone call home. I met endless people and learned to talk with anyone, about anything. ‘I don’t approve of priests’, one former naval officer told me, as I was hitchhiking home, “and I think the majority of religion is bunkum. But of one thing I am certain; I want to leave this world just a little bit better place than when I arrived.” It was a surprising comment to the conventionally educated son of a vicar; and it seemed essentially spiritual to me, despite his not being a conventional believer. Hitchhiking was the best form of schooling I could ever have had.

I didn’t understand the finer points of the theology behind my father’s easy, conversational-style sermons, but quickly came to accept his thesis that life was a pilgrimage. I understood the reality of a heavy rucksack and the need to struggle to reach one’s goal; the wise pilgrim did not encumber himself with too much of this world’s baggage for greed and envy, and too much ambition could destroy a man. Yet the world was a wondrous place to be explored, and with the opportunities it offered there would be temptations. The immediate benefit of my father’s sermons was that they gave me a special opportunity - for twenty minutes every Sunday - to work things out constructively for myself. It was only years later that I read T.E. Lawrence: “All men dream dreams, but not equally. Those that dream in the dusty recesses of the night awaken to find that their dreams were but vanity. But beware of the dreamers of the day for they live to make their dreams reality”. From an early age I came to enjoy my day dreaming enormously.

I garnered one small mathematical strength from my formal education before the age of eleven. Each morning started with a mental arithmetic test in the small prep school overlooking the Solent. Only the answer could be written down. This, for what it’s worth, means that I can still calculate the cost of purchases at the supermarket checkout and generally think of numbers in ways that my own sons, having gone through much more rigorous instruction, just cannot do. Spelling tests were conducted in the same way, but my results were nothing like as good because they were about pure memorisation, with nothing to calculate or make my own. Written assignments were given spasmodically, but teachers seemed to lack any sense of urgency in marking them. I remember to this day my annoyance when I realised that I had filled up an entire exercise book with exercises and answers and not a single teacher’s correction or comment was to be seen.

I reached my eleventh birthday six years after the 1944 Education Act introduced the Eleven Plus exam, an exam that used intelligence tests to assess a child’s suitability to go to a grammar school. Already there were grave doubts being expressed about the accuracy of such tests. My parents feared that as I was such a dreamer and too bookish and inquisitive, rather than academic, I might well fail the exam to get into Portsmouth Grammar School. So without my realising exactly what was happening, it was arranged that I should go to a boarding school at the age of thirteen.

Initially I was lonely at boarding school and missed my family dreadfully. Coming home at Christmas and Easter I found I’d lost most of my earlier friends and spent my time in the vicarage cellar at my workbench, or curled up in a chair reading the National Geographic. But the summer holidays were different and very special. My father agreed to exchange his statutory duties in his church for a month with a colleague in another part of the country. We went to live in his house, and his family came to live in ours. It was more than just experiencing what other people’s homes were like - what books they read, what paintings they thought worth putting on their walls or what gadgets they might have in their kitchens - it was about experiencing, with all the alert senses of youth, what it was like to live in other communities where we weren’t known.

One year we stayed in a country rectory deep in the English Fens, a place where they still tolled...
the bell whenever somebody died, just as had been done hundreds of years before. Two people died that August. One was old and the bell rung once every minute for each year of the man’s life. It seemed to go on all afternoon. Life too, it seemed, would go on forever. But the other bell stopped after only nine minutes. I was terrified. Life was not to be taken for granted. Just around the corner someone younger than I had been alive only yesterday, and now was dead. Around that same corner, too, was the crumbling cottage where Oliver Cromwell had stayed for a whole month while training his New Model Army three hundred years before, at the time when so many yeoman farmers from around about this and other parishes had set off in the Great Migration of the 1630s for Massachusetts. Cromwell would have heard that same tenor bell, a bell inscribed with the words, “I to the Church the living call, and to the grave do summon all”. Cromwell fascinated me, and I read everything I could find about him, and tried to imagine what was going on in the minds of those farmers from thereabouts who had sold up everything to go to the new world all those years ago. It was then, when still a child, that my fascination with history, and especially the development of the English colonies in America, began and that was to influence my life and that of my family forty years later.

By the age of thirteen I was fast discovering who I was. I was purposeful and life had meaning. I never once doubted that adults believed that children mattered. One day it would be my generation’s world. We would have to grow up to be ready for that responsibility. Looking back I don’t think that I was in any way precocious, or unusual in thinking like this. Although I knew no child whose parents were divorced, I knew several who had lost one or both parents during the war. Families, it seemed to my prepubescent mind, were the bedrock of society.

I now understand that I was probably at the tail end of a tradition that had existed for centuries, but was rapidly disintegrating. It was the age-old bargain between the generations; parents looked after children when they were young, in the expectation that when they were too old to cope with their children, and probably their grandchildren, would look after them. However, out of such deeply embedded, implicit but non-enforceable culture, a new world was being born. Out of the horrors of war had come the Welfare State, designed by Lord Beaverbrook, and introduced by Clement Attlee in the newly elected Labour government. Henceforth, by direct provision of the government, no one would starve, go without medical care, fail to go to school, or not have a pension in their old age. It was humane legislation, and the ultimate product of Christian socialism.

From my parents, I learned that if the country had compelled its citizens to fight in the war the very least it could now do was to ensure that everybody could experience a reasonable standard of living. To me, the young idealist, free medical care was a right to be used responsibly, a measure of a civilised society; it distresses me now to see this so taken for granted that it appears to have weakened many an individual’s sense of self reliance. That should not negate the need for free medical care, education or pensions, rather it calls for an increased sense of personal responsibility within a mature and democratic state. If I were even five years younger I might never have come to make the argument that will follow in the rest of this book, nor have seen myself as the bridge between two vastly different traditions. It makes me feel very privileged, but more than a little nervous of the responsibility to translate the values of the former for the benefit of the latter.

In addition to my father, one other man had a profound effect on my development. “Old Mr McFadgen” I called him. When I was about eight, Mr McFadgen used to come to our home every Friday evening to do odd jobs for my parents. He was old, probably well over eighty (ten times my age I remember frequently marvelling), and had served his apprenticeship in the Portsmouth dockyards in the late 1890s as a carpenter; but by the time he qualified the Navy had no use for carpenters. So, even though he had hands like a surgeon, he spent his whole life shovelling coal into the boilers of battleships. The only way he kept his sanity was to take with him, on every cruise he ever made, his carving tools and bits of old oak. According to what he told me, every port he ever went into he looked for the most beautiful girl he could see, and what he told me, every port he ever went into he looked for the most beautiful girl he could see, and then spent the remainder of the cruise carving her as a ship’s figurehead, some eight or nine inches tall. By the time I met him, fifty years on, he had several crates of such figures, and every Friday evening he brought two or three over to show me. I was entranced, not just because his carvings were highly tactile, but because of all the stories he told me about where he had been, what he had seen, and what he thought about it all.

One day he recognised my fascination. “Do you want to learn how to carve?” he asked. I had barely articulated my response, for I was clearly entranced. “Well”, he said “there are just two lessons. First you must learn how to sharpen your chisels,
and secondly you have to understand the grain of a piece of wood”. For several weeks he let me do nothing other than practice sharpening his chisels. Sharpening chisels didn’t bore me for, despite cutting my fingers several times, I was determined to succeed. McFadgen knew well his role as a craftsman instructing a very young apprentice. At just the moment when he saw that I had confidence and competence in doing this task he turned my attention to the second skill. Out of his pocket he pulled some heavily contorted, cross-grained pieces of wood. “Now”, he said, “work out the best way to shape the grain in these pieces of wood”. Again I spent weeks rising to the challenge, and old McFadgen watched carefully. Once I had got the general principle in my mind he again changed the pace.

“You’ve learnt the rudiments, now all you need is practice. You start to carve whatever it is you want to carve, then each Friday you show me what you’ve done”. And that is just what happened for the next three or four years. A clever craftsman, he progressively showed me how to take more and more responsibility for what I was trying to create. From him I learned what it meant to be an apprentice.

Then, at thirteen and a half I took the Common Entrance exam and went away to boarding school. St. John’s School, Leatherhead, was typical of a number of the new public schools founded in the mid-nineteenth century, very much in the Dr. Arnold tradition. After the shock of being plunged into a school that knew no privacy for the individual, I found the easy-going academic regime undemanding and unchallenging. ‘Taking the piss’ out of anyone who tried to be serious was a favourite activity: don’t be yourself, follow the crowd; just conform was the code of the young adolescent. For several years I drifted. I stayed in the bottom class for five terms, unaware that the school, and the whole public school system with it, was going through its own period of uncertainty. In the post war years Britain was fast losing its empire and its world role. The conventional reasons for an officer class were becoming unclear, and the public schools feared their imminent demise.

One man made a lasting impression on me whilst at St. John’s; he was the headmaster of another school who came to address us at the annual speech day. He had one good piece of advice, as I remember it; always to have at least two interests outside your chosen career, things which would keep you focused on bigger, more intrinsically fascinating ideas than those normally offered by a mere job. He went on to confide that, as a head-master, the teachers he appointed were the ones who could bring more to the job than just their professional skills or subject specialisms. That was a piece of advice I was quick to take on board. To this day my own particular form of relaxation after a hard day’s work is to escape to my workbench and pick up some chisels and a mallet, or on a long business trip to take time out and visit an art gallery, museum, or to stand in awe at the prospect of the Pacific Ocean after addressing a conference in Monterey, California (as I did when also correcting this chapter) and think what this might have meant to Francis Drake or one of the Spanish Conquistadors, or the friars who built the missions.

In school meantime I drifted through the largely uninspiring curriculum, and passed all my “O” Levels with the exception of Latin. Even my Latin teacher seemed more bored with Latin than I was, and spent all his time telling us how he won the war single handed in his silly little tank in the North African desert. I failed Latin not just once, but three times, and was all set to fail a fourth time - when I was also taking “A” level - and so forfeit any chance in those days of going to Oxford or Cambridge. Six weeks before the final attempt the school carpenter stopped me in the corridor to congratulate me. Apparently I had just been selected as the best schoolboy woodcarver in the country and my work was to be exhibited at an international exhibition at Olympia. I was enormously excited. My self-esteem rocketed. Then, as the day wore on, it started to fall when I realised that the school would take no notice of my achievement. It was neither a rugby result, nor a debating result, and it certainly wasn’t an Oxbridge scholarship. In the Dr. Arnold tradition such a technological achievement did not count as valid education. It would not go up on the headmaster’s notice board.

Yet the achievement mattered enormously to me. If I could be the best schoolboy woodcarver in the country, why couldn’t I pass Latin? In my seventeen-year-old mind I rationalised this conundrum easily. I wasn’t in charge. So I had better take over. This was my problem, not somebody else’s. That afternoon I went to see my Latin teacher and, with my new-found confidence explained that as I simply had to pass Latin in just six weeks time I’d decided that I wouldn’t go to any more of his lessons, and instead simply teach myself. He, and indeed the rest of the staff, were incredulous. But I had no time to worry. My head was on the metaphorical block. If I were to fail I’d have no one to blame but myself, so I worked like I’d never worked before. Into my short-term memory went the whole of Caesar’s Gallic Wars, Book I and II,
as well as significant chunks of Virgil’s Aeneid and my conjugations and declensions.

Nervous, but feeling well in charge of myself, I went into the exam hall six weeks later and gave it my best. Two months later, when the results came out, I learnt that I’d got eighty nine per cent. Six months later, however, I could hardly remember any of the Latin but now, forty-five years further on, I still wood carve. Far more significant was that I learnt that unless the desire to learn came from within there was nothing much that even a truly brilliant teacher could do for me. I was so excited at realising what I could do for myself, that I knew then I would one day become a teacher so I could help many more youngsters like myself to take control of their own learning. It was the first of two occasions in as many years when I knew I had to do something that other people didn’t understand.

The second time was twelve months after I left school. After twenty years of compulsory military conscription - National Service - it was strongly rumoured that my year group of eighteen-year-olds would be the last to be called up. Despite my desire to travel and my sense of patriotic duty, I had absolutely no wish to risk my life for two years in Kenya where the British Army was defending our declining colonial interests by fighting the Mau Mau. I knew, as did many of my contemporaries, that if I could go straight to university my National Service would be deferred and then abolished by the time I’d have graduated. So I went to the first university that offered me a place without thinking carefully about what it might involve. Coming from a school with strong church connections, it was assumed that St. John’s College, Durham, a theological college that was starting to offer full degree courses, would suit me well. It didn’t. I was intellectually bored, and spiritually suffocated by the cosy, conventional aspirations of a way of life that I had unwittingly grown away from. Pilgrim I might be, conventional middle-class Anglican of the 1950s I was no longer.

As I started at university, one very practical thing remained for me to complete from my school days. On the last night of the school play several of us, having indulged in far too much cheap sherry underneath the stage, pledged to each other that we would spend the subsequent summer living on an uninhabited island. It could have been something forgotten as our hangovers wore off, but the idea stuck. I was once again embarking on an exciting, unusual and slightly risky enterprise, and the others appointed me their leader.

To each of us in different ways it was a powerful dream, an opportunity to break out and do something that really interested us. We selected the island of Rum off the west coast of Scotland, north of the Ardnamurchan Peninsula, and south of Skye, one of the largest yet least inhabited of the Inner Hebrides. When the fishing boat dropped us on the beach with all our supplies for four weeks, we had no real idea of what we were in for, but when it came back a month later I knew I had changed. I needed the company of people who weren’t afraid to be inquisitive, who were prepared to be moved by beauty and to share their ideas. Life on Rum had been more intellectually and physically challenging than anything I had experienced at college. I needed a way of life not confined within a single discipline for I was almost as much a historian as I was an embryonic geographer.

I’d learnt, above all, that I had to be useful: life just to please myself would be empty. The influence of my father’s vocationalism and the Protestant work ethic still ran strongly within me. At the age of twenty though I knew I had to be far less deferential than as a youth, and make up my mind for myself. A few days later I mustered the confidence to write to the Principal of the College, requesting a year’s leave of absence to work things out. The Principal simply didn’t understand me and suggested that if I did not return straight away he would refer my case to the military authorities; no doubt I would then enjoy, he said, my two years of “military adventure”. This was the last straw. I was trying to work out my own direction in life; I needed advice and time, not a threat. With quaking heart I did the only thing honourably open to me. I left the college. This was my second life-changing experience.

So as not to be a burden to my parents, I took a twelve-month post as an unqualified teacher in a small preparatory school, teaching English and History to boys between the ages of nine and thirteen, for which I received the then princely sum of one hundred and five pounds per term. Then I started to search for another university. As the ending of National Service came closer, the universities were under considerable pressure from a greatly enhanced cohort of potential students for the following year. My case looked hopeless. I was then perversely sum to please myself would be empty. The influence of my father’s vocationalism and the Protestant work ethic still ran strongly within me. At the age of twenty though I knew I had to be far less deferential than as a youth, and make up my mind for myself. A few days later I mustered the confidence to write to the Principal of the College, requesting a year’s leave of absence to work things out. The Principal simply didn’t understand me and suggested that if I did not return straight away he would refer my case to the military authorities; no doubt I would then enjoy, he said, my two years of “military adventure”. This was the last straw. I was trying to work out my own direction in life; I needed advice and time, not a threat. With quaking heart I did the only thing honourably open to me. I left the college. This was my second life-changing experience.

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A friend from the Rum expedition had gone across the sea to study at Trinity College, Dublin. He reported favourably on his experiences. Using my first month’s pay cheque from the school, I flew (on my first ever flight) to Ireland. I was
enchanted by Dublin, and by Trinity College in particular. The student body as I saw it that weekend was like nothing I’d experienced before. It was slightly older than its counterpart in England - few were under twenty years of age - and was extremely diverse. About a third of the students came from beyond the British Isles - Americans with Irish connections, children of diplomats who had travelled the world, and people from the international business community. It was an exciting place.

It was arranged that I meet the Junior Dean for what I thought would be an informal discussion. As it turned out he grilled me on my reasons for looking for a change in university, pressed my interest in history, expressed a range of interesting perspectives on Anglo-Irish relations, and then said I could have a place to read General Studies in the following academic year. We shook hands and he clapped me on the shoulder and wished me well. I went out into the gathering darkness of a Dublin evening and had my first pint of Guinness in a real Irish pub, The Old Stag, little believing my good fortune. It seemed as if I had made the right decision.

The paperwork, however, was a different matter. For weeks I searched the post for the promised letter of confirmation. The newspapers were full of the imminent end of National Service. My birth month, it appeared, would be the last to be called up. Still nothing came from Dublin, and the tension made it hard to concentrate on learning how to teach. One morning I received a brown envelope from the Ministry of Defence telling me to report for my two-year period of conscription in three weeks time. Later that same day, by the very next post, I had a further letter from the Ministry cancelling the notice “for at least the foreseeable future”. Three days later I had confirmation of the offer from Dublin.

Easter was fast approaching and I was basking in the confidence that had arrived with my letter of confirmation from Dublin, when I was called out of class to take a call on the staff-room telephone. It was our family doctor. “I don’t want to alarm you”, he said in a voice that was far from reassuring, “but your father has had an attack of jaundice”, and went on to suggest that I should come home to help my mother for a few days. I returned the next morning and was shocked to see how ill my father was. That afternoon he was taken into hospital barely conscious. The next morning the hospital said they thought he had terminal cancer. Instantaneously we saw his life collapse and all our individual aspirations paled into insignificance. I was terrified. Four days later, shortly after eight o’clock in the morning on Easter Day, my mother shook me by the shoulders to wake me up. I was conscious of bright sun shining through the window. The hospital had just phoned to say my father had died twenty minutes before.

Having to Grow up – fast

I was stunned, but never once did I think that somebody else would sort this disaster out for me. I was twenty years old. I was indebted to the little traumas earlier in my life and immensely grateful for the simple, uncomplicated faith that I’d learnt from my father. No child ever forgets even the tiniest details of a parent’s funeral, and I guess it’s an event we each fear from our earliest childhood days. It was not until that day that I realised just how special my father was to other people. Nor did I really understand until then just what that precious, if overused, word ‘community’ can really mean. It was not just we, as a family, who were stunned, it was the village, and people from neighbouring villages and towns who were grieving as well. Realising that I was able to show my grief, I felt more able to cope.

After the service a man I didn’t recognise came up to me. He was both the undertaker who had made my father’s coffin, and the local builder, as had been his father and his grandfather before that. Like Mr. McFadgen, Mr. Roast was a man from the pre-industrial era, a craftsman to the tips of his fingers, and a man who never stopped to ask, “who is my neighbour?” for to him any one in need was to be helped. He had admired my father and recognised the good that he had done in the parish. Seeing the predicament we now faced, he offered to help us out as best he could. “I expect you’ll have to move out of the big house, maybe you’ll have to do up a smaller place for your Mum. You’re a strong young man, and probably as good with your hands as was your Dad. If you need any advice, at any time, just let me know, and I’ll show you how to do it.”

Mr Roast was as good as his word and several weeks later he helped us find a row of three old cottages on the corner of a field, some three miles away. They were dilapidated and the local farmer, who was about to pull them down, was prepared to sell them to us for a very reasonable price. Each had two rooms downstairs, and two upstairs. Mr Roast prodded around. He tapped the plaster, stuck his pen-knife into window sills and doorframes, climbed up the chimney stack and found a way into a hidden attic. “Buy it”, he said, with a confi-
dence I found vastly reassuring. “It’s much older than the farmer thinks. You’ll be able to get a grant to put in water and electricity. You’ll have to work hard; it will hurt your back and strengthen your muscles.”

So, for the long summer holiday before starting at university, I again became an apprentice - this time as a builder. Mr Roast was as good as his word. Twice a week he came out to inspect and offer advice on progress. Never once did he charge me, nor would he accept even the smallest present. Initially I found the work disheartening. The first stage in renovating an old property only serves to make a derelict house look even worse than before as he made me pay attention to the foundations, the damp course, the roof and the rainwater gullies. “Stop the moisture coming up, and the rainwater coming down”, he advised.

As I worked, and my muscles ached, I had increasing admiration for those craftsmen who had first built the house. All I could do was to respect them for the quality of their workmanship hidden for so long but having stood up to the test of every storm in upwards of 500 years. Would that my skills could be as good.

After three months of backbreaking work, two-thirds of the house was ready to move into. There was no electricity, no running water and only the most primitive of drainage systems. For three months the rest of the family would have to use a chemical toilet and go to friends in the village for baths, while I had to leave for Dublin the following weekend to begin my new life as a student. Over the Christmas holidays I could learn to build a bathroom and plumb it in. It was only years later that I realised just what had happened in those months: I had passed from being a boy to a man, that I realised just what had happened in those months.

I was also mature enough to benefit enormously from the many unstructured opportunities offered by a university that saw its responsibilities to undergraduates as being more than enabling them simply to get a degree. In many ways Trinity Dublin in those days still seemed to have more in common with the eighteenth century than it did with the mid-twentieth century.

Several times, at both school and university, I had the privilege of learning from some quite exceptional teachers whose personal ideals were in perfect accord with what they were teaching. Teachers who were authentic and took us into the very heart of their subject with their infectious enthusiasm. One such teacher was Donald O’Sullivan, who lectured on twentieth century history, a man who stood out from the very first lecture he gave as someone who had lived what he was teaching and had an almost incomparable grasp of his subject. As a young Flag Officer in the British Navy, he had been on the bridge with Admiral Jellicoe at the Battle of Jutland in 1916. In 1918 he had joined the British Foreign Office but, as an Irish resident, O’Sullivan had transferred to the embryonic Irish Foreign Service in 1922. He had served in Washington, and was in Berlin when Hitler came to power; as an observer at Bretton Woods he had gone on to be at the San Francisco Conference which set up the United Nations in 1944. He had known the Czech Foreign Minister, Jan Masaryk, in the months before he had been driven to commit suicide when the Communists took control of Prague in 1948. Quietly, without any self-importance, he taught history from the perspective of an observer who was also a participant. In his declining years it was as if he felt an obligation to share with us experiences which, without him, we would never really have appreciated. Donald O’Sullivan was a superb storyteller who almost made us believe we were part of the drama. A polished craftsman, he was a teacher of the finest kind, and he saw us as his apprentices each learning to draw lessons from what we observed and to retell this in our own words.

The morning after President Kennedy’s assassination in 1963, Donald O’Sullivan came into the lecture room and, as usual, appeared to walk confidently to the lecture desk. He looked up at us then, his confidence suddenly failing him. “Please join me in standing to honour the life of Jack Kennedy.” As we rose, not quite sure of ourselves, his voice trailed off. He was silently crying and I doubt if there was a dry eye left in the room. He cancelled the lecture “out of respect to Jack Kennedy anything I might say now would not be good enough.” He was, I remember thinking at the time, crying not only for Kennedy but for all those other needless deaths and lost dreams he had witnessed. A civilised society, he helped us all to see that morning, ignores its history at its peril.

Donald O’Sullivan had a very particular and immediate influence on me. It went like this. Needing to earn some extra money at the beginning and end of each university term, I worked as a temporary supply instructor for just two pounds a day (the lowest possible post in the education hierarchy), substituting for absent teachers at Rainsford Secondary Modern School near our home in Essex. It was the kind of school set up twenty years earlier to serve the bottom sixty to seventy per cent of the ability range, and after all that time teachers still
weren’t sure what to do with such pupils. As a result most of the pupils left school with precious few qualifications, only a rudimentary education, and very little belief in their ability to shape their own futures.

Several weeks after Kennedy’s death I was back from university and working in that school. The Deputy Head was flustered and explained that they were very short staffed that day and he would have to ask me to take over two classes of fifteen-year-old boys for the whole afternoon. You can do anything you like to keep them quiet, he told me, “but I’m afraid there’s no text book, and the teachers haven’t set any work. Give them a spelling test, or set them an essay to write. If it gets too difficult for you to handle, I’ll take over halfway.”

I went into the over-sized class totally unprepared, hoping for some form of inspiration to get me started. One boy had with him an abbreviated version of ‘The Colditz Story’, an account of how prisoners of war escaped from a German prison camp. Noting my interest the boy gave me the opening I needed by asking, “Why did there have to be a war in 1939?” It was a red herring, a conversation starter that the class hoped would get me talking, and take pressure off them to do anything serious that afternoon. With the experience of listening to Donald O’Sullivan still fresh in my mind, I was able to see in this an opening that I could use. I had to do it in my own way that was true to my own limited understanding of both the facts, and of what the students could take. Improvising, I asked the pupils to note down as many dates and events from the war as they could think of. I then divided the blackboard into seven columns, one for each year of the war. In white chalk we listed events as the boys could remember them: Dunkirk, U-boats in the Atlantic, the Blitz, Normandy, the Russian Campaign, El Alamein. In red chalk we listed personal events: “Mum was evacuated from London to Scotland”, “Dad was called up and sent to India” (“Please sir, why did he go to India if we were fighting the Germans?”), “My Aunt met a G.I. and afterwards went to live in Alabama”, and so on. They were surprisingly willing to talk in class about things they’d heard their parents talking about at home. Most of them went on to do the homework I set once they found that their own stories, and the experiences of their families were being taken seriously.

One boy came up to me afterwards to say how much he’d enjoyed the lesson. He said he couldn’t see the point of school most of the time, and would much rather leave. His Dad hadn’t stayed on at school because – he’d told his son – most of what he did in school was a waste of time. As I struggled to come up with a constructive response I was saved by the arrival of the deputy head. He looked amazed and asked how I’d managed to hold the boys’ attention for so long, “I looked through the window half way through and was staggered,” he said. I’ve never seen that class so on task. You’ve certainly got the right knack.”

If there was any knack it was that by treating the pupils as intelligent, inquisitive and essentially good people, I’d invited them to learn, and they had responded enthusiastically. They were doing what made sense to them. It was probably one of the best lessons I’ve ever given. But I couldn’t think of a good answer to that boy’s question; just what use was that kind of curriculum to these boys?

I would most likely have forgotten all this but for an incident years later, during the Falklands War in 1982. A porter at Kings Cross railway station stopped me as I was rushing to catch a train. “I know you, don’t I?” he said, “Didn’t you once teach in Chelmsford? Aren’t you the man who got us all to think about the causes of the Second World War weren’t you? That must have been at least twenty years ago!” I nodded, but couldn’t put a name to his face. “I’ve been thinking a lot about all that with the newspapers full of our army going down to the Falklands,” he continued. “It seems to me it’s a load of hype, and politicians pride being hurt. At any rate, that’s what I told my mates in the pub last night!” That meeting was a rare treat for, as Richard Livingstone had said thirty years earlier, “The most precious fruits of a good teacher’s work are those he is never likely to see.” I’ve been lucky in having several such conversations years, sometimes many years, after an event with a group of children that had obviously been a turning point for them. That’s what makes teaching so exciting.

As it was I very nearly didn’t become a teacher. The university Geography Department, recognising the number of expeditions of school children I’d already taken to some of the more remote islands of the Hebrides, suggested that I could relatively easily turn this into a research thesis for an MSc. It was an attractive offer, but I was not quite persuaded. To produce a thesis about an island very much on the far edge of civilisation, that might never get read, didn’t really excite me. Not as much as those attentive fifteen-year-old faces. I procrastinated, trying to work out which way to turn.

I decided to investigate the university’s rather dreary Department of Education. My interest in feeding young people’s confidence by giving them real challenges and opportunities seemed a thou-
sand miles away from the room in which I met with the professor one grey February afternoon. I couldn’t get out quickly enough. “Stop”, exclaimed Professor Crawford, “It’s impatient people like you that education needs.” To my surprise he agreed that the system was a rotten one for most young people, and that someone would have to do something about it. But educationalists alone would never do it. “It’ll need people who understand life, as well as schools”, he told me. “Don’t just study education, do that research degree as well. Spend the vacations on your favourite island, and the term times here in Dublin. Split the term between two days in school, and three days in the library, and then do the six hours of lectures”. I was taken aback. Who said academics weren’t flexible?

My last year at university was therefore extremely busy. The education side was easy - too easy. The departmental staff were happy to assume that intelligence was an innate, largely unchangeable commodity. What mattered for a teacher was to find out as early as possible what the real potential of each pupil was, and then provide each one with an appropriate education; technical studies for some, academic studies for others. The process of learning was not seen as something of an awesome potential, it was in fact treated in a highly mechanical manner. These were the days when behaviourism was in the ascendant - what pupils knew was the result of what they were taught. J.B. Watson, the American professor who championed the case for Behaviourism in psychology, was still taken very seriously, and we had extensive lectures on Pavlov’s dogs. “Animals have instincts”, I noted in my first lecture, “Humans have learned behaviour”. I found the whole course clashed with my own experience, and what I was already learning from young people. Yet no one seemed deeply concerned; once we passed our exams we could teach however we wished.

Where to start teaching was an issue effectively solved for me by some of my friends who bet me two pints of Guinness I wouldn’t have the nerve to apply for the job teaching Geography that had just been advertised at Manchester Grammar School (MGS). I was doubtful. To someone living in the fading glory of Georgian Dublin, Manchester was the grim cottonopolis - the world centre of the cotton trade, built on the backs of totally broken craftsmen a century before. To an ex-public schoolboy, well versed in the liberal traditions of a previous age, the most successful of all the country’s grammar schools had an internationally meritocratic reputation. But the invitation did suggest that there were plenty of opportunities for overseas fieldwork. I decided to accept the bet, and two weeks later landed the job. When I told my mother over the phone she sounded disappointed, for she had hoped that I would be teaching at a public school. The mother of a girl I was going out with at the time went a step further, and said, “Surely, John, that’s not where the important people go, is it?”

“Not where the important people go!” I was discovering for myself that English social prejudices run very deep. And nowhere deeper than in education. If education is seen as the way up for the bright and the aspiring, I was quickly learning that it’s also the most effective way the English have so far invented for keeping everyone else in their place.

**Becoming a Teacher**

MGS had been founded in 1515 but unlike Elizabethan grammar schools in the Home Counties, it had resisted gentrification. The city fathers of nineteenth century Manchester wanted their sons to be tough as well as educated. Steadily the school attracted more and more of the determined artisan class that Samuel Smiles had exhorted to self-help. Peopled by the bright sons of no-nonsense northern businessmen (no country estates for these men), MGS had emerged into the 1960s with an academic reputation comparable to that of the most elite school in the south of England. Over the previous four years MGS had gained one hundred and forty Scholarships and Exhibitions at Oxford and Cambridge, half as many again as had Winchester, and two and a half times as many as Eton. That it did this without the frills of a boarding school and largely, even in the mid twentieth century, for pupils from working class homes, upset comfortable English middle class expectations. MGS, was largely dismissed by such people as being about the meritocracy, its education probably too much to do with cramming for the exam, and not appropriate for the education of gentlemen. MGS, it seemed, upset middle class assumptions about what young people from the working and lower middle classes could achieve.

When I started teaching there in 1965 the school was thriving. For me it was a brilliant place in which to start my teaching career. As yet I was totally unaware of all the political problems that were shortly to arise as an egalitarian Labour government sought to undermine the very system that had educated some of its most successful politicians, I loved the rigour, the energy and sense of
fun of some of the very bright students. I delighted in the philosophy of the school as expressed by the High Master, Peter Mason, in 1965 the year I joined the staff: “The idea that talents are lent for the service of others and not given, and that knowledge brings humility and a sense of involvement in mankind, are just as necessary corrections to the arrogance of a meritocrat in a highly technical world as they were in Oldham’s day (the founder of the school in 1515) and without them the school’s record of academic success would be indeed alarming.” Yet I quickly came up against the establishment nevertheless.

In my first year I had three Sixth form classes for geomorphology, the structure of landforms and how they change. I was an enthusiast, particularly for the recent theory about plate tectonics, which explained the formation of mountains, earthquakes and the drifting of continents. For the better part of eight weeks I covered the blackboard with masses of three-dimensional diagrams, and dictated endless notes. The pupils’ files got impressively thicker, and I felt proud. Then, just before Christmas, the BBC produced a two-hour documentary film entitled ‘The Restless Earth’. It was brilliant. In two hours it had covered everything I’d done in three months, in a far more effective form. The next morning I approached my Head of Department and asked if we could buy a copy of the tape.

“No way”, he replied sharply. “It’s far too expensive”. I started to argue. If we had a copy I could, next year, run my three classes together I explained. Teachers could loan the tape to pupils to look at whenever they wanted to. Other teachers could use it with their classes, and in any case it was technically better than anything I could ever hope to do. We could even save time.

My colleague’s face darkened. “My word, you are an angry young man. Don’t you realise the system could never cope!” For him that was the end of the matter. For me it was the beginning of my discovery of just how stuck in the past educational thinking was. Educationalists’ assumptions about how children learn, and how teachers should behave, had their origins in theories that have long outlasted their usefulness. To start with, however, I was too busy enjoying teaching to give this much thought.

During the six summer holidays that followed that first year of teaching, I took expeditions of sixth formers to study the life of nomads in Eastern Turkey and Iran. We survived an earthquake, a cholera epidemic, and learned a great deal about Islam and the culture of the Middle East. Returning one evening from a particularly difficult assign-
their plans over previous days, went down to the small market town of Tenbury Wells, an hour or so before the boys left the camp. We each had to disguise ourselves as a local inhabitant and conceal our true identity by simulating the daily tasks of the townsfolk. If a pupil thought he recognised one of us he had to ask the rather banal question, “Are you the goose that laid the golden egg?” Not the easiest question for an adolescent to ask if not too sure of himself. Once challenged the teacher had to give his true identity and the winning boy was the one who had found the most teachers.

The disguises were a delight. One unassuming chemistry teacher made himself look even more insignificant by donning a white overall and a white slouch cap, and spent the entire afternoon stacking shelves in a supermarket. Another, a man of dark and forbidding countenance, collected a set of old man’s country clothes from a second-hand shop and then went to the river with a fishing rod. Knowing nothing about fishing he didn’t know how to keep his line taut in the water so, being a resourceful physicist, he tied a brick to the end. His line stayed in the water, but the water was so clear that everybody could see what he had done. His disguise was quickly blown.

A more sober disguise was that of the teacher who borrowed the verger’s cloak and spent the afternoon brushing the paths in the churchyard. The most sedentary of all was the school chaplain, who came to an arrangement with the local antique shop that he would sit, cross-legged, on top of the table near the back of the shop, wearing a kimono. From a distance he looked a perfect replica of a Buddha.

As for me, I had to disguise both my height and my prematurely balding head. I borrowed a second-hand car and parked it in the car park for the afternoon. For two hours I sat, window open, with a jaunty broad-checked cap, slouched forward over my eyes, slowly scanning that day’s copy of the ‘Racing Times’, marking up my bets and pulling on a large, evil smelling cigar. To complete my disreputable image I had a senior English teacher sitting in the back seat with a fulsome blonde wig. Several boys called my bluff, but none realised that the woman behind me was their English teacher. I felt my reputation sink rapidly, or was I wrong? Did it not, perhaps, go up?

A long story of an almost irrelevant activity but I tell it for a reason. If teachers are not also people that youngsters find interesting, and if these youngsters are not surrounded by other adults who, in a variety of ordinary and natural ways, show that they have time for them, then the life of each young person suffers accordingly. And so too does the life of the community. There is much more to education than achieving high test scores and moving up the league tables, and it’s enormously sad now to realise that an event of the kind I’ve just described seems an account of days long past. If we are to do the right things by the future, and prepare generations of young people properly, it is essential that such simple and memorable activities be re-established. This is the stuff that gives humour and purpose to our lives, and is certainly the material of which life-shaping memories are made. It galvanises pupils, and it regenerates teachers. It’s called education.

Beyond the classroom

I was midway through my third year of teaching, and just starting to question the cost to my social life of such a wholehearted commitment, when the High Master called me to his study. The school was about to undergo a major building programme: better staff accommodation was needed, as well as more laboratories and a much bigger library. The idea was for the school to ask the old boys, as well as local industry and commerce, to donate half a million pounds. The High Master looked me straight in the eye; “I’ve suggested to the governors that you are the person to organise this. It will probably take eighteen months. I’d like you to give up teaching at the end of this term, and then organise the appeal amongst the ten thousand old boys for whom we have addresses. You will have to go and meet them, and get them to set up meetings that you and I will then go and address”.

My mind was thrown into turmoil. What about the expedition going to Iran in six months time? What about the boys we had already selected and the arrangements that had already been made? He had answers to all my questions. I could count the expedition as my holiday time, he told me and “then you’ll have plenty of interesting things to talk about to the old boys!” Thanks very much, I thought, not quite sure if that really was a compliment. For several months I toured the country and met numerous people. Some were good talkers, others were taciturn, and many were too busy to have read the literature I’d sent them. “When you first meet a client, get them to talk about their memories of the old school”, was the advice the fundraiser had given me. These people were far too worldly-wise to fall for such an obvious dodge. “Tell me about yourself”, they would say instead. “Why are you a teacher, and what is it like nowa-
days in the classrooms of the old school?”

I was sociable and found it relatively easy to plant the essence of what I had to say amidst a description of what life as a teacher - at least for me - was all about. Quickly, however, I had to balance my own interests with what the school needed in what I said. My form of education had little to do with the bricks and mortar for which I was supposed to be collecting money. I found it fascinating to meet relatively successful people, years after they’d gone through the best of the much vaunted grammar school system. They were, it seemed, overwhelmingly good and intelligent people. They held reasonable jobs, but I noticed that they rarely held the top job. Very few were in business, or any form of commercial activity. They had, essentially, worked the system. They knew what other people expected of them, but few had gone outside the narrow confines of the career they had earlier embarked upon.

These men let me take their money, but they virtually wrote the first draft of the speech I was to deliver in so many different forms twenty or more years later. “We’ve been so over-schooled”, they would say, “that by-and-large we’re conformists. We’re good at analysing what other people are doing, but we’re essentially careful people, and we’re certainly not good risk takers. At school we were never encouraged to be unconventional. We were so busy studying that the only adult role models we had were those of teachers - from them we learnt to do as we were told and be methodical. Surely education has to be more than that?”

One of them went much further and told me about his younger brother who had been so annoyed at failing the MGS entry examination that he had left school at seventeen and started his own business. He had evidently done so well, his older brother explained, that he had made enough money to retire at the age of fifty and had gone to live in a fine house in the Algarve. “I don’t think my meagre pension will get me very far,” he lamented. We talked together well into the evening. “If you want to be really useful in education, don’t stay in either the grammar school system, or the independent school”, he advised, “go and make a success of the newly emerging comprehensive schools. They’re where the future lies.’ I wanted to take up these challenges while I was still young enough to be idealistic.

While many of my colleagues were moving to jobs in well-known public schools, I decided to move the other way, into the state system. My reason was simple; I was more interested in teaching young people whose parents could not afford private school fees than I was in teaching youngsters who were already privileged. I was in my early thirties and felt that life was only just beginning. I had a dream, but only the haziest appreciation of how dated was the country’s way of thinking about education. If I was ever going to change anything I had both to know exactly what I was talking about, and be ready to battle for years against institutional inertia.

in Connecticut. Used as I was to the formal discipline and carefully regulated pattern of instruction found in English schools, I was amazed at the easy discipline, complemented by the serious intellectual rigour of a school that was superbly equipped, and staffed by hard working, enthusiastic teachers. I sat in on several of their lessons. The teachers were well prepared and they were certainly imaginative. What surprised me was the liveliness of the class, the rapid give and take of the questions, and the respect shown by teachers for each and every student. I was intrigued. The difference between the American children and the English pupils I knew, even at MGS, seemed stark. Fortunately my guide, a professor of education at one of the east coast universities, knew the English system well from the days in which he had completed his own PhD at Oxford.

He described young Americans as ‘potential frontiersmen’, sharpening their axes and preparing to cut their way through some form of concrete jungle. He talked about the need to build up their confidence, and to give children their head. He saw the English as having a clearer expectation of what they wanted their children to be, but it was defined in very academic terms. “You try very hard to get children to conform to your preconceived expectations. I guess in the process you break the confidence of many youngsters and mould them into something they are not.”

This reinforced the more general message I’d been hearing from the English alumni; ‘Redefine what is meant by education. Make it possible for more people to become truly themselves. Don’t push youngsters into too clearly defined slots. Let them be part of shaping their own future. Develop a form of education that doesn’t waste so much talent. Go and make a success of the newly emerging comprehensive schools. They’re where the future lies.’ I wanted to take up these challenges while I was still young enough to be idealistic.

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In the mid summer of 1972, much to the surprise of my friends, I landed the job of deputy head of Alleyne’s school in Stevenage, one of those four-hundred-year-old former grammar schools that have figured so largely in this story. Alleyne’s was in the process of being reorganised into a comprehensive school of some nine-hundred, eleven to eighteen year old boys. Despite my youth and lack of any experience of comprehensive schools I had obviously impressed the headmaster, even though I was so different to him, a crow-like figure with heavy rimmed glasses, whose face seemed always to be scowling. “This place is a mess,” he said the first time I met him, his lower lip quivering as the intensity of his feelings almost got the better of him. “The town, the school, the education authority, and most of all the staff. The whole place is soft to the core. Far too full of social care and concern, full of unrealistic expectations about the working classes, and not concerned enough about academic rigour.”

I tentatively suggested that I might need some help in understanding what he expected a comprehensive school to be. He glowered; “Whatever you do, don’t use that term again. Alleyne’s has been a grammar school for more than four hundred years”, he reminded me, and now a Labour government was going to break with all that history and was ordering him to take in youngsters with widely varying levels of ability. “It’s politics getting in the way of education”, he declaimed, “and I want this school run as if it were still a grammar school.”

But I needed to know what was to become of all those from restricted backgrounds with genuine learning difficulties, the ones the authority was now insisting that he take. “Damned socialism,” he growled. “Plenty of rugby and athletics will knock boys into shape. Keep strict discipline and use the cane if you have to. It’s good for everyone.” Without realising it, I was beginning to take the lid off a can of worms, worms that had been twisting and turning for generations, and feeding on a concept of Englishness that was riddled with class prejudice. The professor in Dublin eight years earlier had been right; this education system was more to do with social control than learning.

How was it possible that I came, young and inexperienced as I was, to be in this position? What did these people think I should be doing? What did the pupils’ parents expect of me? Even more to the point, what did the pupils themselves think I might be able to do to meet their needs? (That is, the tiny minority that might even have thought that this was a valid question). For me, the answer to each question was an emphatic “don’t know”. This was England in the early 1970s, drifting, uncertain and looking for miracle-workers to solve its problems. The headmaster sensed that for all his bravado, he had already lost control. To hide this he wanted, I think, a colourful character who could carry the can while he faded away. My experience in leading expeditions, going around the world raising money for MGS, and my delight in the practical skills of being a woodcarver made me, I suppose, such a colourful character. It was extremely doubtful though that I could be the miracle worker that he hoped for.

Stevenage was to have been the epitome of the working class dream that inspired the Welfare State during the early years of the Second World War. A small market town of Roman and Saxon origins but with less than five thousand people, down whose High Street stagecoaches had once clattered on their way to Scotland, it was eventually to expand to accommodate some eighty thousand people. It offered a microcosm of English educational thought, a case study of how resistant schools and communities can be to fundamental change. Thomas Alleyne, one-time Vicar of Stevenage endowed the school that now bore his
name, just before he died in 1558, to teach the rudiments of Latin and Greek. It was one of the several hundred such schools that a small minority of English boys had depended on for four centuries - places where pupils learnt the language of the classical world sufficiently well to ensure that they were then able to keep the labouring classes in their place. Early colonists in America had built such a school in Boston, and for three centuries my predecessors would have followed the advice of Roger Ascham - theoretical studies are twenty times more effective than learning from practice they assumed. This approach had so antagonised the citizens of Stevenage in the late 1860s, then a town comparable in size and probably in attitudes to the Thetford that Thomas Paine had known, that they had forced the school to remain a Grade B town grammar school, not one of the new public schools established through the Endowed Schools Act of 1869. Those practical tradesmen wanted a school that would prepare their sons for employment, not academia.

Two years before the decision to build Stevenage, the Education Act of 1944 had set out to establish a tripartite form of secondary education. With money readily available from the New Town Commission, Stevenage was one of the first places in England to have a purpose built set of secondary schools - eleven of them, one being a girls' grammar school, one a technical high school and nine being secondary modern schools. The one original school, namely Alleyne's, which for four hundred years had never had more than seventy or eighty pupils, was suddenly to become the Boys' Grammar School of the town, with six hundred pupils.

To assess which pupils should go to such grammar schools the Eleven Plus examination became a much-dreaded event on the road to adulthood. The middle classes were the first to fear it. It was the exam my own parents did not want me to take, and was partly responsible for my going away to boarding school. While the test gave a cultural bias towards the middle classes, bad performance on the day split many a family in ways that individual parents knew was not right. Intuitively they knew that many children develop later, if given half a chance, and that a hard and fast rejection at the age of eleven could have devastating results on youngsters that would remain with them for a lifetime. Even today you can go into a room full of people aged sixty and over and, if you ask the right question, you can quickly sense the deep feeling of failure that memories of this exam still conjure up.

In the early 1950s Alleyne's Grammar School had a specific vision it would offer: an academic education for able youngsters whose career expectations were to go to university, and subsequently join one of the professions. It was an easy system for the headmaster of the day to administer, but it was so comfortable that the staff were beginning to acknowledge its limitations. Grammar school teachers knew that education was about much more than examinations. Good education was about values, judgements, diverse interests, critical thinking, and taking responsibility. So a relaxed and caring staff manned an extensive array of extra-curricula activities, not unlike those I had experienced at Manchester Grammar School - classroom teaching was not overly demanding, and many of them had energies for post four o'clock activities. Pupils were responsive and enthusiastic. Societies of all sorts – including sports, drama, debating and social service groups - flourished. The English appreciated education beyond the classroom, and I believe still yearn for it. They didn’t fully understand what those 'A' level grades actually meant, but they did understand a youngster of good social standing who held his bat straight, played at scrum half, and was socially at ease. The things that seemed to be most valued were those that were done by teachers in a voluntary capacity - just as had been the case at MGS with all its field trips, school plays and activities such as 'Find the Teacher'.

It was the kind of education that I had grown up with in a small public school, but it was essentially unfair. Teachers were relaxed because grammar schools had considerably more money than the other schools; this meant more teachers, each teaching fewer lessons. It was a privileged and self-contained system which, as the fifties gave way to the sixties, produced far too many young men and women who would later look back and regret not taking responsibility for themselves or not questioning the establishment. School provided them with so much that there was little room in their lives to listen to a Mr. McFadgen. They fast became over-educated, and rather too institutionalised for their own long-term good. Too many of them loved coming back to Old Boys’ Dinners for my comfort, and discussing fun-times in the past, rather than the possible excitement of the future.

Twenty-one years on from the Butler Act much of the pressure to scrap the Eleven Plus examination came from the new thinking emerging in primary schools. The immediate impact of the 1944 Education Act had been to put a straitjacket on primary school practice, forcing teachers to teach for the test. Primary teachers disliked this approach intensely, seeing young children whose
home and community culture was at variance with book learning and standardised tests. These children were not unintelligent, such teachers argued, it was just that they had different kinds of values, and other forms of potential expertise that had to be assessed in an altogether more imaginative way. Put them through the wrong hoops, at the wrong time, and they would come to lose faith in themselves, like me with Latin, years before.

So, in 1965, twenty-one years after the 1944 Education Act, and the year I joined MGS, a Labour government issued what is best known as “circular 10/65”, requiring all local authorities to prepare plans to reorganise their secondary education along ‘non-selective’ lines. Conflating expectations of what these schools might achieve led to a monumental compromise. Although many teachers had in mind something comparable to an American High School serving all the needs of the community, as envisaged by John Dewey, what they got were schools too large for contemporary management structures, and too small to offer meaningful diversity. Furthermore these ‘reorganisation schemes’ were desperately under-funded and pushed through with little appreciation of the need to retrain the staff, and with no clear understanding as to the education they were supposed to provide. The Prime Minister, Harold Wilson, further confused the situation by describing comprehensive schools as “grammar school education for everyone”.

Nevertheless, here was a monumental opportunity for change. Reformers had long feared the implications of imposing a strictly academic education on all pupils and sought a complete reassessment of the nature of secondary education with a focus on the skills of learning, and the recognition that pupils could excel in a variety of ways. They wanted to go beyond reassessing the content of single subjects, to a reinvention of the curriculum. They were to be bitterly disappointed.

The reorganisation of education was to be purely administrative, lacking any profound questioning as to what secondary education was actually to be all about. At that critical, once-in-a-lifetime moment, educationalists and politicians stepped back from the question they couldn’t quite answer: “Education for what?”

As far as Alleyne’s was concerned, Hertfordshire’s plan called for a complete reorganisation of the county’s one hundred and twenty or so secondary schools - grammar, technical grammar and secondary modern (of which the latter outnumbered the grammar schools by at least four to one) - into what they, avoiding the egalitarian overtones of ‘comprehensive’, called the ‘eleven to eighteen all-ability school’. It was an ambitious plan. Every community in a county of over one and a quarter million people was, in effect, to have a single secondary school which would somehow incorporate everybody. Realists asked whether this was not pushing optimism to its limits, for any reduction in funding would immediately make the entire system non-viable. Although a few kept on asking what education in a post-modern world would be all about, there was no such debate about the concern voiced, and so the old social tensions remained. Every school was left to define its own mission - a mission for the school in isolation, not for the school as part of the greater community.

The Technicalities of a Curriculum

The curriculum was argued over fiercely by teachers year after year. In terms of easy accountability, examinations could be set for subjects with clearly defined boundaries, and where work was done on an individual basis. It was this clear definition of task and emphasis on individual attainment that gave secondary teachers their well-established authority, and left them generally indifferent to

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*21 The famed circular 10/65 allowed local authorities considerable latitude in implementing secondary organisation and gave great scope for delay. It stated “The government are aware that the complete elimination of selection and separatism in secondary education will take time to achieve. They do not seek to impose destructive or precipitate change on existing schools; they recognise that the evolution of separate schools into a comprehensive system must be a constructive process requiring careful planning by LEAs in consultation with all those concerned.” DES Circular 10/65 July.

*22 Harold Wilson, Labour prime minister variously between 1964 and 1976, had first been elected to Parliament in 1945. He was keen to represent the wishes of a broad section of the middle classes by making Labour a progressive party of government. Apparently most uncertain in his own mind as to what would be involved in a comprehensive form of secondary education he seized on a statement made by Edward Short in a Ministry of Education Report of 1968 on the wider ability of such schools. “This meant preserving what is best in the grammar schools and making it more widely available.” It was on the claim that “comprehensive schools were grammar schools for everyone” that Wilson then campaigned.
what happened in primary schools, where teachers sought the more difficult task of encouraging children to think widely and act collaboratively. The timetable in any one year was the uneasy truce in a trial of strength between different subjects. It could be viewed as a battlefield of heavily fortified positions, of lost ground, shattered hopes and an uneasy lull in hostilities while pupils were regrouped for the next campaign, and lost hopes hurriedly buried.

Little more than a year after I was appointed deputy head that battlefield claimed its most significant victim - the headmaster who had appointed me. It was largely over the question of streaming by ability that he was forced to resign, for this was the hangover issue from the days of selective education. Discussion in the staff room was loaded with phrases such as ‘the gifted’, ‘the most able’, ‘the least able’, or ‘the unexaminable’. The youngest staff from the ex-secondary modern schools argued the need for more collaborative project work, whereby a brighter pupil could improve his own understanding of the subject by having to explain it to a less able friend. The slower pupil would then catch up with the rest of the class because there was so much individual attention. But the older, ex-grammar schoolteachers retaliated to the proposal with their own solution. “Slower students should be put in a class by themselves so that the teachers can attend to their needs individually. That way they won’t hold back the brighter kids and they themselves won’t get confused.” Both kinds of teachers glared at each other across the staff room. They epitomised the two traditions about which there was to be so much argument for years: streaming by ability or mixed ability learning?

Mixed ability classes are hard work to organise and manage. They need good teachers, but they can do wonders for the intellectual and social needs of all children.

I was increasingly confused - as no doubt were many others. Selective education had been rejected for various reasons, not least because of the way it strait-jacketed pupils, but it seemed that my staff were attempting to do just that - but within the single school. I knew just enough about the recent developments in primary education to suspect that it was there I might find a clue to what was needed to be done at secondary level. Much to the amazement of the heads of some of the other secondary schools, I started to make regular visits to these junior schools. A small proportion of the primary schools, namely those found in the wealthier parts of the town, were traditional. They felt like miniature versions of the old grammar school, with their fixed desks, formal school uniform and a carefully prescribed curriculum. “What Alleyne’s is doing is right”, their headteachers would say, “We can give you any amount of information on these pupils. It’s just that you can’t rank them straight away according to ability rather than wasting time in the first term that they are with you.” I asked about the nature of their intake, back at the age of five. “Aah”, said one, “that’s our secret. We’re a church school. Nearly all the pupils that come here are from middle class homes. Their parents know how to play the game and show up enough times at church when their children are young, so they can make the case that their children don’t go to the nearest primary school but come to us instead. You see, we can count on parental support and we are doing what our parents understand.” They smiled at me, knowingly, expecting me to approve. That was indeed how the ‘game’ was played. Such schools were complacent, and basked in their apparent success, and I became increasingly embarrassed at the duplicity I observed around me.

However, in one school, Woolenwick, which was built as the New Town grew in the late 60s and early 70s, I saw something very different. Gone were the regular classrooms with their stereotypical desks and long corridors. Instead there were bright open spaces, broad corridors, small and cozy meeting places, and lots of colourful equipment. The teachers were predominantly young and female. Noise levels were higher than usual but positive and purposeful, and the pupils were not distracted by my presence. Older pupils were helping younger ones. The headteacher, a confident woman, younger than me – and I thought I was young enough - told me straight away that she thought “you’ve got it wrong at Alleyne’s.” She accused my staff of being so concerned with the content of their subjects that they just didn’t have time to think about how the children could understand their own learning. “Did you see how those older children in our school were helping the younger ones to read?” she asked. I nodded. “Actually the older ones were learning as much as the younger ones. It’s just that they were learning different things. A case of: “You never learn something until you have to teach it.” I nodded. She was right.

That primary school had an excellent feel to it. It was by and large a neighbourhood school with pupils from all kinds of backgrounds, many of which were quite restricted. The staff spent a lot of time helping parents to understand the importance of a stimulating home, and out of school learning. Recently they had had a number of new parents who had taken their children away from a private
preparatory school several miles away, where they had been paying a lot of money, and asking for them to go to this school instead. “I wish they’d give us the money they were spending on fees!” joked the head. I didn’t want to leave. This was exciting, because these children looked confident and that confidence ran deep. Just the kind of school I would want any child of my own to attend.

Most of the primary schools, however, did not conform to either of these types. Being mainly products of the industrial approach to primary school building in the 1950s, they were a curious mixture of old-fashioned classrooms, and teachers who wanted to apply new techniques, but weren’t quite sure how to go about it. They were noisy places, and many of their teachers looked confused, which indeed they were. Having started teaching years ago they were conscious that times had changed and they were finding it increasingly hard to cope. They had one over-riding concern, namely that schools were trying to extend new forms of experiential learning so fast that its significance was in danger of becoming trivialised into what some disparagingly called ‘discovery learning’. But the pedagogy of these schools was about much more than that. It needed really good, imaginative and intelligent teachers, and the support of parents.

The primary schools’ comments certainly applied equally to Alleyne’s as a secondary school. Most of my staff yearned to stick with the old certainties – the ‘Janet and John’ 1950’s vision of the world – as understood by the conventional middle-class type primary schools. Few had the confidence to go with the Woolenwick approach and transform themselves into new kinds of teachers. Unless I was careful we, like so many of the other secondary schools in England, would settle for a little bit of everything - a compromised hybrid. Then the teachers, sensing this, would not have the confidence to send their own children to the kinds of schools they themselves taught at. And that would be sad.

Attempting to break the mould

To add to its other problems, Alleyne’s did not have an even distribution of ability when it first became a comprehensive school. Parents working the system meant that a full forty per cent, and sometimes more, of the entry at the age of eleven remained of grammar school calibre. At the same time, the local education authority insisted Alleyne’s take its share of pupils with remedial needs, thus necessitating a class of their own. Having a disproportionately large and able top two forms and one small remedial bottom form in any one year, meant that the academic ability range in each of the three middle classes could be about twenty-five per cent. “It’s in these classes, headmaster, where we have our biggest problems,” the staff would complain. It was not that the pupils were stupid, the staff explained, far from it, but they were simply not interested in what the school was offering them, and they were intelligent enough to know how to be extremely awkward. It was almost exactly the situation as had prevailed in the Higher Grade Elementary Schools of the 1890s, where it had been the youngsters themselves who had pushed for a far broader and more relevant curriculum.

It was hard not to get caught up in this confusion. Earlier, as deputy head, I had helped to establish a household maintenance class for some of the so called less academically inclined pupils. The youngsters liked the combination of classroom-based instruction and hard physical work. They enjoyed learning the tricks of the trade from plumbers and electricians and, significantly, several served apprenticeships after leaving school. I often envied them the half-day each week they spent talking and joking with each other as they worked on projects they found interesting.

One day, shortly after I had been promoted to head, some of the older pupils asked why it was that the household maintenance course was only available to the non-academic classes. “We’d like to be able to do that course as well”, one of them said. “No way will any of us become professional bricklayers or carpenters, but judging by the amount of time our Dads spend doing DIY around the house - and how useless they frequently are - these are skills we’d like to have as well”.

These were youngsters after my own heart. We sat down in the study and talked it through. This, surely, was what a full education ought to be able to deal with? Then a further fascinating thought struck me. Instead of paying outside contractors and cleaners, why couldn’t we employ several part-time craftsmen to work with groups of volunteers and train pupils in such skills as decorating, minor carpentry work, glazing and basic horticulture? The boys were enthusiastic and so was the master in charge of the household maintenance course. But other staff were largely disinterested, for to them this was a fringe activity of little academic gravitas, and it was the pretence to gravitas that had given the old secondary modern teachers their status as being superior to the social class of their pupils. Nevertheless I pushed ahead and, by analysing
recent contracts, was able to provide figures to support my claim that this would be economically, as well as educationally, attractive to the school and to the local education authority.

I presented the idea to the school governors in a paper I challengingly entitled ‘The School as a Self-Sustaining Community’. I found them totally unresponsive. Such thinking was beyond their experience, and they looked at me almost in disbelief. “I’m confused, headmaster,” said one of the Trinity College, Cambridge governors. “You yourself are good at teaching scholarship classes. The examination results are reasonably good and this is surely an unnecessary distraction? It’s not what schools should be about, is it?”

“I agree”, said another quickly, “The boys should be concentrating on stretching their minds, not doing this manual work. Neither the Teachers Unions nor the Local Government employees would like it either”. “Nor would the Education Authority approve”, said an LEA official. “They couldn’t effectively monitor the quality of the work”.

Philip Ireton, the Chairman, quickly moved to other business. Even he, the tireless socialist politician always looking to improve people’s working conditions, was stuck in an out-dated set of assumptions about the separate nature of academic and manual dexterity. To his generation of Labour politicians, who had come up the hard way, school was the route to escape from manual employment. So the opportunity was lost to do something truly innovative within the new comprehensive schools; lost because most people could not see beyond their own limited academic horizons. Lost because their definition of education was highly intellectual; they had bought into middle class aspirations for, as he said dismissively of himself, “I’m not very good at thinking straight in the classroom, and I hate exams.” Again, in the second year, Paul was the near unanimous choice for the prize in the year that he failed most of his ‘O’ Levels (GCSE). Slowly the staff woke up to the fact that here was a most useful and outstanding member of the school community who didn’t have the qualifications to stay into the sixth form. This upset the staff’s sense of the natural order of things, and so they invented a crash one-year course for Paul that they thought would ‘bring him up to speed’, so that he could start his ‘A’ levels a year later. Poor Paul was coached and cajoled for many hours a day by teachers who felt they would be offended if they could not get this delightful and highly popular boy to conform to what they saw as success. Paul tried hard, but as the weeks passed the sparkle and the spontaneous energy he had earlier exhibited started to fade, as did his confidence. When the selection for the Parents’ Association prize was held for the third year Paul did not win it, and eventually left school with none of the confidence or exuberance he had earlier shown.

Paul was an unfortunate example of an all too common phenomenon of able, practical youngsters whom academically-minded teachers simply did not understand. It was a problem of this kind that Jim Callaghan had in mind when, as Prime Minister in 1976, he said that the country as a whole ought to go into ‘the secret garden of the curriculum’, and challenge many of the unstated assumptions that academics made about schooling. Shirley Williams, daughter of Vera Brittain the social activist whose poem about the First World War is quoted on page ??? of this book, was Callaghan’s Minister of Education at the time. She was also MP for Stevenage and someone I came
to know well during ‘The Great Debate’ that Callaghan initiated in 1976. For such a debate to have any impact, the politicians needed to give this their undivided attention. Unfortunately they didn’t, for Callaghan and the Labour government were fighting to hold together a form of socialism that had outrun its time. For their part, the educational establishment was aghast at having to explain itself to a potentially hostile populace, and found their defence in so obfuscating the issues that the debate quickly lost focus, and ran out of steam. Once again a great opportunity was lost.

Gaining a Parent Perspective

My wife, Anne, and I had our first child, Peter, two years after I became headmaster. Never had a headmaster walked so tall as I did that Spring term, and never had I taken such a deep interest in the way boys at Alleyne’s were growing up. I might have been young to become a headmaster, but I was certainly moderately old to become a father for the first time. Enchantingly, the two events were happening almost at the same time with curriculum blueprints and guidebooks to parenthood getting all mixed up. It was the best thing that could ever have happened to me. I started to see my school even more from the perspective of a parent as well as a teacher. Nearly three years later David was born, and twenty-one months after that Tom. This leap into fatherhood made an already busy and interesting life even more fascinating. Children teach you things in the home that you could never learn from a pupil in school. It is this double perspective that I continue to treasure most, and it has dictated the shape of this book. Let me share just a little of this perspective with you.

We lived in Hitchin, some four miles from Stevenage, a town dominated by a fine medieval parish church. Most of the external stone work is thirteenth century, though the short dumpy tower, topped off with a narrow lead covered spire so typical of that part of England, was rebuilt in the fourteenth century, using bricks recovered from the foundations of old Roman buildings found elsewhere in the town. Half the foundations are older, and are thought to go back to the reign of King Offa, just over a thousand years ago. Recognising my interest in both history and building, the job assigned to me by the congregation was to act as the voluntary, unpaid chairman of the Fabric Committee. It was my job, when I had finished with the affairs of the school, to make sure the church did not fall down.

By the time he was five Peter would follow me on tours of inspection most Saturday mornings over the roofs and up the bell tower, and down into the crypt. I loved giving Peter his first history lesson, and I enjoyed the close contact it gave me with the honest workmanship of generations past. I would often draw analogies from the town, its buildings and its people when addressing the school at morning assembly. The church had been used as a stable by Oliver Cromwell’s army, but was magnificently restored by the Royalists following the return of Charles II in 1660. New lead had then been laid on the roof, with the names of the churchwardens cast into each sheet. The lead was of such high quality that it was still in place three hundred and forty years later, and the oak beneath it totally dry. But a hopper-head to collect rainwater and funnel it into the down pipe, last recast in 1797, had cracked with the ice of a severe winter in the early 1980s. I had it taken down, and recast. Several weeks later, the builder went up a ladder to reset it. He pulled some new nails from his pocket, but quickly recognised that they were nothing like as good as the eighteenth century nails he had pulled out weeks before. He fumbled in his toolbag, found the nails, and drove them hard back into the oak blocks - nails reused at two hundred years of age. That made for a good assembly next day.

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One of my difficulties as headmaster was to find good speakers for the annual Speech Day. Determined to move beyond the usual round of academics, I approached the Confederation of British Industry. They nominated Sir Hector Laing, chair-

*23 James Callaghan, prime minister 1976-1979, in an address to Ruskin College, Oxford in October 1976 first used the expression ‘the secret garden of the curriculum’. Callaghan was one of only two prime ministers in the twentieth century not to attend a university and wrote in his memoirs, “I have always been a convinced believer in the importance of education, as throughout my life I have seen how many doors it could unlock for working class children who had begun with few other advantages, and I regret my own lack of a university education.” (‘Time and Choice’, 1987, Page 409). Yet was Callaghan really that disadvantaged? If he had been more formally educated would he have dared to talk about ‘the secret garden of the curriculum’?
man of the mighty United Biscuits Corporation and a close friend of Margaret Thatcher, who had just become prime minister and whose dedication to a market-driven economy was just beginning to influence education. Hector Laing could prove a useful ear to twist. He arrived by helicopter for a whirlwind tour of the school. The pupils he met stood up well to his questions, and our visitor was obviously impressed. He spoke compellingly about his own experience of school and of his business life. Exam results were not the only things that mattered, he stressed several times. What counted was your ability to think for yourself, to be able to work with others, and to take carefully considered risks.

The boys loved it, while the teachers were shaken by his failure to give a stronger endorsement to what they held to be so important. I rose to propose what would be a difficult vote of thanks, but Sir Hector held the rostrum. “Just you sit down, headmaster, because it is I who want to thank you. I’ve never been in a comprehensive school before and I had no idea what good things were going on in such places”. I was taken aback and responded, “I find that hard to believe, Sir Hector, because there are four and a half thousand state secondary schools in England, educating some ninety-four per cent of the country’s children. It’s in these schools that the future of our country is being shaped.”

“I’m sure you’re right, headmaster”, he continued unruffled, “but it’s true. I’ve never been invited into such a school before today, although I am on the governing body of two independent girls’ schools. I’m very impressed. Why don’t your lot tell me what’s going on and what’s needed?”

This challenge was to set a new course for my career. Teachers had to stop the self-indulgence of talking to each other, and instead take the lead in explaining to a confused public exactly what needed to be done about education. If we didn’t we shouldn’t be surprised if others made the decisions for us, acting on their outdated assumptions and an imperfect understanding of how learning takes place.

Tell My Lot what is Needed

In the late 1970s people started to realise that computers might play a part in education. My own fascination was with those technologies I could touch - like Meccano, the feel of a piece of wood, or the edge of a chisel. I knew little about bytes and megas, loading and downloading, or of booting up and systems crashing, but I quickly recognised that the Computer Club became the most popular of the school activities when the Parents’ Association donated three computers.

While the technologically aware were delighted, several of the older members of staff - the ones who saw themselves as the guardians of the school’s traditional values - were dismissive of my enthusiasm. Computers, they said, were merely a tool for vocational preparation. I took a different view. What would happen, I asked, if each pupil in a class had a computer so that word processing could replace the current paper and pencil technology? I noted the various studies, which were already becoming available, that showed how a twelve-year-old, once having learned to type, could write three times as fast with a word processor as they could by hand. Think what could happen to the curriculum if pupils could move ahead at the speed of typing and redrafting, rather than at the speed of handwriting. I said to a sceptical staff meeting. What would such a classroom look like? Should pupils be encouraged to share data and ideas? Would this give students opportunities to work at their own pace and concentrate on the things that actually interested them? “We need to experiment”, I told the staff and governors, “We should go ahead and set up a classroom and try and work all this out for ourselves”.

“This is an altogether unproven idea, headmaster,” came back the stodgy reply from the staffroom. “No one has done this before. Why don’t you just wait and learn how to do this from somebody else?” At the time the cost of personal computers was already starting to come down, but the technology was still expensive and I estimated that equipping a classroom with twenty computers was likely to cost forty-five thousand pounds, the equivalent cost, at the time, of educating sixty pupils for an entire year. It was hardly surprising that most people were simply not impressed. Many were downright sceptical, and some even aggressive. “Yes, it is a speculative venture, but don’t panic,” I said with a confidence that was only skin deep. “I’m sure we could get the money from private sources. If this is the breakthrough I think it could be, then look to the future. In the long-term I think this could really change things”.

It took nearly two years back in the late 1970s to raise this money, which now seems extraordinary. When what we called the ‘Open Terminal’ opened in late 1980 it was the first fully computerised classroom of its kind in England, with a terminal for every pupil. I specified that it was for the use of any subject other than Computer Studies. Most
people didn’t understand what I was talking about, until it opened. Then it was seen to be a Trojan horse that could change everything.

In the first week there were two defining incidents. A fourteen-year-old boy with a difficult and confrontational nature, burst into my study late in the afternoon. “For the first time, because I could use a computer, I’ve started to understand how to solve a maths problem. Then the bell went, and I was told to turn the computer off and come back in two weeks time. Why can’t I stay behind after school and finish it off while I’m still interested?” I started to give him the conventional explanation about the needs of the system, the other possible users, and the need for the caretaker to lock everywhere up at four thirty. “That’s just stupid”, he said, stalking away, highly annoyed. Secretly I agreed, and felt utterly inadequate. I was as stuck in the system as the next man.

The next afternoon, a Friday, a young and very efficient English teacher came to see me. She was decidedly upset. “Headmaster, I have been affronted. I set an essay for a group of fifteen year olds to hand in next Tuesday. Now look at this. One pupil has given me what he says is a first draft of his essay done on a word processor, which he wants me to read through, comment on, and hand it back to him on Monday. Then he intends to incorporate my remarks into a re-draft, which he will then hand in alongside every other student on Tuesday afternoon. Tell me, which do I mark? The one which is his own work, or the one he has cheated on by incorporating my suggestions?” An excellent question, for which I had not got an answer, so I phoned the Chairman of the Cambridge University Examinations Syndicate and asked to go and see him to discuss it. As I explained the situation he grew ever more pensive; “Do you realise that we have been making a good living by analysing people’s first drafts for more than three hundred years, and now you are telling me that it is not the first draft that will matter so much in the future but the second or third draft?” I nodded. “So what do you think should happen?” he asked, obviously confused.

“That’s what I’m not sure of. That’s what I’ve come to ask you!” “I just don’t know what we’re going to do”, he said. “I guess we’ll just keep doing the same thing as we have done until the politicians tell us how to do it differently”.

I was appalled. That was more than twenty years ago. Since then things seem to have just drifted, as they do so often when an old system seems unable to cope with fundamentally new ways of acting. The RAND Corporation of America was to say, years later, “the reforms that deal with the fundamental stuff of education – teaching and learning – seem to have weak, transitory and ephemeral effects; while those that expand, solidify and entrench school bureaucracy seem to have strong, enduring and concrete results.” I’m frequently reminded of the statement made by the Engineering Council in the early 1980s that for all the significant innovation of the past half century, all the individual components of such thinking had been around for at least twenty years before anyone had the wit to join the pieces together. Britain needs to cut the lead-time for new ideas, argued the engineers. I heartily concurred, for educationists had exactly the same problem. Now in the opening years of the twenty-first century we still have the same problem, and I’ll argue in the rest of this book that it’s getting worse.

In the late 1970s the economic crisis lead to swingeing cuts in education, especially in staffing. Staff morale, and that of the parents, fell. Harold Wilson and old style socialism seemed only to increase Britain’s economic problems. Jim Callaghan’s well-meant paternalism had floundered in the face of the power of the unions, and Ted Heath’s conservatism had been no match for the fresh thinking of the radical conservative political thinker Keith Joseph, and his carefully tutored young protégée, Margaret Thatcher. Joseph was a robust politician, but also an intellectual who needed always to be sure that his argument was logically correct. Sometimes this perfectionism drove civil servants working with him to distraction, earning him the nickname of ‘the mad monk’, but the better they got to know him the greater was their respect for his judgement and his appreciation of what was ethically correct. His lasting achievement was that he reawakened the economists’ interest in the free market, an economic model first articulated by Adam Smith two hundred years before. He too had read, and re-read, Samuel Smiles. It was his thinking, for better or worse that ushered in the radical new Conservatism of Margaret Thatcher in 1979 with its belief in ‘energetic individualism’.

It was to be a couple of years after her election that Thatcher turned her attention on education, and replaced an old-style Tory as Minister with her trusted lieutenant, Keith Joseph. It was an unexpected move that unnerved many within the education establishment. Joseph was intellectually detached and emotionally unmoved by many of the materialistic expectations of members of his party. He was determined to drive to the heart of the
cultural and social assumptions that he thought weakened the English psyche. His intention was two-fold: to improve the quality of the education service to which he had a personal commitment, especially for the bottom forty per cent, whilst restraining the power of local government which, with its high level of local autonomy, could undermine the monetarist policies that Conservatism so avidly espoused. With education being by far the largest spender within local government, becoming Secretary for Education gave him direct access to local government’s greatest weakness - their inability to conceptualise an education service appropriate to the needs of the twenty-first century.

On entering office Joseph immediately called for a reduction in educational spending. Teachers, and their unions, became apoplectic. Local Authority officers rushed to defend central expenditure as an essential component in strengthening the schools, but government most certainly did not agree. I felt so incensed at his suggestion that I rushed into print, as did others, and had my letter of 15th October 1981 published in The Times. To my amazement, Joseph wrote me a sturdy rebuttal of the points I had made. I was flattered, but annoyed that he did not seem to understand my point that schools were only part of the complex world in which children were growing up, that learning was essentially a messy process, and that to confuse learning with schooling was to trivialise both. I wrote a careful reply and three days later received a phone call from his office. “Sir Keith would like to come and discuss this with you”, I heard his secretary say. “Would the afternoon of Friday of next week suit you, probably allowing him to stay for three hours?”

As I prepared for the meeting I realised I would have to focus very carefully if I were not to lose an important opportunity. I wanted to talk about giving children the ability to be enterprising enough to handle anything the world might throw at them, to be tough yet responsible. I wanted to talk about new technologies, and the limitations of a small school trying to create a breadth of opportunity.

The Minister and I talked alone for over an hour. He was a good listener and asked probing questions. He had been well briefed by his department. “I’m not sure why you should be worried, Mr. Abbott. My department tells me you’ve got good examination results, and that you’ve got a stable staff and you know how to mobilise the powers of the local authority, and incidentally of the Department of Trade. You’re obviously doing well.”

I was ready for this. “If I’m doing well, it’s because I’m in a fortunate position,” I replied. “Other schools are finding it hard to do the same thing and, if they did, the community as it’s currently structured wouldn’t be able to respond. This kind of success is not replicable.”

He nodded, “Yes, I understand that”.

I took him to see the Open Terminal Computer Centre. He was better at talking with children working at the keyboards than he was to teachers. Accomplished politician as he was, he was socially reserved and seemed more concerned to learn for himself than to score points. “What does this technology do for children’s reasoning ability? Does it make them deeper thinkers, or does it encourage them to be simplistic? While I like what I see of word processing and spread-sheets, I’m fearful if this were to degenerate into teaching machines. Would this make them more, or less, thoughtful? Will it make them creative, imaginative and enterprising?”

He seemed well satisfied with his visit and my responses to his questions, and went away still firing off questions as he got into his car. What difference it would make I was not sure, but I was intrigued at the requests I got from his office over the next few weeks, asking for a reference on this or that, or the title of some further book. He had clearly not stopped thinking about what he had seen or heard and wanted to learn more.

Three days after Keith Joseph’s visit Donald Fisher, the Chief Education Officer offered me a large cigar and, unsure of my political leanings, probed to find out what I had spoken about with the minister. It soon became clear that he was unhappy with the explanation I had given Sir Keith about the shortcomings of the small comprehensive school. He did not like me questioning how much money was being siphoned off to pay for central services and the fact that I could never get a straight answer about how staff were allocated to schools. He began to be suspicious that Authority officers, though themselves once teachers, were looking after the central office better than the schools.

As a one-time academic historian and a man who was convinced of the debt he owed personally to his grammar school education, the Chief found the new technologies of Information and Communication disconcerting, and my enthusiasm for such things suspect. But it was Keith Joseph’s questions about the nature of the curriculum that worried him most. If the Secretary of State were to become more interventionist, then it was inevitable that the local authorities would see their powers constrained. Slowly I realised that the agenda I was setting out for myself would exist in a no-man’s land owned neither by central government nor by
the local authorities.

This was going to be an unstructured and uncomfortable terrain to explore, but I knew I had to try, for one of my strongest conclusions after a dozen years of headship was that learning and schooling were not necessarily synonymous. Schools were trying to do things that they were never expected or designed to do. Children were spending three times more of their waking hours outside the classroom than they did being formally taught, yet school honoured what teachers taught more than what children learnt for themselves. With all the new opportunities for youngsters to use the technology as and when and where they wanted to, it was no longer good enough to think of learning opportunities exclusively in terms classroom hours and pupil-teacher ratios. This frightened the Chief and his officers. They would have preferred it if I had just kept quiet - better still, gone away.

It was indeed to become a messy, confused terrain, as readers of my previous book, ‘The Child is Father of the Man’, will remember. By becoming directly involved with several Secretaries of State - it started with Keith Joseph, intensified with Kenneth Baker, almost reached a degree of constructive thought with John MacGregor, but deteriorated rapidly with the egocentric personality of Kenneth Clarke, and floundered further with John Patten, Gillian Shepherd, David Blunkett and Charles Clarke. I discovered the simple reality that, however significant and profound the argument you’re making might be, your own colleagues don’t like you over-reaching yourself. Most people really do prefer the status quo – it’s easier for them to manage. To many people my constant questioning of all this meant that I was becoming an annoyance.

Once you decide to follow your own course you inevitably meet with disappointments. One of my biggest was the deal which Keith Joseph found it necessary to strike with the Department for Trade and Industry in 1983, when he tried to replicate what he had seen at the Open Terminal Computer Centre in Alleyne’s. When Joseph became Secretary of State the Department of Education had the LEAs.

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I visited Sweden to see the operation of what was called ‘The Work Orientation Programme’ in a hi-tech city close to the Arctic Circle where many youngsters had little understanding of what their parents did at work, and consequently little clear idea of what careers they might eventually follow. Some years before, a decision had been taken that, at the age of seven, all children should spend a day shadowing their father at his place of work, and a day shadowing their mother at hers. They also spent a day shadowing each of their best friend’s parents. So successful had this scheme been that they increased the frequency of such shadowing to five days a year by the age of ten, ten days at the age of thirteen, and fifteen days a year at the age of sixteen. “By the time a student reaches the age of eighteen and leaves school, he or she would have had twenty-four weeks of such a programme, and possibly observed sixty or seventy different jobs”, my guide said.

I was impressed. “That must be good for the students,” I said.

“Naturally, but think what it’s done for the adult community,” came the incisive reply. “On average we clean our shoes twelve times more a year because we are shadowed about once a month. We get used to being asked apparently naïve questions about our work but, believe me, children have many useful insights! What is more important, however, is that there is hardly an adult now who does not realise that the education of young people is simply too important to be left to teachers to handle by themselves.” That reply really impressed me.

From Sweden I went on to the USA. At the ad-
vice of Dr. Ernest Boyer, formerly the US Commissioner for Education, I visited a remarkable High School in Princeton, New Jersey - a city containing a complete cross-section of American society from a world famous university, through science parks and residential areas, to a run-down old industrial sector. Princeton High School reminded me of the red brick semi-collegiate architecture of a Surrey public school. In the two days I spent there I was amazed by, and made extremely envious of, what I saw - envious not simply of their superior resources, but of the vitality and cheerful maturity of the students. It was so different to what was happening in England.

I met Ron Horrowitz who ran the Learning in the Community Programme. “It’s a relatively easy programme to describe”, he explained with all the enthusiasm of the successful innovator; “We believe that by the age of sixteen or seventeen young people should be required to organise much of their learning independent of the school or the teacher. So, in the final two years of High School, virtually every student has a community tutor, as well as an academic tutor. They have to demonstrate that they can take their academic studies and develop these while working with a professional, well outside the school premises”.

“How much time does that take?” I asked, expecting that this was a project that might last three or four weeks, or a term at the most.

“As much as two days a week for the last year of High School, and for some as many days as that in the last two years, not just in a single year”.

Ron turned to his computer, and asked me to scroll through a long list of students’ names and pick one. I chose that of a seventeen-year-old girl, studying the sciences and hoping to go to an Ivy League College to study medicine. “She’s a trainee midwife, working in the birthing centre at the hospital with one of the professors,” explained Ron. “She does that for two days a week, helping mothers in labour. For the three days she’s in school she carries a bleeper and if they’re ever short-staffed in the delivery room she gets called out of school to assist. There are two rules that govern all this, and they are very simple. Whatever schoolwork she misses, she has to agree to make up in her own time. The other thing is that any student behaving that way that, in the environment in which they are working, might bring disrespect on the school, will be reprimanded in the presence of their peers.”

I found this absolutely intriguing. When you’re in the education business, you know what you’re looking for, and these young people were so obviously confident, alert, sensitive, inquisitive, enterprising and fun that I was most impressed. And these attitudes seemed to run through the entire school. A school people, if you like, by youngsters you’d be proud to call your own - people to whom you would willingly trust the future. “How has all this happened?” I asked John Sekala, the school’s principal. “I don’t see how you get a school to function like this”.

Sekala’s story went back several years to a time when sectional interest dissipated any coherent educational policy in the town: teachers, parents, academics at the university, and employers all seemed to be looking for different skills. Eventually, in an effort to come to some kind of consensus, everyone came together and suggested that unless the community come up with a mission statement for learning, their confusion would only get worse with time. After two years of rigorous and sometimes acrimonious debate they got their statement.

It read: “This community believes in functional literacy for all: that is, the ability to feel comfortable amidst all the change and confusion of a fast moving, technological society. That comfort comes with knowing you’ve learnt how to learn and feel confident in your ability to face the future. This depends on developing the full the ability to think, to communicate, to collaborate, and to make decisions.”

That was a most powerful statement, which, to me, drove to the heart of what I understood education to be about. The schools saw teachers first and foremost as educators whose task it was to build up the confidence in young people so that they became ‘free standing’. And the town, in turn, realised that it should no longer expect the school to do everything. Through a cross-disciplinary approach teachers really did become facilitators of the learning process and counsellors of the students rather than instructors within simply their own subjects.

“Word processing is very important to us”, John Sekala explained, “We have one computer to every three students (which to an Englishman in 1984 seemed like Utopia) and every essay ever written in any subject is done on a word processor. This approach is embedded in the process”, Sekala explained. “Once an essay is written the teacher will comment on it, often at length. Not until the student feels the draft is the best that he or she can produce do the students ask for a mark that reflects not just the quality of the finished text, but the improvements made on the first effort. We don’t set anything like as many essays now as we used to, as more time is spent developing verbal and audio skills. These youngsters’ academic results are
outstanding.”

Staff development was a key factor. Out of a total staff of eighty-two no more than seventy were time-tabled at any one time, fifteen per cent would be out on a retraining programme, working with local employers or professional groups to develop new programmes for the students. “The community is our richest resource. That is what gives our school its vitality, and because our teachers see themselves as continuous learners so do the pupils”, explained Sekala. While the buildings reminded me of traditional middle-class Surrey, this was a stronger commitment to an inclusive acceptance of community than I thought any part of England had ever sought to embrace. I returned home much inspired. Here, in a community-wide Mission Statement that really meant something, in an imaginative use of technology, in a cross-curricular commitment to develop autonomous learners, and in an insightful staff development programme, were the key ingredients for a fundamentally new approach to learning.

I was full of excitement when I went to meet Keith Joseph in his ministerial office high above Waterloo Station looking out across the Thames. He was intrigued as I explained all this; “That’s the kind of thing the Americans are so good at. They get hold of an issue, get everyone involved, build up a head of steam, and just get on and do it. Would Hertfordshire back you on something like that?” Sir Keith asked me very directly. It was a question that revealed the extraordinary tension that lay within the so-called balance of power between central government (who provided the money for education through taxes) and Local Education Authorities (who largely spent central government money, but raised only a small part for themselves). Keith Joseph, with the best will in the world, could not require a local authority to do anything.

“I’m not sure”, I replied. “They say their problem is shortage of money. But I think it’s lack of resolution,” I picked my words carefully, hoping my comment would not be repeated outside his office.

“Well you can tell your Authority that I personally think it would be a very good thing for them to put money into. But you had better be careful. They may well object to my interest,” said a man more skilled than I in such political niceties.

It was sensible advice, and I knew I had to be very tactful. I met the Chief and his senior advisor the following Friday just before Christmas. For several minutes they talked about the carols they had just sung at a local Christmas service. The message was plain. This was to be a polite termination meeting. Over lunch I pushed the conversation around to my discussions with Keith Joseph. There was a loaded silence. “That’s not possible,” said the advisor. “We simply have other priorities.”

I tried once more. “I don’t understand this distinction between ‘we’ and ‘you’. I thought that by sending me on that secondment I was supposed to set up something that might benefit the children of Hertfordshire.” They looked embarrassed, the mince pies and fresh cream sat half eaten on their plates. Eventually the Chief said, “The fact is, John, this is not a very appropriate time to raise this issue with members of the Council. They’re worried about the budget, and worried about the apparent intentions of government to strip them of their roles.”

There was a silence I was not prepared to break. It was all too obvious I had raised issues they did not wish to consider and indeed believed I should not have even been thinking about. Eventually the Chief, looking more drawn than usual said, “We think you ought to go back to being a headmaster. Keep the idea on the back burner. We’ll give your school an extra half teacher for the rest of the year as some recompense for the extra work you’ll have to do.”

I wondered why I’d ever tried. As I left the office I reminded myself that I had never set all this up for them in the first place anyway. I had set it up for the children – not just mine and Anne’s but the thousands of others who deserved better than this from the adults who were supposed to be their guardians. The more difficult this became, the more convinced I was that I had to hold to my convictions and find new ways of proceeding. I was finally forgetting those lessons of deference I had learnt too well in my youth.

A few weeks later I resigned my Headship and, with the initial support of a small number of business people I’d met earlier on my travels, set up a small not-for-profit organisation with the appropriately challenging title of Education 2000. The organisation was pledged to stimulate the fundamental changes in the way youngsters should be able to learn. I was forty-five years old and with three young children. I was leaving a post with a guaranteed salary through to retirement, for a very uncertain future. Thankfully in my wife, Anne, I had a partner who was fully appreciative of the risks we were about to take, and which we both thought were necessary. Without her support, and my young sons’ exuberant energy and inquisitiveness, I could never have done it. Now it was I who had to set the agenda.
Chapter Twelve

ON MY OWN WITH A VISION

Believing that there was much latent idealism amongst youngsters and the community in general that was largely untapped by conventional schooling, I stepped out of my comfortable position as headmaster to find ways of popularising the argument that a full education needs more than just formal schooling, however good that might be. Nervous at first I quickly discovered that such a message was seen as highly pertinent to the business community, and within two years I found myself addressing the annual conference of the Confederation of British Industry. The message initially attracted much interest in both Downing Street and within the Department of Education, but shortly our interests divided – government wanted a more centralised form of education, while Education 2000 saw in the emerging research a compelling argument as to why schools and local communities needed to become ever more closely inter-connected. Education 2000 relocates to America, and reforms itself as The 21st Century Learning Initiative.

Drawing a dozen years of headship of a large and exciting school to a conclusion, and bidding farewell to an education authority that had once set admirable national standards, but was now bogged down in petty and irrelevant squabbles, was not easy. Unbeknown to him, a rabbi from Manchester came to my assistance. In a letter to The Times on the penultimate day of term he had sought to contrast the amazing energy of young people searching for something greater and beyond themselves, as exemplified by the national response to the Bob Geldof Band Aid Concert of the previous week, with the inertia of established institutions. I read part of this letter out to the school at my last Assembly; “Why have religious and political leaders so miserably failed to offer the youth of this country something worthwhile to live for? Religious leaders have been preoccupied with church membership, while political leaders vie with each other to offer greater bribes in their quest for power. There is probably more latent idealism among young people now than ever before. But who is there to raise their sights and to show them a vision of goodness and holiness?” The rabbi concluded by quoting from the Book of Isaiah, “For without a vision, the people perish”.

Those people who knew me well would have known that I was really speaking for myself. Education 2000 had to help generate the vision which local authorities seemed incapable of doing for themselves. Moving my personal belongings out of my sixteenth century study was traumatic. I did it one evening late in the summer holidays when I knew no one would be around. There was a blank space over the fireplace when I took down the Turkoman rug that I had bought in the Shahrud bazaar a dozen years before on my last expedition. I closed the door for the last time with a lump in my throat. Nostalgia, yes; but anger too. I was slowly coming to realise just how limited my vision had been in those early years. I could have done so much more if I’d been surer about trusting my intuition, and if I’d known more then of the background to schooling as explored in the early chapters of this book. Too often I had stopped short of what I sensed ought to happen. Too often a voice of deep, regimented tradition warned me not to rely on intuitive. “Be logical”, my formal training had said, “Be prepared to justify every action with quantifiable data.”

I was different now. I was stepping out into a new world with precious few fixed points; I was no longer a headmaster, nor the employee of local government. And as I left I had a simple hope that my successors in that study – a room which had had headmasters in it for more than four hundred and twenty-five years - should look out and see generations of more positive, creative and independent young people walking down that driveway into a brighter future. Even my salary was ultimately dependent on the goodwill of a man I had known for less than six months. It was a job I had to make for myself, because there was indeed a vision that needed to be created.

On the first day of my new job I sat in my small office with one young part-time secretary, a telephone and just five thousand pounds in the bank. With this, my new trustees assured me, I could now plan to change the educational world. I felt vulnerable, lonely, and lacked even the wherewithal to make a cup of coffee. Then the telephone started to ring, and for weeks it seemed it never
stopped. Endless people who had battled with the system in the past, and had lost, poured into my ears accounts of their fruitless struggles. Other unstructured idealists suspected that I might have a bandwagon onto which they could climb. I put the disillusioned and the unstructured idealists firmly behind me. Within a week I recognised that I had just two tasks - both of monumental proportions; I had to learn how to articulate a vision for education that was both radical and attainable, and to develop a power-base of influential people in high places who could listen to what I said and then find a way to raise money, lots of money, for the program I was starting to envisage would need at least one million pounds a year. As the months passed this was like keeping two high-stepping carriage horses in tandem. Daily I feared that the enthusiasm of the academics for defining an incredibly finely nuanced statement of what needed to happen would flounder as our business sponsors wanted every statement reduced to a single page of double-spaced text. If ever I were to be caught between those who thought too much, and those who did too much without thinking enough, it was now.

Within two years I had captured the interest of many of the teachers and parents within the Hertfordshire town of Letchworth to start a significant project that would combine a town-wide appreciation of children’s learning needs, the use of new technologies and a massive staff development programme to explore new approaches to learning. In less than two years sponsors had donated over a million pounds, and so good were our commercial contacts that, in October 1987, I was invited to give the keynote speech to the Annual Conference of The Confederation of British Industry in Glasgow. I was told to anticipate an audience of eighteen hundred people, including the chairman and chief executives of most of the largest companies in the country, including firms such as British Aerospace, GEC, IBM, Marks & Spencer, the Prudential and Whitbread, while my speech would be televised live by the B.B.C.

Energetic Businessmen and ambitious Politicians

It was to be the speech of my life. I spent endless hours drafting and redrafting. I spent time with communication experts who taught me how to hold the interest of an audience, and I learnt the basis of the KISS rule ‘Keep it simple, stupid’. ‘You have to become a good teller of a straightforward story’, said a former MP now earning his living as a communications expert, ‘people find theory very hard to understand.’

With such advice I turned to face the audience in Glasgow, and was startled to see just how intimidating eighteen hundred faces can be. As the TV cameras rolled towards me I was foolish enough to think of my three sons, then aged nine, six and five sitting with their headteacher in their school’s staff room, eyes glued to the television screen, waiting, as they had told me on the phone the evening before, for me to make a mistake. The audience settled into their seats. The language I used then may sound slightly stilted in comparison to how I would now explain matters, but these are the actual words which first made the case of Education 2000 so well known. “Young people are a nation’s most precious resource, but academic success alone is no guarantee that a young person is empowered to tackle the challenge of modern society with confidence. We need young people who can think, communicate, cooperate and make decisions. People with the confidence to stand on their own two feet. Why is it, I’m often asked, after years of conventional teaching do so many young people appear to have little personal initiative, seem so unwilling to accept responsibility? After all, at the age of eleven, so many of them left their primary school alert, excited and inquisitive. Why?”

“Maybe you recognise such a child?” I said, letting my question hang long enough in the air so that each of the delegates would have to think of such a child. “The clue is in the word teaching. Good primary schools encourage children to want to learn,” I went on to explain, “to explore relationships, to treat the world as their expanding oyster. Learning becomes their thing. The child becomes excited and motivated. Secondary schools have been saddled with the artificiality of single subject disciplines, each with a heavy load of content. The teacher takes control, the pupils do as they’re told; it’s the only way to cover the syllabus. The integrated view of knowledge is easily lost, along with the pupils’ interest. They do as they’re told because teacher knows best, not because they any longer feel responsible. A vital attribute - that of responsibility - is destroyed. Many never recover, learning is associated with failure, and this bugs them for all time. We have to bring about a revolution in the practice of education. We have to foster young people’s growing desire to be independent, responsible and creative.”

The speech was well received, but I’m now sure that it came at least two years too late. Keith Joseph had resigned the previous year, as he recognised the onset of ill health, and Kenneth Baker, who succeeded him, was a politician with eyes stead-
fastly fixed on the leadership of his party. To do this he needed a big success or, better still, he needed to find an idea that was already in place that he could adopt and grow rapidly.

Some of his advisers thought they had found this success formula in Education 2000. In the months that followed the speech to the CBI we received a string of highly placed visitors: David Hancock, the Permanent Secretary of the Department of Education, Professor Brian Griffiths, Margaret Thatcher’s Head of the Downing Street Policy Unit, Alistair Burt, the PPS to the Minister, Angela Rumbold, the Schools Minister, a number of H.M. Inspectors, local MPs, and then eventually Kenneth Baker himself.

What had caught these people’s imagination was the way I had articulated a vision of education that was about high standards of learning, the use of technology, the involvement of the community and the need for excellent teachers all rolled-in togeth-
er. The Conservatives endorsed all this, but they had another pressing issue even higher on their agenda. They wanted to break, perhaps even destroy, the power of the local education authorities as they saw them to be the root cause of excessive, unnecessary expenditure. What I was looking for was a quality education for all children, founded in a respect for local conditions and traditions. While I had been badly bruised myself, and was to be fur-
ther bruised by local education officials, I believed local control lent an essential support to local democracy. I feared what would happen if these two agendas became mixed up with the objectives I had set out for Education 2000.

Kenneth Baker was ambitious and he was concerned to do three things. He wanted to reshape education to create an entrepreneurial culture; he wanted to demonstrate the massive potential of information technology to transform education and, as a loyal Thatcherite, he wanted to signifi-
cantly reduce the power of local government. It was in April 1988 that Kenneth Baker came to Letch-
worth, shortly before he published the Education Reform Act which was to herald fifteen years of an increasingly centralist approach to education. He was obviously out to enjoy his visit and talked animatedly with pupils and teachers alike. He came across as a good listener, and was particularly struck by how little attention the pupils paid to him. “They seemed so caught up in their work that we must have seemed uninteresting,” mused the man renowned for preening himself for the television cameras. He went off by himself and peered into places not on the official tour, talking with people who hadn’t expected to be spoken with.

“I’m amazed at the spectacular progress that’s been made in this project. This is much more than skin deep”, said the Minister thoughtfully later that afternoon in front of the television cameras.

Driving the Minister in the old family Volvo between two of the schools, I raised the vexed question of school autonomy versus community inter-dependence, particularly with regard to schools being able to opt-out of L.E.A. control, one of the first initiatives he had introduced as Minister. He put down his briefing papers and asked me to explain. There was just time to make a single point. “Well, Minister, it goes like this, and you ought to know it. The local employers have an interesting argument. They think that an opt-out school would, with its extra resources and prestige, quickly be seen as the best school. It would drain the better pupils from the other schools. The pupils from the more prestigious school would be likely to get the better qualifications, and would go on to better jobs, and most probably leave the town for higher paid employment elsewhere. The town, and the local employers such as themselves, would then be left with weaker students. That’s how they explain it”, I said, struggling hard to do justice to the deeply held view of the employers but trying not to make it sound too confrontational. “You see they have come to believe in trying to establish high quality right across the town. They believe in Letchworth as a whole, not simply in one of the schools. Their concern is for all the children”.

He was silent for a moment. “An interesting observation. What do you, or the employers, think would be better?”

About a minute of private conversation re-
mained before we turned into the school grounds.

“Offer the challenge to whole communities - places like Letchworth with less than fifty thousand peo-
ple - not simply to opt-out of LEA control as sepa-
rate institutions, but rather together to ‘opt-into’ a partnership between all the schools and the entire local community. It must be real partnership - not simply the schools telling the community what to do. Give such communities the responsibility they need to do it all, by using all their own resources collaboratively. Hold the community to account for using all its resources, formal and informal, to raise the standards of achievement of everyone. Let the buck stop on their own doorstep”.

“All this technology should give you a clue”, I said, speeding up my explanation, “The new unit of change will have to be something larger than a single school, but certainly smaller than an old fashioned education authority. It has to involve everybody; there’s massive talent floating around
in most communities, totally unused. Such people don’t want to be pushed around by some vast, complex bureaucracy. They want to be useful within a small, quick reacting community, the place where they matter, and where they’re appreciated, and can genuinely grow.

“That’s fascinating”, said a Minister always on the look out for the politically interesting idea. “I wish we could replicate this elsewhere in the country. But as to opting-in as opposed to opting-out, I think Parliament has already gone too far with the new legislation to reverse that and go the other way. Tell me”, he said, not wanting to get out of the car, despite the obvious committee standing outside waiting to welcome him, and desperately wondering what we were talking about, “why is your local authority so negative?”

I thought carefully, and was aware of the Chief himself standing on the pavement very obviously impatient at the delay in his welcoming the Minister. This was a politically loaded question and my answer might later be quoted back against me. “I think they’re frightened that you’re trying to abolish their power”, I said somewhat defensively.

“And what are you afraid of?”

“Both of them, and of you”, I said speaking very much from the heart. “By that I mean I don’t think either the authority or the Department have the appropriate thinking for all these new opportunities”.

“Neither do I,” he said, and I’m sure he meant it, “You’re right”. He opened the door and tried to leap out to greet the outstretched hands of the reception committee but, having forgotten to unfasten his seat belt, he fell back into the car in an undignified heap. I feared that his confusion might cause him to forget the significance of those last few words.

During the summer months of 1988, Education 2000 came extraordinarily close to influencing government thinking. But we were almost a year too late. The country was fast losing patience with educationalists and Baker was pushing ahead rapidly with the Education Reform Act. His own political credibility was at risk with the City Technology Colleges which he was promoting with enormous zeal, and the ideas I was setting out were, he told me later with disarming candour, were simply too fundamental and commonsensical to make political headlines. That was the root of the problem. Baker and Thatcher were rushing too fast to be able to handle anything as profound as what Education 2000 was advocating. If we’d got started in 1983 or 1984 and not been sidelined by the LEA, who instead of accepting us as allies saw us always as a potential threat, the course of English educational history could have been very different. Another of the tantalising ‘ifs’ of history. Despite all our endeavours we had missed the tide.

For seven years we - that is, a slowly emerging but increasing following of enthusiastic teachers and a dedicated group of Trustees - fought on. Constantly seeking to strengthen our case that learning was about more than schooling, and that children’s informal experiences were every bit as significant as anything that happened formally in school, I became deeply involved in teasing out the significance of the emerging research from cognitive science and neurobiology. I received a great deal of help from Al Shanker, the President of the second largest American teaching union, the A.F.T. I had first met Al at a conference in Helsinki and found him to be a man of enormous intellect whose many years as a union official were reflected in his bullerrier-like appearance. “Countries that don’t invest properly in the development of their teachers will never trust them to get on with their job - the less the teachers are trusted, the thicker will become the rule books that they are forced to follow. Only when a country ensures that the very best of its young people become teachers, will governments back off from micro-management” he told me at a subsequent conference in Colorado in 1989. That sounded a very fair assessment from the perspective of my English experience, and even more perceptive now in 2005 when looking back over twenty-five years.

In July 1993 Shanker alerted me to a book he had just read in manuscript form, and which was to be published that same month. It was John Bruer’s ‘Schools for Thought’. This book was to help me enormously. “Current methods of schooling are relatively successful in imparting facts and rote skills”, Bruer argued, “but they are far less successful when developing higher-order skills.” Youngsters can memorise large bodies of information for limited periods, but they don’t understand this at a profound enough level to be able to give it real meaning, he explained, therefore, such learning is inevitably superficial. Students can only use it in the way they first understood it. It is not transferable. It is transferability that is essential if students are to develop genuinely flexible skills, and be creative and solve novel problems. Bruer goes on; “Transferability means applying old knowledge in a setting sufficiently novel that it also requires learning new knowledge.” In other words if formal schooling is to have a commercial value over and above developing basic skills, it will be because teachers have learnt how to develop such higher-order skills intentionally, not accidentally,
and for the majority rather than solely for the elite. Bruer’s is a fascinating and powerful argument but to me it was essential that such thinking involve more than just schooling. This was when people like Bruer worried me, as did many other cognitive scientists, who appeared to be preoccupied with formal instructional processes of school, and failed to acknowledge the significance of learning on the job, so well expressed in cognitive apprenticeship. They spoke, and wrote, about learning as if they thought the schools were the only places that influenced young people.

I had one, brief, opportunity of explaining this argument to John Patten, the former Oxford don who succeeded Baker as Minister of Education. Brian Corby, the Chairman of my trustees and by then president of the C.B.I., and chief executive of The Prudential, came with me to Sanctuary Buildings which had replaced the tired old offices at Waterloo as the new home of the Department. I had read many negative press comments about John Patten, but being the optimist I was, I had hoped that I would find him reasonable and constructively. The Secretary of State’s new office was moderately spacious, and fitted out in some style between the oddly shaped walls, windows and a dipping ceiling at the top of Sanctuary Buildings. Patten rose to greet us, brushing his hair from his eyes in a studied gesture, going on with the same movement of his hand to check his tie. He was anxious to talk, flattering Brian so effusively that, for once, Brian himself was stuck for words. Sitting opposite him, I could not help but notice the nude sketches on the walls behind him. These, it seemed, were all part of the ploy. He caught me looking at them, - they were by Augustus John he explained. Apparently the Foreign Office had suggested that he should take them down whenever moslems come into the room. “The Minister of a middle-eastern country was here last week, so I turned them round. I bet he spent all his time wondering why!”

I was shocked. With such an attitude it was impossible to take the Minister seriously. Eventually he gave me a few minutes to say what we were all about, but I didn’t think he was listening. His eyes flickered from Brian to me, and he broke into my explanation to justify his own policy. He turned to Brian, “Don’t you think that the grant maintained schools are a very good idea? Even my chauffeur has children attending a voluntary aided school, where every parent has to agree, in advance of the child going to that school, to attend each and every Parents’ Evening. That’s what good education is going to be all about, isn’t that so Sir Brian?”

The Minister was similarly dismissive of international research. What is there that we don’t already know here? was his line. It was impossible to think of an appropriate response that would do justice to the ideas, yet mean something to him. Less than three minutes into our presentation he cut in and said hurriedly, “Yes, you have my support. No, I have no money to spare, but give me a paper of two or three sides setting out your proposal and I’ll get my team to have a look at it.” With that we were shown out. That was all the discussion Patten was prepared to have. I had never seen Brian, the man heading up the CBI, and well used to dealing with uncertain personalities, so annoyed. That England, once the epitome of delegated responsibility and local accountability, had regressed to the point where the individual quirks and idiosyncrasies of such a Minister had to be taken seriously, seemed a travesty of democracy. What on earth had happened to the political process?

Meeting with so little enthusiasm from policy makers in England, Education 2000 found itself better known on the international circuit, and so we prepared to shift the trust’s base to the United States. As the powers of the Department of Education grew, and its officials became ever more numerous, so it must have appeared to many that Education 2000 had become irrelevant. But, like the Socratic flea, we always appeared to have the ability to bite back in places that gave the trust an influence out of all proportion to its size.

In December 1995, and apparently out of the blue, David Peake, my new chairman of Trustees and formerly chairman of Kleinwort Benson, the merchant bank, received a personal letter from John Major asking for an explanation of Education 2000’s thinking, and what it might entail at policy level. By this time many of my papers and books were already crated up and on their way to America. I sat in my stripped-down office to write a memo to the prime minister. It had to be short and persuasive to hold his attention. I drafted and redrafted. Everything I wrote was correct, well thought through, and concise; it summarised the case I’d made to the young entrepreneurs in Venice in Chapter One. But it was, however, just too big an idea to fully express cold, and on paper. The memo resulted three months later in my being told in Downing Street by John Major’s education adviser, Dominic Morris, “I can’t really fault your argument, but it’s all based on having a supply of good teachers”, he said with brutal clarity. “We don’t think we have them, so we have decided instead to go for a system that is so well designed, so efficient, that it is virtually teacher-proof.” I tried to argue, but Conservative Party thinking was not for
turning. As the door of No. 10 closed behind me it was like the death knell of Education 2000. The conviction of the Trust that the British system of education could be transformed had been rejected by the more politically accepted strategy of playing down visionary idealism in favour of pragmatic cynicism. That afternoon the cold grey light of Whitehall seemed very harsh.

Adolescence and Apprenticeship

My last formal engagement before leaving for America was an invitation to address the members of The Haberdashers’ Company, one of the oldest of the London trades guilds. This was my opportunity to be more expansive than had been possible with the policy makers in Downing Street and, given the breadth of interest amongst such a diverse audience, I could relate my thinking more directly to their personal interests. In short I could talk about the dynamics of human learning without necessarily tying this closely to the institution of school. The members of this ancient livery Company were no longer concerned with buttons, bows, hats, scarves, gloves and all the fine silks which the aspiring mediaeval bourgeois had once valued. Haberdashers, as with other city guilds, devoted themselves largely to charitable works, and to education in particular. Two hundred or so businessmen, insurance brokers, lawyers, elected officials of the various guilds and directors of other charitable foundations, assembled in the Great Hall. As I was being introduced I couldn’t help but notice the rugged features of earlier Haberdashers displayed in gilt frames - men whose fingers would once have distinguished between the feel of silks from China and those from India, while their astute minds had ensured profitable deals four hundred years ago in the markets of Bruges, Ghent or Samarkand. Rounded men, who dealt as easily with theory as practice. That, I would have to impress on my audience, was what modern education had to do as well.

“Long ago, when your Guild was established, your master craftsmen were the essential role models to their apprentices” I said as the guests settled into their seats. “They taught the apprentices everything they knew themselves - not just instruction and detailed formulas, but trade secrets, the rule of thumb, know how and the ability to sense the integrity or otherwise of other merchants. Never was it a question of ‘Do as I say, not as I do’ for these were men who knew that the survival of their business depended on their young apprentices progressing from being ‘Jacks of all trades’ to eventually demonstrating their competence through the production of their own ‘masterpieces’. The young inexperienced ‘jack’ had indeed to become as good as his master, in a self-perpetuating cycle of continuous self-improvement. Each new generation of journeymen realised that quality was maintained, not by simply slavishly following the rules without thinking, but by intelligent adaptations, and the fusion of new materials with new technologies. Good apprentices had to be quick thinkers. History has not been kind to such craftsmen. More school children think of the Luddites as fools, rather than the protectors of high standards of craftsmanship, and that is too simplistic. Because human babies are born with their brains so incompletely formed, our children need long periods of care and nurture to develop their physical capabilities. They are much more dependent than other species on ‘growing’ their brains in the first few years of life, through interaction with their environment. This interaction is critical. Because human babies are born with brains that have been shaped by millions of years of evolution, this shaping we now understand, means that we are born with very many predispositions to do things in effective ways that help to ensure our survival. But while each one of these skills is innate – they are only there as a ‘possibility’. Only if the environment in which the child is born utilises that innate skill will it actually develop, otherwise the predispositions will quickly disappear. It’s as if we are born with a whole library of D.I.Y. books in our brains - unless we pull these down and use the instructions we never grow.

The easiest of predispositions for us to understand is the ability to speak, something Homo sapiens have probably been doing for more than one hundred and twenty-five thousand years. The ability to communicate is of course a key survival skill. Through speech we are able to share ideas. Children who can understand language know when to get out of the way when they hear from another child that there’s a bear coming around the corner. In the mind of a William Shakespeare language can be used to express the finest emotions, or in a Goebbels the foulest of lies. Language allows us to share our brains with someone else.

Evolution has favoured the offspring of parents who use language a lot. Just which language a child will speak at birth is absolutely conditioned by the language he or she hears around them from day to day, but how they construct language is largely influenced by factors of heredity. At birth every child is quite capable of making some sixty structured
sounds which, when combined, will be more than sufficient to construct all the letters in the alphabet of each of the six thousand or so languages presently spoken on the earth. For example a young child, say of English speaking parents from Hampshire but growing up with a Swahili speaking foster parent in South Africa, will learn to speak perfect Swahili without a trace of a Hampshire accent by the age of four.\textsuperscript{6} Reverse that experiment, and you can find a perfect English speaker from a Swahili background. Both children have used identical structural forms in the brain, but in interaction with the environment have come out with an entirely different language. In time ‘culture’ will actually modify the way the brain operates through a process known as neural pruning.\textsuperscript{7}

These predispositions are Nature’s present to each new generation, for they enable each of us to learn (in this case a language) with apparent no effort and with total efficiency, providing we are doing this within the time frame that suited our ancestors. Once that time frame has passed learning has to be a far more intentional, and inevitably incremental and harder activity. Think how easy you found learning your native language (almost without instruction) before the age of three or four, in comparison with learning a foreign language at secondary school.

This is just enough biological detail to make it possible to better understand Confucius’ observation that telling somebody something is not as good as showing them, which in turn is nothing like as good as letting them do it for themselves.\textsuperscript{8,9,24} Experience, having to act upon what was earlier only just an idea, is critical to the growth of the brain. Without the ‘having to do’ part, such people’s intellectual activity remains strictly cerebral. They just don’t know how to use these insights in any practical way, which is a problem that many academics suffer from – most frequently without even knowing it.

It is possible for us in the present generation to look back over the several millions of years of human history and see the remarkable way in which our physically puny species has come through such processes to have ‘domination over the beasts of the field, and the fish of the sea’.\textsuperscript{5} Our ancestors, even as recently as our grandparents, did not have the depth of vision now available to us. Their immediate concern was to ensure that their children were strong enough and wise enough to take the skills and culture of the tribe into yet another generation. To our ancestors the successful learning of their children was, literally, a matter of life and death. There was no room for mistakes. Get it wrong, and your children perished, and so did you. That was the process, repeated hundreds of thousands of times, that has evolved into what we call our human nature.

Take, for example, the very group I was addressing. The original Haberdashers’ realised that the whole operation of apprenticeship had to go with the brain of the child. Much adult support was provided when the apprentices were young, but this started to fade as the apprentice took up more of the responsibility, and the craftsmen set the apprentices even more complicated tasks. They did this well, those old craftsmen, for their livelihood depended on it. They might not always have made silk purses out of sows’ ears, but they got a remarkable number of youngsters to high levels of competency. Unfortunately for us, those craftsmen of generations past were too busy to spend time writing up the theory of what they were doing - they simply transmitted such ‘know-how’ to the next generation through everything they did. Academics, with more time on their hands, and with the church to protect them, did write, and they did elevate their own conviction that the affairs of the mind were of a different order of magnitude to the affairs of people’s hands.

Apprenticeship was a highly successful technique to channel the energies of adolescence into useful skills.\textsuperscript{9} However, English education, as readers of this book will readily appreciate, has a distinctly ‘anti-practical’ prejudice, and an elevated infatuation with the affairs of the mind as being totally separate and superior to those of the hand. This thinking, I reminded the Haberdashers, can be traced back to the Greeks and especially to that classical scholar, Roger Ascham, and his book ‘The Scholemaster’. Much of the glory of our civilisation owes its origin to the philosophers of Ancient Greece. But I believe those philosophers missed out on something - they were not in the least interested in young men until they were ten, eleven or twelve years of age. Whatever happened to children before that age was of no concern to them; that was women’s work, if not slaves’ work. Whilst Socrates delighted in teasing out the faults

\textsuperscript{8,24} The following set of lines are attributed to Confucius in approximately the fifth century, BC.

Tell me, and I forget/Show me, and I remember/Let me do, and I understand.
in young men’s logic, so as to make them ever more rational, neither he nor his fellow philosophers studied the marvels of the development of the young child’s thinking, nor did they show any interest whatsoever in women’s minds or ways of thinking. Quite simply those ancient Greeks didn’t think those early years mattered, nor that there was enough substance in a woman’s mind to merit attention, and they certainly didn’t have the medical technology to enable them to study the brain as a living organism. What mattered to the tidy-minded Greeks was not squandering scant resources on those who they were not sure were going to be the leaders. This approach has led in our day to a funding regime that spends more on children as they get older, and spends less at that stage which we know, with the knowledge we have now accumulated, is the most significant in the building of children’s brains.

Cumulatively these failures led to another major mistake - the failure by contemporary educationalists to recognise the significant opportunity provided by adolescence. The craft tradition as existed from before the medieval period, saw adolescents both as learning on the job, as well as reading and talking amongst themselves as they sought to become ever more inventive. The craftsmen of old saw in adolescence an energy they could use. They saw it as a period in a person’s life when they had a natural disposition towards risk-taking, a love of their own independence, and an appetite for ferocious questioning of the status quo. Properly directed this could be used to the good of the whole community. Without the rebelliousness of youth, society would have been (and still would be) boringly unimaginative.

We are wasting the skills and energies of adolescence, I told my audience in the mid 1990s, and we – and they – are the losers. This argument certainly interested the Haberdashers and they asked many perceptive questions. Two stand out clearly in my mind from that evening. A retired Army officer remarked “You’re going to be up against the most enormous inertia in the system with this argument of yours, not to mention the vested interests of those who have created a comfortable niche for themselves in what I clearly understand now is a fundamentally flawed system. I don’t know a great deal about education, but what you’re saying makes absolute sense. I’ve seen real problems with two of my own grandsons, boys who have had every opportunity a parent could give them, but they really fell foul of adolescence. Now I’m starting to see that what they really needed was to be ‘given their head’. Instead my son and daughter-in-law, and their expensive schools, tried to corral their energies. Deeply worrying; you really have made me think.”

Just as I was preparing to leave the reception the Director of a large national charity approached me, a charity that had earlier generously supported our work in some of the first projects. She accused me of being arrogant in criticising the whole basis of what she saw as classical philosophy (which actually I had not) and the way, again as she saw it, that this had created in the English public school the best education system in the world. There was no chance that we would get further funding from them, she said, because “You are just going too far.”
In late December 1995, my family and I flew to Washington so that I could set up The 21st Century Learning Initiative. Together with the Johnson Foundation in Wisconsin, the Initiative was determined to draw together some of the best minds in research, policy construction, pedagogy and philosophy so as to get a clearer understanding of the principles that should shape education in the future. Our conferences would be held in the Great Hall of Wingspread, an unusual building designed by the flamboyant Frank Lloyd Wright in the 1930s on the shores of Lake Michigan. Our ambitions were not going to be easily realised, I reflected on the flight across the Atlantic. Even if we could get the clearest possible understanding from the sciences of the need for change, when two well-educated and well-do-do citizens of London could view what I had said at the Haberdashers' Hall from such totally different perspectives, we could be in difficulty. “It's not people's ignorance you need to fear”, I remembered Josh Billings, an American journalist having said way back in the nineteenth century, “it’s what people 'know' that darn well ain’t true any longer that causes all the problems.” True, too true, I thought to myself, it’s people’s preconceptions that make them indifferent, even hostile, to new thinking.

My first concern was to ensure that the group should be broad in its base of experience. There would be people from neurology and cognitive science, anthropology, evolutionary psychology and systems thinking; school-based innovators; policy-makers; educational administrators, and others deeply interested in the potential impact of information and communication technologies. Some of these would be strict rationalists whilst others, in their search for inter-connectivity between different forms of experience, would be more philosophical and even metaphysical. This disparity would, I knew, inevitably breed tensions and some misunderstandings. “Beware of the intellectual's search for creeping academic perfection”, one of my trustees, Tom Griffin, a former investment specialist, had frequently warned me. The issue the Initiative had to address was not simply a matter of information, nor was it a question of more research: it was as much about making sense of what was already known, as it was about finding fresh insights. Our eventual recommendations had to make people passionate if they were to bring about whatever changes were deemed necessary by the conclusions of our work together.

I had a second concern. We had to search for a process that would create a synthesis, the painting of the broad picture in ways that would be helpful to vast numbers of people currently confused by the babble of specialists, each promoting their own agendas. We in the West, because we don’t know much about the art of synthesis, often simply retreat into our specialisms. We compromise. We look for the lowest common denominator in an argument, and come out with statements so generalised that no one is offended. Consequently nothing really changes. I’d attended far too many conferences in the past that were simply of passing interest, and which apparently achieved nothing. We had to bring about a revolution in how schools treat children’s learning; an easy thing to articulate - popular almost - but incredibly difficult to achieve.

More than fifty years earlier, Erwin Schroeding-er, himself a refugee from Austria and a physicist of international renown, had challenged academia in a similar way to reconsider the nature of different branches of knowledge. In a famous essay in 1943 entitled, ‘What is life?’ Schroedinger wrote of academia; “We have inherited from our forefathers a keen longing for unified, all-embracing knowl

**Chapter Thirteen**

**DISCUSSIONS IN THE GREAT HALL**

The challenges and opportunities of drawing together some sixty world-class researchers, policy-makers, practitioners and educationalists from fourteen different countries in an attempt to distil their knowledge and experience into advice that might shape the future structure of education. Western academics don’t know much about trans-disciplinary synthesis, and individual academics easily retreat into the security of their own specialisation. Discussions indicate that nature is constantly shaped by interaction with dominant culture of the time. Initiative assumes responsibility for stressing importance of life a child leads outside school, learning experientially from society’s values. Process of marrying conclusion together with findings of neurobiology, cognitive science and evolutionary psychology.
edge. The very name given to the institutions of highest learning remind us that, from antiquity and throughout many centuries, the universal aspect has been the only one given full credit. But the spread, both in width and depth, of the multifarious branches of knowledge during the last hundred years has confronted us with a queer dilemma. We feel clearly that we are only now beginning to acquire reliable material for working together the sum total of all that is known into a whole. On the other hand, it has become next to impossible for a single mind fully to command more than a specialist sub-portion of it. I can see no other course (lest our aim of creating synthesis be lost forever) than that some of us should embark on a synthesis of facts and theories, albeit with a second-hand and incomplete knowledge of some of them - at the risk of making fools of ourselves."

I was under no illusion about the difficulty of creating a synthesis which would include both natural and social sciences. I was asking very intelligent people, each of whom was making their daily living from their authority as a specialist, to take the risk of making fools of themselves, and to use their wisdom to speculate as to what all this knowledge meant when taken in its entirety. How could each of us go beyond our traditional skills as specialists and develop the art of synthesis, drawing together all the variables in a context where no topic was off limits? There was no recognised methodology to do such a thing. The challenge called for people who could see beyond the fascination of their own specialisms to the bigger, all-encompassing themes. Most of us are not good at doing that. We are too concerned simply with the individual dots each of us has contributed to the hypothetical impressionist painting, and nothing like as concerned as we should be to stand back and view such a picture from a distance. To do this we had to be prepared to lose our own individual contributions within the bigger scene; not an easy task.

Ours was probably a unique platform. It included four former Ministers of Education, one of whom had also been a leader of Solidarity in Poland, and another had formed the first ever Ministry for the Development of National Intelligence in Venezuela. There were professors of education from England, America, Canada, Australia, Germany, Ethiopia and Columbia. There were researchers from Scotland, Germany, Israel, England and from across the United States, and there were people from both the non-government organisations (NGOs) as well as the United Nations’ Development Programme (UNDP) and the United States’ Agency for International Development (USAID). There were politicians, political advisors and businessmen, including Dee Hock, the founder of the VISA Corporation, the educational manager of the Motorola University, and a Quaker teacher and philosopher, Parker Palmer. Through such people we were directly linked to many other networks. To Howard Gardner, the cognitive psychologist at Harvard; to Marian Diamond at Stanford and to Gerald Edelman at San Diego - both world-renowned neuro-biologists - to Dick Riley, the US Secretary for Education, and via Rod Cocking to the National Research Council and to Bruce Alberts the President of the National Academy of Sciences. We were also linked to the Council of Presidents of the Scientific Society of America through Martin Seligman the President of the American Psychological Society, and - somewhat reluctantly on his part - to John Brewer, the cognitive scientist at the MacDonald Institute in St. Louis.

**Neural Darwinism**

I took as our starting point the work of Gerald Edelman. In the early 1970s Edelman had won a Nobel Prize for his work on the human immune system, gaining recognition that almost makes him a household name. He had shown that, as the result of chemical interactions over aeons of time, the human body is born with a vast number of specific antibodies that each have the capacity to recognise and respond to particular types of harmful viruses. In other words, our immune system doesn’t just build new responses every time a new threat appears; it simply searches its vast repertoire of defence mechanisms until it finds an antibody that is appropriate. If it finds one, then all is well. But if the immune system can’t find an appropriate antibody in that person’s genetic inheritance, then growth is retarded and the individual’s life possibly threatened. In 1992 Edelman argued that human learning occurs in a very similar way to the functioning of the immune system. He suggested that to think of the brain as similar to a computer was unhelpful because - without an external developer - change in our brain occurs solely through the interaction of our internal mental processes with those aspects of the environment that attract its attention. In other words the drive comes from within the brain, not outside. Edelman suggested that in the way our brain develops and operates, it resembles the way organisms respond to the rich,
layered ecology of the jungle environment. What happens in the jungle is the result of natural selection. All trees have the innate capacity to reach the sunlight and extract nutrients from the soil; those that do this thrive and reproduce - the others simply die. They do this, said Edelman, not through following specific instructions, but by selecting the appropriate options.

Edelman argues that genetic processes that have evolved over aeons of time have created a human brain which is fully equipped at birth with the basic sensory and motor components so as to enable each individual to function successfully in the normal physical world. An infant brain doesn’t have to learn how to recognise specific sounds and line segments; such basic neural networks are operational at birth. We don’t teach a child to walk or talk; we simply provide opportunities for adaptations to an already operational process. As fresh opportunities present themselves so the brain searches through its vast repertoire of potential processes that its evolutionary experience has built up. As in life, however, not all individuals read these instructions as effectively as other people, so not all adaptations are complete or effective.

Thus, learning becomes a delicate but powerful dialogue between genetics and the environment - the experience of our species from the distant past interacting with the experiences we have during our lifetime. Our brain is partly shaped by genetics, development and experience - but it also then actively shapes the nature of our own experiences and of the culture in which we live. And as biological evolution proceeds at a snail’s pace in comparison to cultural evolution, we are forced to grapple with current social and environmental issues with a brain that biological evolution has tuned to respond to the vastly different cognitive challenges of something like thirty thousand years ago. Back then physical dangers were signalled by rapid changes in the environment, not by gradually developing problems like pollution, over-population and acid rain. We’ve compensated for the slowness of biological change by seeking rapidly evolving technological solutions to our current problems.

Of our number it was Bob Sylvester, a professor of education from Oregon with an especial interest in neurobiology, who had done most of the thinking on this subject. “Each new technological advance also creates a new human problem” Bob told our first Conference. “Our profession will be challenged to reconceptualise formal education as new brain theories evolve. Then we have to discover how best to reset our brain during its development so that one day we may develop biological solutions to many technological problems that currently seem to defy solutions.” Bob went on to say, “Such a model of our brain is especially intriguing because it suggests that a jungle-like brain might thrive best in a jungle-like classroom which included many sensory, cultural and problem-solving layers that are closely related to the real world environment. An environment that best stimulates the neural networks genetically tuned to it.” It was a fascinating explanation.

“Such a description of the brain intrigues me”, said Stephanie Pace-Marshall, the Executive Director of the pace-setting, Illinois Maths and Science Academy, and one of the Initiative’s most thoughtful supporters in America. “That helps me to understand the diversity of human expectations. Let me show you what I mean. I would like to read you a little piece of free-writing by an eleven-year-old girl at my school last week. It goes like this: ‘I wish I could still draw. When I was in grammar (primary) school I used to draw decently. I also love music, and painting, and carpentry. I want to dance in my own ballet class, play my clarinet, and draw thousands of pictures. Create beautiful poems, cook and sew for my children, be an astrophysicist, go to Mars and understand all my questions about life. That’s not too much to ask, is it?’

“You see that is exactly what I want for my students”, Stephanie said forcefully, “and that surely is what the incredible complexity of the brain would seem to suggest is possible?”

“I understand you exactly”, responded Bob, “for remember I too was once an elementary school teacher. You and I both have great ambitions for children - broad ambitions. We believe that every individual has the right to develop a range of skills and attitudes. The truly remarkable feature about the brain is that it can make so many different responses to entirely different cultures,” Bob went on to explain that this theory - often called Neural Darwinism - is emerging out of the material world of biology and natural selection. “Neural Darwinism explains cognitive behaviour through the electrochemical actions of neural networks, hence it provides an explanation from a biological perspective of the ‘how’ of existence, but leaves still unanswered the question of ‘why’ humanity, at its finest, pushes to go beyond the apparent rules of biology in its search for ultimate meaning”, said Bob.

Bob Sylvester is a man whose ideas, as expressed in his several popular books, are eroding the power base of conventional schooling. He is also a man whose ideas upset creationists. “What you have to realise is that the medical profession is at least fifty
years ahead of us in theory and research”, he said at our first conference. “We started maybe two or three years ago in terms of the biology of learning. The conventional wisdom used to have it that ninety per cent of what we knew about the brain was learnt in the last ten years. Because of the development of functional MRI two years ago, ninety per cent of what we will know about the brain in just three years will have been learnt in the last three years. What is happening is a phenomenal influx of new information. All this is happening on our watch. We don’t have to apologise for the last fifty years, but we as sure as hell are going to have to apologise to our grandchildren if we drop the ball at this point.”

There was a lengthy silence as individually we pondered all this. I welcomed his sense of urgency. The silence was eventually broken by Betty Sue Flowers, a professor of English at the University of Texas, and the ghostwriter for a number of TV presentations of scientific, philosophic and spiritual issues.9 “Like Stephanie, I would like to read you a piece of student writing, this time from a twenty-two-year-old in his penultimate year at university. It goes like this”, she said, “and I haven’t edited a single word of it. ‘It’s hopeless out there’, writes my student, ‘it’s just a crap game. There is no way that hard work is going to pay off. There is no cause and effect connection any more. What you have to do is to get into a system and figure out how it works, and then you either work the system, or you don’t, but that’s all it is. It’s a system. And you need to find your place in it. It’s all about networking, and the better your school the better your chances. What’s the old saying - it’s not what you know but who you know - I think that’s absolutely true. That’s the way it’s always been. I mean the world is made up of winners and losers. You’ve just got to figure out how to come out a winner.’”

**Go-go Capitalism**

“A crap game. You’ve just got to figure out how to come out a winner.” The bluntness of this statement shocked many of us. It seemed so uncompromisingly harsh, cynical and devoid of any sense of the significance of the individual. Yet many of those gathered at Wingspread - especially the Americans - knew that it was true, youngsters did indeed feel they were being squeezed into a system, and if they objected to it too much they would be left behind. I thought I understood America well because, for a dozen or so years, I’d attended numerous conferences across the breadth of the Continent and holidayed there five times with my family. Yet I was quickly to discover that I’d earlier seen America with a perspective focused more on the history of the Founding Fathers, than on the America of President Calvin Coolidge and the contemporary consumer republic. I was still exploring the concept of democracy with Jefferson and Patrick Henry, or on the Mississippi with Mark Twain, rather than being amongst the whiz kids of Wall Street or the political spin doctors of Washington.

In the year before I became headmaster, a leader in The Times, (1971) had declared, “There is no great enthusiasm in Britain for wealth as such. There are probably still more people who will give total effort for reasons of idealism than for reasons of gain.” It had been in that spirit that, as a teacher, I’d given up my summer holidays to take schoolchildren on expeditions to Iran and Turkey all those years ago. I’d received no extra pay for this; and never expected any. You did what you did in life because of what you believed in, and what interested you. That was how teachers operated, and by and large people respected you for it. It was in that spirit that I had come to America to set up the Initiative.

However, not until you live and work in a country like America, until your children attend its schools and you experience its Presidential election and pay its taxes, do you really understand what makes its people tick. What I was to learn from the experience of living-in-America-as-the-Americans-lived was to be as influential to me personally as anything I was to learn working on the research into human learning.10 It’s as important for readers to appreciate this, as it was for me to understand the economic and social dynamics of the world’s wealthiest economy - the economy so much of the world thinks it should emulate. It’s these economic facts that are creating our present culture, and it’s these cultural values that switch genes on, or switch them off. You just can’t neatly separate culture from nature.11

We’d only been in Virginia for a few weeks when it was announced on the early morning news that A.T.& T., the enormous telephone conglomerate, had just made a record profit, and that its share price on the New York Stock Exchange had accordingly leapt sixty-seven points. The next day the company announced some one hundred and fifty thousand lay-offs “because we now have the technology to be profitable with fewer people”, and the Stock Market responded with a further hike of seventy-one points. For a day or so it was a major story. Loyalty to a company no longer matters,
commentators were quick to explain, every worker has to understand that they are on their own; what matters to the company is the profit it makes for its shareholders. Employees are strictly disposable. One radio station interviewed an older employee; a much-embittered man who had grown to treat his job as a two-way commitment between himself and the company, as had his father before him. He offered to quote from his father’s A.T. & T. Employee’s Manual of 1947: ‘The company endeavours to take care of its employees throughout their working careers and beyond. In return it naturally expects employees to be genuinely concerned with the welfare of the business and to be personally responsible for its reputation and continuing success’.

“That is just what I was brought up to do, and I’ve done it”, said the former employee. “I thought I was a genuine partner in the company’s future. Now I’m being thrown out because that is in the interest of those people who are already rich enough to buy shares in the company. I’ve never been that rich, but I’ve given my life to doing an honourable job.” The man was clearly devastated, his sense of values built up over a lifetime completely obliterated. “Now nothing makes sense any more”, he said.

At this time I was beginning to settle into my new office in Connecticut Avenue, just minutes away from the White House. Over lunch one day a banker from a neighbouring office joined me for a chat. We got around to talking about each other’s work. He was enthusiastic to explain that his branch of the bank specialised in the buying and selling of bad debt, especially in countries from the former Soviet Union. “I don’t understand”, I said, “who in their right mind would want to buy a bad debt?” “There’s more money in this than you might think”, he explained, “Many of the old Soviet Corporations are heavily in debt to Western investors, and those investors are nervous that they will never get any of their money back. So, we make them an offer; we will ‘buy’, say, a hundred million dollar debt, owed by a Russian company to a Western investor for, say, fifty million dollars. That means the investor gets, in hard currency, half of what they were owed - but feared they would never recover any of it. That Russian company now owes all the money to us. We then either turn the company around, or we effectively asset-strip it. Normally we would expect to at least double our investment.”

“You mean that the profit of an aged Russian company now comes to America, and is not reinvested in Russia?” I asked tentatively.

“Basically yes”, he replied. “We might well reinvest that money in buying more such companies, but what is for sure is that I’m largely paid on a commission basis, and that money is all spent here in the States. I work incredibly hard, but in the last quarter alone I paid several million dollars in tax”. One of his colleagues admitted that because he worked such long hours, as did his wife who was an international attorney, they had to employ both a nanny and a child-care assistant to look after their daughter. “My wife was very upset last Saturday when she heard our two-and-a-half-year-old daughter was calling their nanny Mama. Later, when our daughter got upset about something she rushed to the nanny for comfort, and not to my wife. My wife feels her life is falling apart, and is talking of employing a counsellor.”

To add to my confusion, I met one of our neighbours on the metro as I was returning home several evenings later. She was in her early fifties, and obviously a successful member of the Washington financial elite. But she was tired. “It’s OK though, I think I can afford to retire very soon. I have a dream of a combo down in South Carolina, close to the beach; a place easy to lock up for several months at a time while I go exploring Europe and beyond. I’ve never had children as I was too busy when I was younger. I sort of regret that now. However I’ve had good bonuses now for several years and made good investments; particularly in A.T. & T., the company that is doing really well. That single investment should fund my twice-yearly visits to Europe for the rest of my life. It’s good to know that I’m a part-owner of such a successful company.”

I tried to explain to her, from my perspective, how it was that a company could pay such generous returns to its investors by divesting itself of all those staff who, by their earlier loyalty to the company, had built the financial base that had made such profits possible. I even introduced into my explanation the vexed issue of how A.T.& T. and other companies - such as Safeway, where we both frequendy shopped - paid only minimal wages to those whose jobs could easily be taken by other people. I reminded her of a conversation I’d had recently with a young mother who worked extraordinarily long hours at the checkout. The mother had cried (in the store) as she explained that, to begin to make ends meet, she had to work at least fifty hours a week in the store, and then do a cleaning job afterwards in the evenings, “and my children are growing up without me because I’m just too poor to have the time to spend with them.”

This was a touch of reality too strong for my
conversant. She was a nice woman, but made it abundantly clear that discussion of this kind was off limits. “This is America”, she said dogmatically, “This is the ultimate free society. The more money you can make the more freedom you have earned. You English have to understand that when you come here.” And you Americans, I thought, must acknowledge your denial of what happens on the other side of the block.

A week later it was my turn to be working late in the office, preparing for a trip I was about to make back to England to give some lectures. The night watchman knocked at the door and came in. “Sorry to trouble you, sir”, he said in his deep Southern drawl, “But I guess you’re a stranger round these parts. From about eight o’clock in the evening every doorway around this block will be occupied by people sleeping rough - some will be on drugs, some drunk, some will be white trash, while others will be niggers. Many of them are just homeless. Mostly they are friendly but sometimes there are fights. Not a safe place at nighttime, sir, just so’s you’re warned like. I wouldn’t want you to fall into some kind of trouble.”

This was the America of Go Go Capitalism, and Reston in Fairfax County, where we were living, was at its very heart. This was the prototype of the social and economic arrangements that countries such as Britain were told they could adopt as a result of globalisation. Greed drives Go Go Capitalism, a faith that believes turbo-charged capitalism fuelled by global free trade and domestic deregulation will - so advocates argue - consistently make extraordinary profits. It is accelerated by intellectual and technological wizardry, human adaptability, openness and the unconstrained movement of capital to wherever possible profits are greatest.

In Fairfax County (the county with the highest median income in America), the money is there for the taking if you have the right education, skills, connections and an almost superman-like work ethic. The work ethic takes a frightening toll on family life. Shortly after our arrival in America the book entitled “God wants you to be rich” became a best seller. America has seen the working week expanding enormously in the last twenty years. Employed fathers of children under the age of eighteen now work on average nearly fifty one hours per week, with working mothers clocking up forty-one and a half hours per week. So much for the nominal European thirty-five hour week!

Bob Reich, the Secretary of Labour in Clinton’s first administration writing in his book “The Future of Success” in 2000, said, “The central paradox is this; most of us are earning more money and living better in material terms than we (or our parents) did a quarter century ago, around the time when some of the technologies on which the new economy is based - the microchip, the personal computer and the internet - first emerged. You’d think therefore that it would be easier, not harder, to attend to the parts of our lives that exist outside paid work. Yet by most measures we’re working longer and more frustratedly than before, and the time and energy left for our non-working lives are evaporating.”

Too many parents just don’t have time for their children. In 1997, forty per cent of teenagers were said to ‘feel bored every day’, and young people were described as ‘a tribe apart’. Families were spending less time with one another. In one recent survey, adolescents said, “not having enough time together with parents” ranked as their top concern. As one of the few families in our neighbourhood who always sat down to an evening meal together, I often thought our home had become a hostel for kids who found a family meal together so fascinating that ‘they just happened to be passing, - and had brought a cake, or a giant bottle of coke, to contribute to the meal they expected to find!’ These were some of the most delightful kids you could ever meet; socially self-assured, extraordinarily well fed, all with perfect teeth and near perfect bodies, but often with neuroses that would keep the whole counselling industry in business for ever more. They all seemed to have their own cars, and fuel accounts that went straight onto a parent’s credit card. Yet deep down many of them were lonely, the brightest of them totally turned off by school, and most of them terrifyingly unaware of a world beyond America. The reason was not hard to find. Not only were their parents too busy to spend time with them, too many teachers seemed preoccupied with the money they could get from their second jobs, rather than finding ways of inspiring their pupils through out-of-school activities. Add to this the poor quality of the media, and the origins of a dumbed down society, despite its very obvious wealth, become blindingly obvious.

Fritjof Capra, in ‘The Hidden Connections’ published in 2002, wrote, “In contemporary capitalist society, the central value of money-making goes hand-in-hand with the glorification of material consumption. Accordingly, political rhetoric in America moved swiftly from ‘freedom’ to ‘free trade’ and ‘free markets’. The free flow of capital and goods is equated with the lofty ideal of human freedom, and material acquisition is portrayed as a basic human right, increasingly even as an obligation.” Was this the kind of society, the way of life,
the English were aspiring to? Was the curriculum of our schools becoming ever more about how to get the most out of a highly inquisitive culture, rather than equipping young people with the ability to make valid judgements about how best to lead their lives?

Understanding Creativity

Over the first two years of the Initiative, some sixty people from fourteen different countries attended one or more of the conferences. Between times we assembled an enormous library of over three thousand recently published books, and hundreds of research papers. We listened to many fascinating presentations - always looking for clues as to what it was that was integral to our human natures which, if properly understood, would give us the design brief to better support children’s learning.

The Canadian Carl Bereiter and his colleague Marlene Scardamalia, from the Ontario Institute for Studies in Education, had done fascinating research into what they neatly described as ‘Surpassing Ourselves’. In simple terms it’s about how we, as individuals, sometimes go even further than our teachers. The issue is fascinating – it’s like asking who taught Pythagoras the maths that led him, not his teacher, to formulate the theorem about the square of the hypotenuse. To Bereiter it’s a matter of understanding the difference between a specialist and an expert. “Specialists”, Bereiter told us at one conference, “by working within the fixed parameters of their subject, know their material from top to bottom and from inside out”. They know all the rules, all the tests, and all the possible combinations and formulae. Their authority rests on the depth of their knowledge and understanding of the rules, and is uncluttered by the need to access extraneous information.

“Experts, on the other hand” Bereiter explained, “possess certain additional qualities that make them very special people. Experts indeed start off as specialists. They know an awful lot about their own subject. You can’t fault them on the detail, any more than you can fault a specialist, but experts have something extra - they are able to get outside themselves and their subjects and look at their specialisms from a distance”. In other words experts are essentially quizzical. They’re also intentionally playful; they ask awkward and tantalising questions and are not easily satisfied. They’re quick to grasp the overall situation, they have both their feet on the ground while their heads are in the sky. I smiled. These are the kinds of people that I for one like to do business with. “What’s more”, Bereiter went on, “the evidence suggests that they are healthier, and live longer - it’s as if by using all parts of their brain, their brain then gives a more positive message to the rest of their bodies.”

All children need to know how to diversify their experience in this way, many of my colleagues loudly proclaimed – creative thinking helps everyone to achieve more than they anticipated. Bereiter and Scardamalia continued; “Experts tackle problems that increase their expertise, whereas specialists tend to tackle problems for which they do not have to extend themselves (by going beyond the rules or formulas they accept). Experts indulge in progressive problem solving, that is, they continually reformulate problems at an ever-higher level and thereby uncover more of the nature of the issue. They become totally immersed in their work and increase the complexity of the activity by developing new skills and taking on new challenges.” Experts know the rules, but they also know how to reformulate them, and when to break them to fit new circumstances. They are persistent, industrious, curious, and are always searching for perfection.

Here were the four critical attitudes that it seemed more and more people would need for the future; persistence, industriousness, curiosity, and a desire for perfection. These attributes add up to create capable people. People who know how to connect thinking to doing. People who get things done. The Initiative had no difficulty in unanimously agreeing that people with such attributes were key to the future.

Bereiter fascinated me. He certainly understood the scale of what the Initiative was trying to do, yet was unclear about his own role. “It is clear that you sincerely want to connect science with pedagogy, but bringing this about will be a Herculean task”, he wrote to me, but then added a personal reservation, “I’m uncomfortable with the emphasis on brain research in neuroscience. There is a long history of quackery, and it seems that this may be simply escapism; that somehow scientists are going to look into all this and find the answers to all the things we’ve been unable to answer, seems naive.” Bereiter is a cognitive scientist and his methodology is to look at problems from the top down and only then draw his conclusions. Neurologists start exactly the other way around. They work up from the finest details of microbiology to the next level of complexity. All too often the distance between the two methodologies is so great that they never meet. John Bruer, the cognitive scientist that Al Shanker, the union leader, had recom-
mended to me earlier in Helsinki, loudly expressed the opinion that to consider neurobiology is simply 'a bridge too far', at least as far as learning theory is concerned.

In some confusion I asked Bereiter what he thought of a recent paper by a mathematician interested in applying complexity theory to education, which many of us had found a fascinating and well-written piece. "The study of complex adaptive systems is at its heart the study of the process of learning" wrote the author, John Cleveland.

"It's about how systems detect patterns in the environment, interpret and respond to those patterns and change their rules for detection, interpretation and response based on experience. It's simple really, complex adaptive systems are nature's way of learning." Cleveland had then gone on to say something that made many people feel uncomfortable; "Most school reform has failed because it attempts to mandate new structures without changing the important rules in the system (like pouring new wine into old wine skins). New learning theory and practice constitute fundamentally new rules governing the interactions between players in the education system. As these rules spread through the system, we should expect to see old structures break up and new ones form."

We spent considerable time at the next conference analysing what Cleveland had said. Eventually there was broad agreement that he was right. "Isn't that just what we are seeing in schools all over the world? Those new ideas are so fundamentally different to what schools were designed for that they are like a Trojan Horse breaking the school up from the inside!" exclaimed Wiktor Kulerski, former Vice Minister of Education in Poland, and a key figure in Solidarity's struggle to oust the communists. "So, what do you make of that?" Kulerski teasingly asked Bereiter. Bereiter's response was curious. "Cleveland describes in exciting terms the style of education that corresponds fairly closely with what we've been trying to develop in our own classrooms (in the Toronto region of Canada), but he is looking at this from a semi-mathematical perspective. I very much doubt whether he and I, would find very much to talk about. We live in different, though complementary worlds."

I found this response extraordinarily hard to accept. The problem of trying to get these complementary worlds to find enough to talk about frustrated me, it seemed, at every corner. "Don't ask me for advice on how learning takes place", said the eminent neurologist dismissively at another conference in Virginia, "I can't deal with issues at that scale, that's just not meaningful. Now if you want to talk about phonemes, and how we could over a period of several years develop programmes to deal with particular aspects of dyslexia, then indeed we could talk and define a rigorous research programme, for which with our reputation I'm sure we could get sponsorship."

Overschooled but Undereducated?

At our third conference we moved to the contentious question of what we thought schools were educating people for. "At the heart of Western epistemology is the requirement to be objective," Parker Palmer, a quietly spoken Quaker philosopher, said, "We tell students to study something as if they are not personally involved because we fear that personal involvement somehow taints the truth. We have elevated the fear of being subjective to the point where we have removed all forms of emotional intuition from how we form our ideas." He spoke softly, yet with such conviction that everyone felt compelled to listen very carefully.

"Let me tell you of a conversation that took place back in June 1744 that well illustrated this," said Parker, "A new treaty had been concluded in Virginia between the English settlers and the Indians of the Six Nations. To express their good faith the white men invited the Indians to send several of their sons to study at the newly established College of William and Mary in Williamsburg (the University where Jefferson studied, and William Smith of the Lunar Society once taught). The elders of the tribe duly considered this offer before replying; 'We know that your people highly esteem the kind of learning taught in your college. We are convinced you mean to do us good by your offer but you, who are wise, must know that different nations have different conceptions of things.' They went on to explain that their ideas about education were very different, and described how several years before a number of young Indians had been persuaded to go to Harvard to study the sciences, "but when they returned to their people they were no longer good runners. They were ignorant of every means of living in the woods, fit neither for hunters nor for councillors; they were totally good for nothing. We are obliged by your kind offer, though we decline it. But to show our gratitude, do send us a dozen of your young men and we will take care of their education, instruct them in all we know, and make men of them."

How many of us, I thought to myself, looking around the Great Hall that evening, would love to have been sitting in on that original conversation,
and with the advantage of hindsight that two hundred and fifty years of history could offer? “What the Indians of the Six Nations knew”, Parker continued, “was that every way of knowing becomes a way of living. Epistemology becomes an epic. Those Indians were engaged in a battle, not just for land and status, but about whose way of knowing would prevail in the shaping of young lives. Education is a form of soul-making, or of soul-defamation.”

Next to speak was Aklilu Habte, an Ethiopian. What he had to say that afternoon shook all of us. Here was a highly intelligent man who had such a powerful story to tell that his emotions almost overtook him. He explained that his first teacher had been a village headman under the baobab tree. At the age of about twelve he had been identified as a youngster of potential by the Emperor’s advisers and taken to Addis Ababa to train as a Coptic priest. He measured up to his early promise and, before the revolution that displaced Emperor Haile Selassie, he had become both a bishop in the Coptic Church and Chancellor of the University of Addis Ababa. Then, with the onset of the revolution, he fled the country and later became a special adviser to UNESCO.

“How have you people ever stopped to think what the over-emphasis on Western education has done to my country, and countries like it?” he asked. “You came to Africa and told us that our traditional way of learning was out of date. You said that our way of formulating knowledge was inappropriate. You emphasised the dominance of narrowly defined intellectual skills. We listened too carefully to your advice. So we told parents that they needed to care for their children only when they were very young, but that proper learning would now be organised by professionals in schools. The old men were saddened that no one wanted to listen to their wisdom, and the old women mourned the grandchildren who would never come and talk with them. We emphasised higher education, and our students did well, many of them very well. So well that they were over-qualified and there were insufficient challenging jobs for them in Ethiopia. They started to leave for lucrative careers here in America, in Europe and in Australia. Many of them left our country for good, denying it the leadership it desperately needed. Society became increasingly unstable. We had, as it were, too many people trained to become clerks and few wise enough to be the leaders, nor did we have responsible enough workers for the good of the country.”

He became tearful, and paused for a minute or so before continuing. “So these men, like me, had to flee. My country became ever more unhappy, riven by revolution after counter-revolution. Far too many of those who remained had been deskilled by this alien system of knowledge and learning. I look around me in Washington where I now live, and I see many young people who, through the nature of their personalities, just do not fit into this restricted Western view of learning. It is not what their inherited predispositions cried out for. So you Westerners failed us. Once rejected, these youngsters become a threat to your lifestyle, and a rebuke to your ignorance as to how it is that, through learning people achieve their full humanity.”

The journalist Robert Wright had just published his much-acclaimed biography of Charles Darwin ‘The Moral Animal’, which he described as being an exploration of the newly emerging science of evolutionary psychology. An attempt, he said, to explain ‘why we are the way we are’. I spoke to him on the phone one evening in Washington as he was too busy to attend a conference. “We at times are getting the feeling that modern life isn’t what we were designed for”, remarked Wright. “Perhaps the biggest surprise from evolutionary psychology is its depiction of the animal in us. Freud, and various thinkers since, saw ‘civilisation’ as an oppressive force that thwarts basic animal urges such as lust and aggression, transmuting them into psycho-pathology. But evolutionary psychology suggests that a larger threat to mental health may be the way civilisation thwarts civility.”

There is a kinder, gentler side of human nature, Wright went on to explain, which seems increasingly to be a victim of repression. Society should ask why it is that the Old Order Amish suffer depression levels at less than one fifth the rate of people in nearby Baltimore, why rates of depression have been doubling in industrial countries every ten years, and why suicide has become the third highest cause of death amongst young adults in America. “Love, pity, generosity, remorse, friendly affection and enduring trust are part of our genetic heritage, but all too often we squeeze that out of our existence”, Wright had written earlier in Time Magazine. “The problem with modern life is less that we are over-socialised (which is what Freud believed) but that we are under-socialised - or that too little of our social contact is actually social in the natural, intimate sense of the word.”

**Complexity Theory doesn’t mean Complex Rules**

Standing on the balcony outside the Great Hall at Wingspread late one October afternoon, I was intrigued to watch flight after flight of Canadian
geese rise up from the marshes that ringed Lake Michigan to the front of us. As they rose they took advantage of the eddies in the wind and circled until, their numbers reaching some fifty or sixty, they set off for their winter feeding grounds in Florida and the islands of the Caribbean. The sky was perfectly clear and the birds flew over our heads in near perfect military formation. It seemed as if the individual birds took it in turns to lead the V-shaped flight, each one dropping back to one of the tails after an hour or so of being the pioneer to rest. “Just how do those birds do that? Is it all just a natural reaction to what seems to be just three inbuilt instructions, operating in the ever-changing wind conditions of this October sky. Some eight or nine years ago scientists began to use a relatively simple computer simulation exercise which they called the ‘experiment of the BOIDS’, to study this flocking action within a large collection of autonomous, bird-like agents, which they called BOIDS. They found that, to their amazement, if each separate BOID were programmed with just three simple rules, namely; each BOID must maintain a minimum distance from other objects and from other BOIDS; each had to match its own velocity with the BOIDS in their immediate neighbourhood, and each moved towards the perceived centre of the mass of the BOIDS, all the BOIDS would then quickly form a flock and would for ever move as a single entity - be they sheep, birds, cattle, fowl or any other free-moving species. Not for nothing”, said Ash with a grin, “did the ancient psalmists say ‘all we like sheep’, for we humans also have an inbuilt tendency to flock. No one has to tell us to do so; we just do what’s called ‘self-organise’ in response to our needs. The important thing for us to note”, said Ash, “is that out of only three general rules, operating in a dynamic atmosphere - be it the winds of the sky or the turmoil on the floor of the stock market, or of children on a playground - apparently complex and complicated patterns emerge.”

Sally Goerner, a scientist who refused to stay within the boundaries of a single discipline and has higher degrees in computer science, psychology, and non-linear dynamics, was standing with us on the balcony. She had recently published an eminently readable book ‘After the Clockwork Universe’ setting out how new and profound rethinking in science is showing how interdependence at all levels from classical networks and living cells, to ecosystems, cities and economics, is critical in explaining the dynamics of Complexity Theory. “Complex behaviour, like flocking, doesn’t have to have complex rules”, said Sally. “People have run this simulation thousands of time and, with just these three simple rules, a flock always forms every time. What is amazing is that not one of the rules given to the BOIDS actually says ‘form a flock’. Simple rules within a dynamic environment will yield profoundly complex results.” As we listened, still the birds kept coming, and always in perfect order. On that autumn afternoon it would have been impossible to have found a better illustration of what scientists call ‘emergent order’.

Back in the Great Hall we carried on this discussion, “What these new understandings of the natural world enable us to do is to challenge and then change the current context of education, possibly recreating a completely new one”, said Stephanie, who had largely been quiet since the time she had quoted the dream of the eleven-year-old girl who had wanted to be a good painter, sew for her children, go to Mars and understand all the big questions of life. Instead of trying to give children our own incredibly complex explanations of the things which we adults have found out for ourselves, we should be giving youngsters those skills which help them interact with each other and their own culture. In that way we would help children form their own complex thoughts, whereas too often we weigh children down with what we have discovered so that there is no room for them to discover anything for themselves. In other words it’s very simple - give young people the skills and, as you introduce them to the ever changing dynamics of our culture, they’ll create an amazing diversity of new knowledge far more rapidly than anybody could ever teach them.

“Isaac Newton described the universe as an orderly clock which, one day, he was confident we would fully understand”, Stephanie reminded us; “But today’s scientists are describing the universe more in terms of a shifting kaleidoscope of ever-emerging new patterns.” For three centuries, Stephanie and Sally told us, this image of a static, repetitive, predictable, linear and clockwork universe had given us classical physics, the laws of gravity and mechanics, and the description of a de-
terministic world, where one action of necessity led to a predictable next step. Such an emphasis had profoundly influenced society’s beliefs, behaviours and the design of institutions. Scientists became obsessed with linear systems, and this influenced almost every dimension of our culture. Often with catastrophic results.

“With such a belief in ‘order’ we’ve gone on to manage our world by drawing lines and boxes around everything, and by separating everything into discreet, observable and measurable categories”, Sally continued. I found this explanation very useful for it seemed to me that we had constructed and operated our schools as we had understood our world - by splitting it up into self-contained compartments. In doing so we had produced institutions that create learning-disabled students. For that matter, learning-disabled staff as well - including ourselves - who had learnt to suppress their creativity in order to survive. That explained so much about the frustration my teachers had experienced years before when I was headmaster of Alleyne’s, as well as the frustration I had felt with them. The system isolated people so much that, as teachers, they no longer felt authentic – an expression which Parker Palmer had introduced to explain what separated a natural teacher from someone simply following the rules. “That’s why we here, in this lovely building, find a discussion like this so very difficult”, I said at the conclusion of the day’s discussions, “our minds have been trained to think in a highly restricted, linear fashion; so much of what matters we totally ignore.”

There was much shuffling of papers. People were uncomfortable, recognising the truth of what was being said but seeing it as something so significant in its implications and intuitively right, but not having the first idea of what they could do about it. No wonder they were daunted. “An orderly, linear design of schooling – however efficient - no longer makes any sense”, my colleague Terry Ryan exclaimed. “I’m up to my eyes in reading all the research. Schools don’t exist in isolation, nor does learning. Learning takes place whenever anyone has a question that they want to resolve. Complexity Theory shows that for schools to survive in any creative sense they have to recognise their inter-dependence with everything else the child experiences around it. Schools don’t stand by themselves. They never could, and never will. But how the heck to get the policy-makers in Washington or in State capitals is even more difficult than getting ordinary citizens in the boondocks of Illinois, Minnesota or Kansas to understand.”

I decided to close the third of our conferences by focusing on differences in the management of organic and inorganic systems, as I was worried that some people were inclined to take systems theory too literally when applied to people. I asked them to imagine themselves as manufacturers of anything, from widgets or shovels, to keyboards, or pints of beer. As such they were the only ‘thinking’ bit of the equation. They had to plan it all out, for no other part of the system had any intelligence; none of it could ‘think for itself’. I told them that it was like picking up a large stone and deciding that they had to throw it to a particular point. As they held the stone and assessed its weight they calculated how much energy was needed to throw it to a particular spot. If they were a reasonably competent shot they could do it easily. However, if they applied the same analogy to a child - or even worse to a collection of children within a school - it would be like picking up a bird, weighing it and then lobbing it with the appropriate energy towards its target. They might well have calculated its weight correctly but if, when the bird was halfway through the selected trajectory, it decided that this wasn’t the direction in which it wanted to go, it would simply flap its wings and set off by itself. Bye, bye birdie!

Now, if an efficiency expert were standing next to them, or a school inspector - both being experts in ‘outcome-based education’ - and were to demand in peremptory terms, “Do better than this”, what would they do? Well they could ‘do better’ if, before they threw the bird, they tied its wings together, and to give it some extra weight, tied a stone to its legs. Then, calculating its total weight, and having removed any chance that it might think for itself, they could again throw it. This time it would land in exactly the right place - but with such a bump, because the bird couldn’t flap its wings to slow itself down, that the bird would be dead on arrival.

“That’s a useful and at the same time frightening analogy. Learning systems that don’t respect the individual’s own needs and expectations create dysfunctional people. It’s actually as simple as that”, concluded Stephanie.

Which reminded me of a story I’d heard in the early days of OFSTED in England. An Inspector was about to visit a classroom and had carefully read through the teacher’s lesson plan. Within minutes of the lesson starting a child asked a fascinating question that the young teacher saw opened up a number of interesting learning opportunities. The teacher took the opportunity and so impressed was the inspector that afterwards he admitted it was one of the best lessons he had ever observed. But he then said, turning to the teacher, he would have to fail her for not following the lesson plan.
previously agreed with her Head of Department. I gather that, on appeal, the teacher’s lesson was eventually judged successful. Exceptional as that story may be the fear of being caught out for not having done what was prescribed in advance now haunts many teachers – be they British or American. The kind of lesson I gave on the Second World War at that Essex Secondary Modern School, and which was so vividly recalled by one of them more than twenty years later, is most unlikely to happen spontaneously now.
Chapter Fourteen

HIGH POLITICS AND RESPONSIBLE SUBVERSIVES

Confronted with a profound, unanswerable question in Estonia. Difficulty experienced by academics in reaching a conclusion over synthesis. Publication of a major Policy Paper by the Initiative advocating the reversal of an ‘Upside down and inside out’ system of education. Addressing the State of the World Forum in San Francisco, the North of England Education Conference, and a lengthy private meeting with the US Secretary for Education. Confronting a sceptical sponsor who thought our work “largely a waste of time.” Redrafting to a significant reduction in income. Publication of ‘The Child is Father of the Man’. Relocation to England. Strengthening the Initiative while rediscovering through personal experience the need to reunite thinking with doing.

Over the four years I was based in Washington I was invited to address conferences in many parts of the world besides the United States and England. I went often to Canada, Africa, the Caribbean, South America, across Europe and into Japan, Korea, Indonesia and Australia. I spoke at The State of the World Forum in San Francisco, the Manhattan Institute in New York and The Institute for Economic Affairs in London and I went many times to Scotland and Ireland.

Of all the countries I’ve visited, Estonia stands out most in my mind. The visual impact of the old mediaeval city of Tallinn, as the winter sun pushed its way through the fleeting snow showers, conjured up memories of the Pied Piper of Hamelin. Once an outpost of the Hanseatic League, Estonia’s history as a land perched on the northern boundaries of Europe and Russia has been harsh, and no times were harsher than the Soviet regime between 1945 and 1989. I’d been invited to address a conference of some three hundred teachers in an old castle overlooking the Narva River, on the border with Russia. As people milled around afterwards a Russian lady, speaking almost impeccable English, cornered me. “Who are you?” she said, in the imperious tones that might well have dispatched numerous sons to fight for the motherland in earlier days. Then I realised this was not merely a matter of simple introduction, but the start of a highly philosophical question.

“You in the West persistently misunderstood us dissidents. When we tore down the Berlin Wall we did so because we wanted to be free to make decisions for ourselves. But you thought we did this because we wished to replace Communism with Capitalism. Now it looks as if we are replacing one tyranny with another. When the Berlin Wall was there you in the West defined yourselves negatively; you were against Communism. Now that Communism is no longer a threat to you, your reasons for being seem empty. Surely you are about more than just making money.” She seemed to expect an instant answer. I could not give it, either then or now, for she was raising the question that everyone has been busy dodging. Do we learn so as to live well, or do we learn so as to earn more money. If it’s a mixture, by what criteria will we decide the ultimate balance?

The following afternoon, back in Tallinn, I was invited to meet the Education Minister, an impressive man in a less than impressive office, surrounded by large numbers of officials all trying to look purposeful. “We are a poor country, Mr Abbot, and I have money for only one of the numerous projects my staff are always pressing me to support. You may be interested to know that I have decided to put all the money into training twelve, thirteen and fourteen-year-olds in the city of Tallinn in the use of the computer.” These youngsters would be highly privileged and would have learnt so much by the time they were fourteen that they should be able to teach themselves the rest of the course, the minister told me. I admired his determination. Later that evening a group of six earnest Estonians, selected by different organisations to form a kind of Think Tank to guide the early tentative steps of the new democracy, sat me down to a hearty dinner in a local inn. Once the plates had been cleared away, a flipchart was put on the wall, and bottles of beer placed on the table. “We would like to explain to you the way
we are shaping, in as graphic a form as possible, the four possible alternatives facing Estonia for its future. We believe that our country has to make two basic decisions; firstly do we want to go for high or low rates of economic growth? Secondly we have to decide whether we wish to create an inclusive, or an exclusive society. We have divided our Paper into four quadrants; high growth at the top, low growth at the bottom; on the left is an inclusive society, and on the right an exclusive one.

First they described for me an inclusive society but one with a slow growing economy. They deemed this to be inward looking society revelling in past glories, conservative in its attitude and frightened of the future. Such schools would be seen as traditional; the curriculum fixed, with an excessive emphasis on vocational courses and the students passive. “We call this the ostrich society, not an attractive bird and much prone to burying its head in the sand when things get tough!” They then went on to describe the second alternative as a low growth, exclusive society - a land of the ‘lumpen proletariat’ they said, where the many labour for the few; a country where the education of the masses is about conformity, and where the few relatively wealthy people send their children to private schools outside Estonia. Graphically they called this the crow economy, an unattractive bird, threatening in appearance, and a scavenger with a harsh song.

Then I was told about the third alternative, the exclusive high growth society; an Estonia that would exploit to the full its strategic position controlling communication between Europe and Russia. Lax trading laws would allow the Russian mafia to see this as the doorway into Europe, whilst Western countries would see Estonia as a convenient doorway into Russia. The free market would be given maximum protection, and the concept of common interests ridiculed. Education would be all about competition. “It’s not the land most of us want to live in. It would be characterised by Icarus, the mythical bird of old which was so ambitious that it flew too close to the sun and its wings, which were made of wax, melted. Icarus may look to be the greatest of all birds, but in the end it amounts to nothing at all”, said the older of the Estonians.

The optimistic mood of the younger Estonians shone through as one of them described the last scenario, that of high growth within an inclusive society. They called this the flamingo, a beautiful and gracious bird that always stayed with the flock. Egalitarian attitudes would prevail and the economy would be based on sustainable development and conservationist principles. Estonia would be regarded as being ‘in transit’, on its way to becoming a knowledge-centred society. Lifelong learning would define the new education system. “We would strive to develop all young people so that by the time they leave secondary school they will be perfectly able to learn independently and take full responsibility for their continual study,” I was told. “We all like the flamingo scenario. Even more, we like this particular way of projecting the various alternatives that face our country. Most of our people have not thought very much about political alternatives in the past. They find the normal political arguments difficult to follow. This set of possible scenarios are easier for them to understand and each - the crow, ostrich, Icarus and the flamingo, carry very specific messages. In this way we think we can get the people well involved in the political discussions that are necessary.”

I found the presentation intriguing. I admired the Estonian’s determination to build a genuine inclusive society, and the way they put such an emphasis on the Flamingo scenario as an education system that emphasised independent learning; I was impressed, too, with the thought that had gone into the way of communicating the various economic options to a population that was not yet familiar with democracy.

Coming to some Conclusions

“Something easy for them to understand”. Academics don’t like things that are too easy, for it seems to put them out of business. Here I have to admit to my own lack of tolerance. Many of my best friends are academics, and this book could never have been written without their scholarship. But getting them to come to a conclusion, let alone make a recommendation that extends beyond their area of specialisation, can be painful and sometimes even impossible. This was a problem that almost undermined the last of our Wingspread Conferences.

It happened like this. The President of Wingspread was, at the time, Charles Bray, a former American diplomat who had grown up on the Princeton campus, where his father had been a professor and a colleague of Einstein. It was a background that had left Charlie with conflicting emotions about academia; he had, it seemed to me, an undue respect for their hierarchies but was sceptical about intellectual inertia. He felt that several of the participants at the conference were unwilling to reach any conclusions that did not
highlight the importance of their own research, or their organisations. Charlie was as anxious as I to get a full endorsement of the Policy Paper, which was the summary of three years work, and contained key policy recommendations for the organisation of schooling that we believed would resonate across many different countries. These recommendations were circulated to all members of the Initiative several weeks before; “It is impossible to bring children up to be intelligent in a world that does not appear intelligible to them”, the Paper had stated and then went on, “and there is just one policy guideline that follows; no innovation at this scale can occur unless society is broadly aware of how all the issues raised in this Report interconnect. The agenda is not solely about schools. It is about reconnecting children with adults in ways that develop their social, emotional, practical and intellectual skills. This involves policy initiatives broader than anything normally conceived of as the responsibility of a nationally designated Ministry of Education.”

The afternoon before the conference was due to start Charlie had invited a hundred or so of the more influential and thoughtful citizens of Racine, the town on the Wisconsin shore of Lake Michigan in which Wingspread is situated, to come and listen to me give a report on the work of the Initiative. “Keep it simple, John”, Charlie had said, “and remember that these are essentially practical people. They’re still idealistic about children, but they’re fast becoming tired out and cynical about the normal form of school reform. Tell us some of your stories to make good points.”

It was a diverse group. It included the mayor, county executives, professional people, clergy, teachers, administrators, principals, CEOs and many parents. It was a fine, balmy summer evening, and looked as if they would be a good audience and one I would enjoy speaking to. They paid careful attention as I spelt out the significance of all the research we’d studied to enhance the way in which elementary education gave children such a mastery of basic skills and why it was that the secondary schools should develop a much more apprenticeship-form of learning. They followed the presentation carefully, were generous in their applause, and asked lots of questions.

“I’ve rarely seen a more attentive audience”, reflected Charlie later with some admiration. “Not in the eight years I’ve been here. Never during these public lectures has anyone of us associated with the Foundation heard such warm and prolonged applause. It’s quite striking.”

Charlie, forever the trained sceptic, tried to discover the reason for this positive reception. He’d heard me talk many times before, and was obviously committed at an intellectual level to what I was saying. Yet deep down his classical training always cautioned that, perhaps, I was still not sufficiently rooted in an academically accepted set of practices. He was as concerned as I was for the need for a synthesis which drew together material from both the physical and the social sciences, but knew every bit as much as I did that there was no clear methodology with which to do this. Analysis and empirical research was what he had learnt to respect at Princeton, but even though he realised the shortcomings of such a process he was, probably inevitably, nervous of moving into such uncharted territory. When we went in to dinner, Charlie made sure that he sat with the most influential of the Racinian citizens. Later that evening he reported his conversation as follows; “Why was it, I asked those people over dinner, that in your estimation this presentation was so well received?” Their answers were not what Charlie had expected. They effectively said that the presentation was untidy. This had surprised him greatly, given the volume of their applause. Then it turned out that what they meant was that it was intellectually untidy. It was a presentation they could join in and make their own. It did not swamp them, or leave them feeling inadequate. “We know that there aren’t any silver bullets in all this, and we thought John was talking sense - well rounded sense. He wasn’t pushing a line, but he was inviting each of us to think. That was important. He did more than give us a good idea, he reminded us that we have to find the ‘good answers’ for ourselves.”

This intrigued Charlie for it’s obvious, he explained later that evening, there must be a lot of people out in the world who are tired of silver bullets. Such people understand that life isn’t tidy. They’re prepared to some degree to cope with untidiness, and understood that this new approach to learning and the development of human competence isn’t going to happen unless ordinary people start to take charge. Those people from Racine, said Charlie, were as good a cross section of local Middle American opinion as you could find, and they were anxious to pick up that challenge. Most of the solutions they had been offered in the past, both in Racine and elsewhere, “had taken the paddles out of people’s hands, and given them to specialists instead. People just aren’t like that. To feel good they need to know how to make this work for themselves. That’s why the Initiative is so very important. It could show the people of Racine, or for that matter the people of England or California,
how to do things.”

Now, here’s the curious thing. The following day, when it was time to welcome people to the next conference, Charlie described the meeting of the previous afternoon with enthusiasm. Then he went on to report on the conversations he had had and the people’s conclusions, in glowing terms. Charlie had meant his comments to be supportive, but curiously they had almost the opposite effect, and this confused him. “But you must understand”, said several members of the Initiative, “Charlie was talking as if your interpretation was the Initiative’s story. There isn’t an Initiative story, at least not yet - many of us have not reached the same conclusions that you have. That’s why your success in doing this puts many of us on edge.”

This tension was to prove to be an ongoing problem. In setting up the Initiative I had very carefully chosen people with different skills and professional experiences. To each person I had explained that the Initiative was seeking to create a synthesis of the key concepts that were emerging from across a range of disciplines, and to express our findings in a form that would be helpful to lay people. In accepting the invitation to join the Initiative everybody concurred with this ambition, but many found it to be a task almost beyond them. I had to be sympathetic because few, if any of them, had had the opportunity of going into all this in the depth that I had done, together with my most able colleague, Terry Ryan, whose terrier-like approach to ferreting-out matters of significance from quantities of often pedantic research, was of enormous value at that stage of the Initiative’s development. But there was no doubt that my ability to express this emerging synthesis did indeed put some people on edge, as is about to become all too obvious.

News that we were about to publish the Policy Paper led to a number of additional invitations to speak at major conferences. One of these was to address the next meeting of The State of the World Forum, to be held in San Francisco in the Autumn of 1999 under the chairmanship of Mikhail Gorbachev. Another, and one that interested me particularly, was to address the North of England Education Conference, a prestigious event held every January, at which three or four keynote presenters, as well as the Secretary for Education, always spoke. The third was an invitation to meet privately with Dick Riley, the Secretary of the United States Department of Education, formerly the Governor of North Carolina and a close friend of President Bill Clinton. The fourth was a somewhat curiously worded invitation suggesting that I meet with the agent of a large anonymous donor to discuss certain ‘reservations’ the donor had about our plans to establish an Institute for the Study of Human Learning and Community Development. To us the establishment of an Institute was an inevitable next step that was bold, logical and practical. It could be something that could take the work of the Wingspread conferences and turn them into an ongoing think tank cum professional development centre for these ideas on an international scale. So I looked forward to allaying any reservations that might prevent the sponsor from continuing to fund us at such an important juncture.

I prepared my speech for the North of England Education Conference at least partly to gain the attention of David Blunkett, the Secretary of Education. In fact he never heard it. He arrived nearly half an hour late, went straight on to the stage and only took questions from those who had earlier been ‘approved’ and then left immediately. I subsequently wrote and offered to visit him in London to make a repeat presentation. “That’s kind of you”, came back the official reply, “but the Minister is just too busy.” Too busy, I thought to myself wryly, that he saw no reason to question the very specific, and narrow, set of priorities that he and his Department were pledged to hold on to at all costs. It was to become an increasing problem. Time and again I would be billed to speak on the same platform as the Minister, or another politician or senior civil servant, policy advisor or the Chief Inspector, only to find that they arrived moments before they were due to speak themselves, and then left directly afterwards. It was not just me who was frustrated. Audiences were getting fed up with being talked at by people who didn’t talk together. “If only Woodhead (the Chief Inspector of OFSTED) would have listened to what you said there could have been a debate”, a group of Cheshire headteachers had said at a conference a few months later, “as it would have been a real opportunity to get into the substance of the arguments. Like this we all end up feeling we are wasting our time.”

With the U.S. Secretary of Education

The meeting with Secretary Riley was different. “It’s a very busy day for the Secretary”, his assistant warned Stephanie and myself as we waited in the ante-room on the 7th floor of the building at the top of Independence Avenue, overlooking the capital, and the Mall as far as the Washington monument, “and your meeting will have to be limited to twenty minutes.”
The conversation that Stephanie and I had with Dick Riley that morning proved to be the précis of a long, intellectual journey. It was helpful that Stephanie already knew Dick Riley moderately well from the time he had been Governor of North Carolina. Both of them had spoken together a number of times at the annual, and highly influential, meetings of the Renaissance Institute set up by Bill Clinton before he was elected President to share ideas on policy; a group which I was invited to join. I had initially been fearful that in a precious twenty minutes we would make little impact on the Secretary, but Stephanie broke a moment of anxious silence by cutting through the formalities and coming straight to the message we wanted to communicate. “What you must understand, Mr Secretary, is that from all our work we in the Initiative have drawn a simple conclusion - our current system of education is in effect ‘upside down and inside out’. We’ve inherited it from earlier times, when the assumptions on which it was based were reasonably congruent with national needs. Now we know that many of those assumptions were largely incorrect, and are antithetic to the kind of society modern technology and the economy is creating. It’s a simple explanation, and John can tell you the argument clearer than anyone I know.”

Dick Riley looked at me sympathetically - “Please do that, it sounds interesting”, he said. I tried to make my voice sound confident. “Let me explain why we think that research on learning is becoming so important. In both Britain and American we have had many years of school reform. People are getting tired of it and it doesn’t seem to be getting us far. We need a new way of looking at things.

As I started to talk I knew I had his undivided attention. It was wonderful. He genuinely wanted to hear what was being put forward, so I didn’t rush my explanation, even when I realised we’d already exceeded our allotted time. “Go on”, said Riley, “It’s not often that I get an explanation that really interests me!”

I spoke about our inherited instincts, and how they had developed over all that length of time that our ancestors had lived on the African Savannah. Riley smiled in recognition, “Yes, I think I must have read the same article as you in the Harvard Business Review!” His attention remained absolute, as he ignored all attempts by his secretary to terminate the meeting. Using a flip chart I explained how the current distribution of resources - which gives the largest class sizes when children are young and the smallest in the last years of secondary - clashed with what we knew about the way the brain changes in both the youngest children and in adolescents.

“The can explain that a little better?” Riley intervened. I went over the details more carefully, noticing that he was copying the graph down on his own notepad. He was so enthusiastic to talk that I was worried that I would not have the opportunity to reach my conclusion. Stephanie broke in and attempted to summarise with a single quote, “A Canadian woman, hearing John make this case, said that she suddenly ‘got it’ - it would be the pupils who would be tired at the end of term, not the teachers!”

Riley nodded: “Quickly tell me what impact all this would have on class sizes and the other fascinating issue of the under-fives, as well the over-eigh teens”, he asked.

“Starting with classes of ten or twelve, but limiting overall expenditure to no more than at the present, that would suggest classes of forty or more at the age of eighteen. But that need not be the case. If we do our job properly when children are getting such intensive support in the earliest years, then it would actually be better for them if, probably before the age of sixteen, little more than half their classes would be formally taught. For most of the time it would be more helpful to them if they worked on their own, and accessed the rich learning resources that such schools would then be able to provide. Too much teaching makes young people too dependent on the teacher.”

The Secretary for Education smiled broadly, not something I imagined he did often. But by now his secretary had given up dropping gentle hints about time and was standing over him and flapping a diary sheet. I looked at my watch. We had been there nearly one and a half hours. “These are such fundamental issues”, said Dick Riley, “that I need to know and understand them far better. But you must understand the pressures I would be under if I or my successors should try and do any of this.”

He went on to describe how the universities had become so accustomed to assuming that youngster coming out of high school needed a full four years to complete a degree that their arrangements would be destabilised if the ability of the next generation of young undergraduates to think things out for themselves were to increase substantially. Then he explained that his second problem related to the religious fundamentalists who had a massi ve, if unconstitutional, control on education and simply did not want their children to think things out for themselves.

“However, these are undeniably the issues that have to be faced both here in the United States, and I understand in other countries. If you were
to call a meeting of Ministers of Education from different countries so that we could discuss the possible logistic and strategic implications of all this on an informal basis, I would most certainly come.” He offered to encourage his colleagues in other countries to do the same thing, and offered his personal support for the setting up of the kind of Institute we were planning. “Something which is truly independent of any government”, he said, “and which is about the whole of children’s life experiences, not just school.”

That afternoon, feeling excited at the reception we had received from Secretary Riley, I wrote again to the agent of the anonymous sponsor and concluded, “Consequently a transnational group of leading thinkers and policy-makers is absolutely essential if we are to redesign education systems based on the optimisation of learning opportunities for all children.” We needed to set out an agenda for such a redesign as fast as possible, I explained, yet I went on to note that it wouldn’t evolve of its own accord within the present highly structured systems of mandates designed to enforce earlier assumptions about learning. “That is why our plans to set up an Institute which would prepare key people to be ready to lead such change is so important.”

Dashed Hopes, and a new Beginning

It was a full two months before it was possible for the agent and myself to meet, which we eventually did in his office in Dublin. At stake I knew was not only the one hundred thousand pounds a year that they currently gave us (a sum that covered much of our basic costs) but what would, I hoped, be a significantly larger grant that would in itself cover much of our basic costs) but what would, I hoped, be a significantly larger grant that would in itself encourage other funders to help in the setting up of an Institute.

Ready with all the figures at my fingertips I stepped into the sponsor’s office. Instantly I saw from his face that there was a problem. “I have bad news for you. We have taken some independent advice from an academic, a professor of education here in Ireland, who is not impressed with your Policy Paper. She writes; ‘The Paper… shows no awareness of the political realities of educational change in Western democracy, and is insensitive to the human dimensions of change.’ In particular she thinks that your recommendation to reverse the funding ratio in favour of the early years, and changing the nature of secondary education in the way you suggest, is politically naïve, and therefore casts doubt on all your other statements. It seems to us that you have largely wasted the last four years.”

As far as the sponsor was concerned the relationship was over. Licking our wounds we had immediately to go into survival mode as forty per cent of our financial support had suddenly disappeared. In addition, the meeting of ministers of education that Dick Riley had said he would help set up would never happen. In professional terms it was as sudden and unexpected, and almost as devastating, as had been the death of my father all those years before. So much of what had given purpose and form to years of my life had been dismissed as a waste of time. Dismissed on the advice of an academic whose reasoning was forever constrained by thinking about the institutional nature of schools, the dominant role of teachers and a dismissive attitude towards the child’s informal, out-of-school experience. Some very bad weeks followed, as the trustees and I tried to come to terms with the catastrophe. However, the human spirit is remarkably resilient and, as it turned out, this was not to be the end. In fact it became something of a new beginning, for it made me realise, like nothing else could have done, that in the continuous development of new ideas - particularly if they are well thought out - the enemy is the persistent adherent to ideas whose time has long since past.

In my mind the civil servants in Downing Street, the charity fund manager at the Haberdashers’ Hall, and the academics at Wingspread, all merged to ideas whose time has long since past.

In my mind the civil servants in Downing Street, the charity fund manager at the Haberdashers’ Hall, and the academics at Wingspread, all merged.
should remain in America, or return to the United Kingdom. I opted for the latter, partly because I had more confidence in the British trustees to stick with it and partly because, as a family man, I had first to consider the interests of my wife and children.

So, in little more than two months, we arranged to transfer all the Initiative’s resources back to England, closed the Washington office and rushed through the final stages of preparing my book ‘The Child is Father of the Man’ so that its publication could be used to mark the opening of the English office in January 2000. We expanded the website which, as the most obvious demonstration of the value of our work, was becoming more significant with every passing day. Then I had to decide where my family was to live. I needed to be within easy reach of Heathrow, and with good communications around the UK, and Anne needed reassurance her new home would be congenial. I was much concerned about the well being of our sons at this time. To continue the work of the Initiative by giving it even more of my energy, meant that my own mood, motivation and self-confidence could be undermined if I was not, at the same time, doing the best I possibly could for my family. Just as this book makes the case for balancing thinking with doing, so in life itself it is foolish to pretend that matters of the intellect can be separated from the emotions. To ensure that I could do my best by the Initiative I had also to do my best by my family, so the details of our family life, for a while, become an inseparable part of this story.

The move for our sons could have been traumatic; while Peter had only spent the last eighteen months of his schooling in America before going to Cambridge, David and Tom had gone right through high school in America, their best friends were Americans, and David had an American girlfriend. We quickly decided that the ancient Georgian city of Bath seemed the best of all locations, apart from the hideously high cost of housing, exacerbated by our preference for being within walking distance of the city centre and the need for a house large enough to accommodate the Initiative’s, by then, considerable library.

In one frantic weekend, with Anne and the boys three thousand miles away in Virginia, I made the decision to buy an unrestored 1791 Georgian townhouse that had been used as a school for the past fifty years. The house commanded a wonderful view across the valley. It was big enough for all our needs - probably too large if I was realistic. It had six floors and a hundred and one stone steps from the basement to the top of the house. Every room was beautifully proportioned, with gloriously large windows, and all the original late eighteenth century shutters, architraves and elaborate plaster ceilings. Every room was, however, painted in an insipid institutional green, and the floors and staircase alike were masked in similarly coloured carpeting. The central heating system was defunct and there was neither a kitchen nor a bathroom, though the house still had thirteen girls’ toilets. It was so large, and needed so much imaginative restoration, that the owner was anxious to be rid of it at a reasonable price.

I climbed to the top floor of the house and went slowly from room to room, imagining just what each one might look like if we gave it the sympathetic care that such a Grade One Listed house cried out for. As I came down to the main reception floors the mid-afternoon sun pouring through the tall sash windows enhanced the beauty of the wonderfully spacious rooms. I found myself planning the conversions necessary to create bathrooms, kitchen, dining room and workshop but as I stood in the space I’d identified as my future study, I nearly panicked. Could I, from here, almost single handed, regenerate the Initiative? Ideas and strategies flooded through my mind. I forced myself to calm down and to think one step at a time. This was potentially a fine house, a place where we could be very happy, and from which I could work well. I was experienced enough in practical affairs to know the scale of the work that would have to be carried out. I also knew, what probably no-one else who had seen the house would have known, that a determined man, assisted by a determined wife and three late-teenage sons, could largely manage the conversion themselves.

I had some eighteen hours to make up my mind. “Are you sure the rooms are really light?” Anne asked on our extended transatlantic phone call. On that point I was easily able to reassure her. “And it’s within easy walking distance of the town; and the roof doesn’t leak?” On such points I could again readily assure her. Then there was a long silence; “Do you really believe that we can do this, and not lose money?” I prayed silently that Anne would not hear the slight hesitation in my voice as I said, as resolutely as I could, “Yes, of course. Remember I’ve done this once before, when my father died. Now we have three sons to help us.”

Some six weeks later, as we closed the door on our Washington office, the first of several lorries arrived in Bath to unload the furniture we had put into store when we left England for America four years previously. My trustees were very understanding: “You’d better give yourself a couple of
months to get the house and your office sorted out. You won’t be much use to the Trust if you and the family are living in a mess.” And a mess it certainly was, as anyone who has ever tried to convert a large Georgian house whilst living in it at the same time will readily appreciate. The Georgians used lime plaster - tonnes and tonnes of it. Once you break the seal of such plaster it dissolves into a fine dust that creeps into, and settles upon, everything. For the first six weeks a grey, cloudy, pandemonium broke out, and I had to recognise that my sons, even my own wife, were looking at me as if to reassure themselves that I was still sane. It was not a question I was willing to consider myself, but ever so slowly a miracle started to emerge. We took off twelve layers of wallpaper from the walls of the drawing room, and it took Anne six days working on a scaffold tower to highlight the elaborate plaster carvings of the cornice. By Christmas day the family finally had a gloriously comfortable drawing room, and I had the beginning of a functional study. One and a half rooms down, ten more to go.

It was months before we had a proper kitchen, and even longer before the bathroom was finished, but by summer the dust was restricted to little more than half the house. And I was steadily recovering my confidence. In January ‘The Child is Father of the Man’ had been published, and a review in the TES had said “(This) story sheds a unique light on what it is like to try to sell good ideas to politicians who may well be sympathetic but are hobbled by their addiction to the unholy mix of ideology and expediency.” With that publicity came an amazing number of invitations to address conferences in Britain and overseas; and the first of the invitations to set up training programmes for several hundred head teachers meant a rapidly filling up diary. The Institute was it seemed, going through a premature birth.

Inevitably those months were a time of considerable stress, for if anything had gone wrong with the Initiative or in my attempt to provide a proper home for the family, the results would probably have been disastrous for both. This story would not be complete without acknowledging the personal side of my life in some detail. Most important to me, as a father, was the steady development of my sons’ abilities to learn useful practical skills working on the house whilst keeping up their academic studies. Peter, the eldest, coped best. He had already been at Cambridge for a year before we moved to Bath. Every holiday he approached with zest the need to put up new ceiling joists, plasterboard, dividing walls and endless decorating tasks. It was that first summer, my bruised fingers still dirty with bricklaying, that Peter gave me one of those moments a parent can never forget. When he had gone up to Cambridge the previous year he’d asked to borrow my dinner jacket on the basis that, as he was going to join the University Debating Society, he would use it more than I would. Little did either of us guess that he would go on to become President of the Union, or that he would then invite me to be one of the main speakers in one of his debates. For this I had to go out and buy another DJ! The novelty of the evening was not lost on the three hundred or so undergraduates in the chamber, as I advanced the case that a ‘back to basics’ education was no education of real quality. “Thinking”, I argued passionately, “has to be reunited with ‘doing’.”

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On the spur of the moment I turned to the students - reverting to the ingrained habits of the headmaster and forsaking the rules of the debating chamber - and asked how many of the audience had not been able to read when they had first gone to nursery school. Just three hands had gone up. Several of them emailed me afterwards and I sent them a reference to the research carried out by the Kellogg Foundation in the State of Michigan five years before, that showed that the biggest predictor of success at the age of eighteen was the quality and quantity of dialogue in the child’s home before the age of five. I used that piece of research frequently in my speeches, as I did the findings in a carefully researched book ‘Meaningful differences in the everyday experiences of young American children’, first published in 1995. This showed, in ways similar to the Kellogg findings, that language acquisition is heavily dependent on the quality and frequency of interactions between the very young child and the adults around her. By the age of three it showed that the child of professional parents already had a larger vocabulary than had the parents of a welfare child. Fascinating as I found all this, my interest was shifting away from the early years of life to the research that related to adolescence. In an article published by the Open Society Institute I had read an insightful comment by a sixteen-year-old Romania girl, Dan Zdremtal: “When you are young you do everything without thinking too much. Prudence and indifference were words you can’t bear. But you’ll never know better than at this age what it is you really want. You’ll never again have this courage, that of risking everything in one second.” The impulsiveness, and idealism, of adolescence is something that society ignores at it’s peril – this is when children become experiment at becoming functional adults.

David was studying Art and Creative Writing at
university in Virginia and, being sufficiently adept at designing websites to earn significant pocket money, his approach to the house alterations was fascinating. Whereas Peter had everything worked out in his mind and set himself a steady and regular pace, David oscillated between an exact attention to detail and the moodiness of the artist. In other words, while what he achieved intrigued me; what he forgot to do often amazed me. During the second summer holiday he took on, single handed, the building of a twenty-six foot long, ten foot high, concertina girder/wall, which would divide a large room on the fifth floor in such a way as to take the ‘sag’ out of longitudinal floor joists which, after two hundred and twenty years, were in danger of cracking the fine ceiling below. It took him six weeks to complete, and his work passed every test the structural engineer applied. The night before going back to university he said: “You know Dad, I’d hate to own a house I couldn’t do anything with myself. It wouldn’t feel like me, if I hadn’t designed it myself.”

Four years later, in his final year at university, I asked David to reflect on all his teenage experiences by reviewing for the Initiative’s website the recently published book on adolescence, ‘The Primal Brain’,1a by Barbara Strauch, together with Jonathan Sacks’ remarkable book, ‘The Dignity of Difference’. David started his review by quoting Strauch; “As the teenage brain is reconfigured, it remains more exposed, more easily wounded, perhaps much more susceptible to critical and long-lasting damage than most parents and educators, or even most scientists, had thought.” In a lengthy and punchy review twenty one year old David commented; “It’s dangerous for parents to treat their adolescent children as time bombs rather than developing humans, as such relationships quickly become ones of command and react, rather than of discussion and conversation. Many adults seem to forget that the messy ball of hormones, hair dye, silver piercings, and whatever else characterises teenagers, will one day become an adult. There is a desperate need for guidance, but likewise an equally important need for independence.”

David concluded his review, had he but known it, by reiterating the case so very well made by Mihalyi Csikszentmihalyi years before in his book ‘Becoming Adult’; “Though my friends and I for the most part played down what was going on at school,” David wrote, and I wryly remembered, “we spent a good deal of our own time actively involved in our own creative processes. More than school, this rich, social interaction helped shape my ideas and expectations and reinforced for me that there is more to life than a career and owning three cars. It might sound like pseudo-hippy claptrap, but it has raised my expectations of myself more than anything school-related did, and has opened up a range of more exciting opportunities than a 1500 on the SATS could ever do. Very little of what happened after school within my group of friends was quantifiable in any scholastic way, but its importance in the very fabric of what it means to be a socially engaged, interested human is immeasurable.”

I thought about this a great deal when David first showed it to me, and I was glad that, when our sons had been young and I was so preoccupied with setting up Education 2000 that, even in the most difficult of days as described in chapters eleven and twelve, Anne and I had always placed great emphasis on the amount of time we spent doing things with our sons. Money was moderately short then, and I can now see that this was actually a good thing. Hart and Risley, the authors of ‘Meaningful Differences’, expressed this most succinctly when they wrote, “Parenting in a society without television, toy stores, gas-powered lawn mowers, and sugar coated cereals was easier by far. Technology has removed parents’ need for children’s help, the traditional means by which parents transmitted across generations the importance of work, and has left parents to guide their children as best they can through a maze of continuously available entertainment.” We were living proof of the value of that statement in our early months back in England.

Tom, our youngest son, had been twelve when we went to America, and so for four of the most formative years of his life had grown up surrounded by the seductive youth culture of the wealthy Washington suburbs. He was fascinated, but found it unsettling. To David’s book review he contributed; “It’s impossible to measure the importance of my interactions as a young child, and as a teenager, with adults and the elderly. One of my most treasured relationships was with an old Irish man who took my brothers and me for rides on his tractor when we were very young, and who, when I was a teenager, had a profound effect on how I lived my life. I cannot forget the nights in Morran’s Bar in the little village of Woodford in County Galway, when he leant over and recited fragments of Sir Walter Scott in my ear. With thick Irish tones he rasped “Breathes there the man with soul so dead/who never to himself had said/this is my own, my native land” through a haze of whiskey and cigarette smoke. I don’t believe Eddie saw me just as a teenager, but rather as a surrogate...
son for whom he was passing on knowledge and wisdom, fragments from his own teenage years. Teenagers need adult guidance, and I count my time spent with elders, as a younger person, as a time of apprenticeship, a transition from the old to the new.”

My understanding of the multiple influences which help to shape the attitudes and beliefs of young people was much extended by the publication of Judith Rich Harris’s book ‘The Nurture Assumption’ that forcefully broadened the concept of nurture beyond the narrow definition of parental love, to include – as the child gets older – its peer group. With her well articulated case that “parents matter less than you think, and peers matter more”, Harris argued that the influence of parents tends to decrease and the influence of peers increase. “Parenting is a revelation to most people”, commented Matt Ridley, the writer of several highly regarded books on human behaviour, when reviewing Harris’s work some years later. “Having assumed you would now be the chief coach and sculptor of a human personality, you find yourself reduced to the role of little more than a helpless spectator-come-chauffeur.” In the ancestral environment children were most often reared in groups of what zoologists call cooperative breeding. It was here, not in the nuclear family, or simply in the relationship with parents, that Harris argued we should look for the environmental causes of personality. That has to make sense. It’s a confusing picture for, initially, each child within the family selects what they see as a vacant niche - if the oldest child is responsible and cautious, the second child will often turn rebellious and carefree, but as they get older these differences diminished as the influence of the peer group grows.

Being the parent of teenagers is as time-consuming and challenging, as being the parent of an under five - particularly when the whole family is under duress. That, surely, must also have been the case for our ancestors going right back into Stone Age times. Children were around the adults all the time so that the fortunes of the parents became the direct experience of the child. Until the last generation or so in Western countries there was no such concept as ‘quality time’, or of a child waiting to be given a lift in a neighbour’s car. The constant cloud of lime dust that surrounded us in Bath must have been as much of an irritant now as was the smoke in our Stone Age ancestors’ caverns was to them, but no more so, for it seems we are at our best when there is some stress in our lives. Levels of depression, I am told, were lower in Belfast during the Troubles than before or after. The same was apparently the case in London during the blitz. It seems we are often happier having something real to worry about, than having nothing at all to trouble us.

The early years of a child’s life can build up enormous reserves of emotional capital that come in handy years later. To quote David’s review once more; “In my pre-teenage years my parents frequently entertained guests, and we were encouraged to be around and ask questions. We were not nuisances because we were babbling, young and inexperienced, we were the same because we were inquisitive.”

The move back to England, difficult as it was, turned out to be a blessing in disguise. It didn’t feel like it at the time; it was scary wondering whether it would be the Initiative that would first run out of its dwindling funds, or the family budget collapse as we poured all our savings into building materials. I had to prioritise my time more carefully than ever before, which meant jettisoning those things that were not essential.

What had been essential back in 1995 before we had gone to Washington was that I should find a way to strengthen the Initiative’s research base. In leaving England I had made the conscious decision that this was more important than the constant attempts to capture the ephemeral interests of politicians who just might see in our programme something which might further their political careers. Many small high-minded organisations like Education 2000 squander far too much of their scarce resources on such fruitless activity. I wanted no more of that. Our message had to be so well presented that it spoke for itself. The four years spent working in America had given me much experience in handling the research so that I was starting to run the risk of being distracted from our main objective – how to make all this usable to practitioners.

Back in England, with a home to provide for my family and a burning desire not to waste all the international work of the past four years, I felt a sense of urgency that I’d not known before. As my desk became ever more cluttered with builders merchants’ invoices, research papers, newly published books, and ever more requests to address conferences in England and elsewhere, I found that the sense of satisfaction I was getting from the practical struggle to convert the house was giving
me the mental determination to take up the cause of the Initiative with fresh vigour.

The Message takes root

People were paying far more attention to me now than they had first done when I was initially presenting the possible implications of new research for the structuring of schools. Just why this was intrigued me. Slowly it dawned on me. I had personally gone through those dark days, and come out of this far more of a fighter. The dark days had forced me to reconfigure my objectives with enhanced clarity. Critically I had now got the relationship of the brain-based agenda better balanced with the philosophical issue of what kind of world we thought we were educating people for. Research was a means to an end, and the “end” had to be a restatement of what good educationalists had always believed; namely that only the curious will learn and only the resolute overcome the obstacles to learning. The quest quotient has always excited me more than the intelligence quotient, ‘I can is more important than I.Q.’ I once heard someone say succinctly.

“What you have done for us in today’s conference”, the Chief Education Officer of a London borough told me in front of the hundred or so teachers in late 2000, “is to start preparing us to be Responsible Subversives. A teacher to be worthy of his task has to be genuinely authentic. He or she has to teach what they believe; if they don’t children will rapidly see through them.”

At long last, after many frustrating years of apparently banging my head against the wall of the English education system (and the corresponding systems in other countries) one senior person in that very system was prepared to stand up in front of over one hundred teachers, and tell them that what I was saying was correct. As the chief education officer he could see clearly what the problems were, and worse still, that they were not being addressed. He reminded the teachers that his job required him to do everything possible to lift the achievement scores of their individual schools, to improve the SAT scores and the value added indices. That is what he and everyone else was paid to do, he said. But he then went on to warn them that their vision had to be greater than league tables, and the endless juggling of statistics to fit the needs of numerous forms. Everyone had a responsibility for which future society would hold them accountable: “You have to lift young people’s eyes above the immediate parapet; you have to inspire them to become more responsible citizens of the 21st century world by becoming rightly critical of the things that they – and all of us – don’t think are working properly.”

It was quite wonderful to hear someone else voice my thoughts. From then onward I made the phrase “responsible subversives” part of my own, frequently used, vocabulary. If teachers believed, as professionals who understand how children learn, that the system was not working properly, they had to become much better at explaining to the public why this was, and what had to happen in response. “Your responsibility ultimately is to the children themselves for what they need to be in twenty or thirty years time, not the short-term political expenditure designed primarily to deliver quantifiable results in four or five years.”
Chapter Fifteen

FACE-TO-FACE WITH THE STONE AGE

The year 2003 and the politics of war. What adults tell children about personal and collective morality. Unique opportunity to understand personal study of one of the last surviving Hunter/Gatherer societies, the Hadza in Tanzania. Exposure to Hadza society reveals how like modern man these stone age people are in terms of behavioural pattern and thought processes. Evolution of mind brought into focus through alternative creation story; empathy with natural world; separate but complementary male/female skill sets, different ways of living and raising of children. Significance of these insights for study of developing mental needs of children in the twenty-first century.

“It is the last day of February 2003,” I noted in my daybook, “and as I write this in my hotel room in Istanbul, the sun is slowly lifting the early morning fog over the Bosphorus and the Asian shore is becoming clearer. A large Russian freighter is steaming steadily south, and endless passenger ferries crisscross this historic waterway. To the right is the Golden Horn and beyond the outline of the Topaki Palace, the Mosque of Santa Sophia and the sparkling waters of the Sea of Marmara.”

That peaceful view of Istanbul on that snowy morning in late February in reality shrouded a deeply divided and confused society, as the joint American and British Armies appeared poised to invade Iraq. The previous evening, addressing the Istanbul and Bosphorus Chapter of the Young Presidents’ Organisation I’d heard strong language expressed. “We Turks are demeaning ourselves. We think we’re driving a hard bargain with the Americans for the use of our bases for a possible war with Iraq. This is not a bargain. We are admitting that we are beggars. What matters more to us - that we are true to basic human rights, or that we admit that we are too poor to be independent?”

‘Too poor’ immediately seemed an incongruous description of these very obviously successful, young entrepreneurs - many were in their thirties and some in their early forties - living in considerable style. As a description of the country as a whole, however, it was accurate. Turkey is undoubtedly poor, and fraught with internal ethnic and national tensions that would come to the fore in the weeks ahead if Turkey became involved in war with Iraq, as first the Kurds, and then probably the Turkomans, saw in the confusion of a possible war a political opportunity.

“If it’s true, John, as you said in your speech, that youngsters learn to become adults by constantly watching and listening to the adults around them, then the home is the cradle of morality,” said one of the younger of these successful businessmen. “In which case what bad role models we are in danger of becoming for our children! Too often we spoil them. There is no point in our moaning that our children just take our wealth for granted if our actions simply imply that money really is the real bottom line”.

It was a fascinating discussion, and one that I had come to see as typical of what would happen when highly successful entrepreneurs came together, whether from a Western Christian tradition or Moslems from the Eastern Mediterranean with the blood of the Phoenicians still flowing in their veins. It was what I had heard in Venice the previous year; how the excitement of inventing a new concept and taking it through to profitable production gave people a buzz. Not simply business people either, most people want to see the significance and end result of what they do. To an extent the money is a side issue, even to the successful. Having started off, often from humble beginnings themselves, many entrepreneurs had learnt how to struggle and constantly assess the ever-changing conditions around them. These people knew the truth of the biblical axiom “The love of money is the root of all evil” better than most of the rest of us.

Some of the group were totally up front with the alternative view though. “Turkey is poor,” they said, “and America will get its way in any case. That is inevitable. We need their money, therefore we’d better be on their side. It’s like dealing with any American mega-corporation. You have to negotiate to the bitter end and get all that you possibly can. Then you have to trust that, when the showdown comes, you have some chance to stop it all getting out of control”. Here was the true voice of old Istanbul, of Constantinople before it, and of Byzante-
time before that - three separate civilisations each of which had grown rich as traders controlling the business of many nations from this narrow spit of land controlling the entrance to the Black Sea.

"If my daughter heard me talk like that", one of the fathers confided later, "she would despise me. We have many relatives in eastern Turkey who are Kurds, and their relatives live in northern Iraq. Young people who think about these things are highly critical of our generation for being too Machiavellian. Just to learn facts and theories in school is not enough to create wise thoughtful young people. That’s what our country needs. Such young people come - or should come - from the quality of morality experienced within the family”.

It was nearly four years now since that devastating meeting in Dublin. What seemed a death sentence at the time had, in retrospect, given the Initiative a new vitality. While I know of no government, as yet, willing to accept the argument that new understandings about how the brain grows and how intelligence is developed, makes a reappraisal of the current models of schooling essential, an ever increasing number of people at least want to think about it. As a result I’ve become a lecturer on the world stage, and on my travels I’ve learned a lot.

Much of that travelling has vividly brought home to me many of the problems the world has to face: the devastation of the Colombian economy caused by the drug wars; the poverty in the shanty towns of south Africa; the ethnic struggles in Indonesia, or the sense of sitting on a time bomb on the forty-ninth parallel in Korea. At the same time I’ve learned much about humanity’s natural resilience and its insatiable optimism and perseverance. In addition, game wardens in Africa, husky teamsters in the Yukon and horse breeders in Alberta have taught me much about the instincts of wild animals that stimulate interesting thoughts about how other species learn as well. Yet everywhere I go, I hear expressed profound fears about adolescents and real concern that we now have schools that actively teach to a consumerist agenda, when in reality the world needs civilisations that are sustainable and able to respond to the fragile nature of eco-systems. Above all, I’ve come increasingly to fear the inability of academics to see beyond their own narrow, highly specialised studies, and show what these could contribute to an understanding of how humanity can exist more equitably on what seems to be becoming an ever smaller planet. The world needs help to see the big picture.

February 2003 had been a very busy month, with meetings in different parts of Britain as well as in Dubai. Then, with all my family feeling as strongly about the issues as I did, we went to London to join the other million or so people marching to stop the war in Iraq. Since September 11, 2001, the issue of international terrorism, and what was the appropriate response to it, had dominated thinking everywhere, perhaps especially amongst the young. Our son David recorded in his diary, “after the Stop the War march, in a moment of hope, we hugged each other as one of the organizers announced two million in attendance there in Hyde Park and similar numbers in Rome, Paris, New York and across the globe. I must confess I woke up the next day expecting to see a headline reading that Blair had withdrawn his support for war. But that was not what happened, of course. It was that morning I realized the potential disconnect between power and popular opinion. In many ways that morning would forever separate my teenage years from my adult life.” A sad lesson to learn, but it was learning unmediated by any teacher, not to be found on any curriculum, and perhaps only appreciated in its entirety by people privileged enough to have had a good schooling and an intense involvement in life itself.

A few hours after the march I flew to Kilimanjaro in northern Tanzania for a follow-up to my earlier meeting the previous Autumn, when some hundred or so people had come together at the Arusha International School to discuss the implications of the Initiative’s ideas for the schools of Tanzania. The speed with which this second meeting was to be held, and that it was to be with two hundred and fifty people over three days, was exciting. Arusha is a bustling east African city that appears to be growing before your very eyes. Its traffic is chaotic and its roads largely unkempt. New buildings and construction teams are everywhere, herders are constantly driving their cattle down the main street on the way to the abattoir, and unemployed country people continue to flood into the city looking for work. Bikes loaded down with bags of charcoal, or cans of water clog the roads. Even with the resources brought by many NGOs and missionaries the schools of Arusha and northern Tanzania just can’t cope with the ever increasing volume of the population. One primary school I visited had a class of one hundred and forty-two pupils; yet only seven per cent of the children in Tanzania go on to secondary education, and only a tiny proportion of these actually complete the course.

Many of the people of Tanzania are Masai - a
tall, good-looking tribe of warriors turned cattle farmers who over the last century have displaced many of the indigenous tribes of the region. They are a semi-nomadic people who live almost entirely off their cattle. They not only drink their milk but also, at times of celebration, their blood, which they take on a regular basis by opening a vein in the neck of the animal to fill a gourd before sealing it up with a lump of dung. In due course they eat the cattle. As they often grow to six feet and more in height, the Masai fear for their wives (an elder will often have several wives) needing to give birth to babies with correspondingly large heads. They have, over time, developed an extraordinary technique for dealing with such birthing difficulties. A woman is encouraged to eat well for the first six months of pregnancy and the foetus grows fast. Then, for the last three months the woman hardly eats at all - if she does the other women administer a powerful local medicine that makes her immediately sick. With no food to eat but with the foetus continuing to extract whatever nutrients it needs through the placenta, the mother inevitably starts to lose weight. Shortly after the foetus also slows its growth so that, by nine months, the baby is normally small enough to pass down the birth canal with little difficulty, but because of the good supply of food during the first two thirds of the pregnancy the baby’s brain is well developed. Directly after birth the mother is put on a crash feeding-diet and she and the baby are not allowed out of their mud and straw ‘kraal’ for fourteen weeks - by which time the baby has put on plenty of weight, as has its mother. A fascinating cultural adaptation that will, I hope, some day attract the attention of neurobiologists to explain the significance of this to mental development.²

Understanding Stone Age People

What I need to record in this chapter are the four days that followed when I was taken by Daudi Peterson, a safari expert, and Kevin Hawkins, the Head of the Arusha International School and their families, to visit the Hadza people. The Hadza tribe still practice a genuine hunter/gatherer economy in conditions that, it is thought, reflect almost exactly the way our Stone Age ancestors lived forty thousand and more years ago. There are fewer than a thousand of them still living in their natural state, though the descendents of disaffected Hadza are quite numerous outside the area - a phenomenon I’d noted earlier amongst the half-caste aborigines in Australia, and the Bushmen in Namibia. To see them living as their ancestors had for tens of thousands of years before the white man had introduced them to alcohol and a cash economy was an opportunity I wouldn’t have passed up for anything.

To reach their homeland necessitated a nine-hour drive from Kilimanjaro airport by Land Rover to the Lake Eyas region of the East Africa Rift Valley. The Hadza neither herd animals nor do they plant crops; they have no permanent villages, and nothing other than grass covers the low huts in which they live. The Hadza people own minimal possessions (other than their knives) and move from place to place for food - the self-rooting tubers of hanging vines, the fruit and berries they collect in season, the honey they collect from the trees (aided by the honey-watcher bird) and the meat caught by the hunters. They have no facilities to store anything - they literally live from-day-to-day on their wits. It seems as if they are a living relic of a group of people living in Africa perhaps sixty to seventy thousand years ago from whom everyone alive today is descended. To visit them was to meet with our ancestors of three thousand generations back. The question foremost in my mind was just how like them in our behaviour are we all these generations later?

Let me explain why it was important for me, and the writings of the Initiative, to experience all this first hand. Over the past twenty-five years biomedechnology, with the invention of PET and CAT scans and functional MRI, has enabled scientists to watch - through the transmission of signals from an individual brain measured and wired up to a video display screen - which parts of the brain are involved in particular intellectual or practical experiences. During this same period cognitive scientists have been able to offer far more precise explanations as to how the human brain shapes, processes and stores information. Within the past dozen years evolutionary psychology has emerged as a new discipline which applies the insights from evolutionary theory to the development of psychological processes. Evolutionary psychology sees (as Darwin had done nearly a hundred and fifty years ago, but which psychologists until thirty or so years ago had largely ignored) that the very structures in the brain that we use today have been shaped by the evolutionary experiences of our distant ancestors, particularly as they adjusted to life on the open savannah. It is these evolved predispositions that enable us to process information, act as social beings, think in particular ways and literally find our way around in life. To note the similarity between the way modern man has become
acustomed to live and the way the Hadza retain a Stone Age way of life, could help us develop a better understanding of what a system of learning that consciously “goes with the grain of the brain” would really look like.

For a century and more we have accepted that animals have deeply entrenched instincts that enable them to survive, and which give them their specific characteristics. My life was saved years ago when, on an expedition in Turkey, the villagers noted that the wolves had all left their caves in the mountains and were roaming aimlessly in the foothills. “That’s a sure sign there’s going to be an earthquake,” we were told, “for the wolves can feel the earth starting to shake. We will all sleep in the fields, away from the houses.” We did just that, and three days later there was a massive earthquake. People in a town some thirty miles away, without the benefit of the knowledge of the wolves, perished in their thousands.

The ability, for instance, of birds to follow an exact path of annual migration, of salmon to return to the river they were born in, of gazelle to live in herds, and the lion to live on its own, prompts many questions about intelligence and social organisation. Psychologists until very recently wanted to make a simple distinction in humans between what they saw were a very small number of basic instincts - classically sex and survival - and learned behaviours which they saw as entirely the result of culture. This was the theory of Behaviourism first expoused by J.B. Watson in the 1920s. At the core of this theory was a belief that a behaviour that couldn’t be measured, and defined in terms of inputs and outputs, simply didn’t matter. To Behaviourists the brain was a blank slate waiting for culture to write on it. We humans, they argued, had no inherited instincts.

In the past dozen years evolutionary psychology has begun to turn such a theory on its head. In doing so it has been much assisted by other disciplines, which have benefited from the acquisition of new technological tools and processes. Oldest of these is Archaeology, which in recent years has been radically transformed from a discipline involving old mechanical techniques of spades and sieves, to one that includes the microanalysis of pollen, radiocarbon data, computer simulation models and massive data banks of carefully measured findings from around the world. Cultural anthropology has similarly been transformed through the addition of the study of genetics, and the teasing out through specific studies in DNA (such as mitochondria) of just which of us is related to whom, over vast periods of time, and just where

in the world we have come from. In other words we can now see back into the distant origins of our species with a clarity that twenty years ago would have seemed like science fiction.

Take all this research together and it is the thesis of the Initiative that, as it is the human ability to learn (and so be adaptable and flexible) which has given our species such a pre- eminent position in the hierarchy of the animal world, then our multiple ways of learning must have their origins way back in the depths of human history, ninety-eight percent of which was probably lived on the savannah. The better we can understand the conditions which shaped our brains to be inquisitive, adaptable problem-solving organisms, the easier it should be for us, now in the twenty-first century, to create learning situations that most effectively draw on our natural aptitudes.

We are learning much about our human antecedents, though there is still much dispute about the connections between different branches of the human species. Very simply it seems that the human species parted company from the great ape between five and seven million years ago. That we still share ninety-eight per cent of our genetic structure with the apes reinforces the need to appreciate how significant was the pattern of our development in the millennia before that separation. In other words how much of our brain processes were shaped before the separation, and which ones have emerged subsequently, to make us the creatures we are?

It seems that we humans started to walk upright at least three and a half million years ago. What still puzzles scientists though is just how it was that such a puny species as ourselves managed to survive on the open savannah lands of Africa, which were also populated by large, fierce and very swift predators. One clue was pointed out to me at the Stirkfontein caves north of Johannesburg in 2002 by the American paleoanthropologist Lee Berger. It appears that these caves have provided shelter for wild animals and humans for more than three million years. What makes the caves so particularly interesting is that the steady accretion of bones and detritus on the cave floor has been consolidated into a form of calcrete, and as archaeologists have dug through this historical timescale they’ve noted something extraordinary. Up until about one and a half million years ago the human bones they found were almost invariably chewed up and broken apart, but the bones of the large predators are almost all intact. One macabre artefact is that of the cranium of a young boy who died more than one and a half million years ago.
The brain cavity was already quite large but the boy’s intellectual capabilities were insufficient to outwit the killing power of a leopard’s fangs that have left their mark - two holes neatly puncturing the boy’s skull. However from about one and a half million years ago forward to the present day, there is a massive change. From that time forward it is normally the human bones which are largely intact, while the animal bones frequently show signs of where flint knives were used to cut off the meat. In other words about one and a half million years ago, in Africa, humans passed from being the hunted to being the hunters.

So how did this transition come about? We’re pretty certain that such early humans could not use speech in any formal sense, and they do not appear to have had that reflective intelligence we would now regard as an integral part of consciousness. In addition the archaeological evidence would suggest there was no noticeable improvement in the technology of making flint tools. What probably happened was that, as a species - or more accurately in tiny subgroups of nomads - some of our ancestors developed the skill of working in teams. Hunting independently became replaced by hunting in groups. Is this how the Hadza, even today, armed only with bows and arrows, can overcome lions and giraffes? To this day other animals hunt in packs, such as lionesses or packs of wolves, only the leopard is an independent hunter. It seems that ten or twenty screaming early humans armed only with stones and spears, working as a team, suddenly became more than a match even for the lion. It was the social skill of collaboration that made up for our comparatively puny bodies.

Our ancient ancestors learned to act collaboratively long before our species learnt to use spoken language. According to some recent theories, language development can be dated as recently as a hundred or a hundred and fifty thousand years ago. But long, long ago, it seems we did have the ability to communicate effectively in a combination of sign language and - most importantly - through our ability to think ourselves into other people’s feelings. Empathy, the ability to sense through an ever-growing skull, the need to breath from the need to pass some of that air through the voice box and to make controllable sounds. It’s argued by some that this was a comparatively recent event, probably no more than a quarter of a million years ago, with others arguing for an even more recent date. A second factor appears to have been enrichment in the human food chain perhaps initially by scavengers extracting bone marrow, then latterly by the inclusion of significant quantities of fish. Fish provide the extra fatty acids that are needed to create the myelin sheathing around the dendrites in the brain. Put simply, good myelin sheathing creates the insulation that keeps brain stimulants going in the right direction. Bad insulation, as it were, causes the brain to ‘leak’. Several scientists in South Africa suggest that this improved diet did not become a significant factor until about a hundred and twenty five thousand years ago.

It has been the growth in language that many scientists have used to explain the expansion in the size of the human skull, arguing that as the prefrontal cortex has got larger so as to handle the vastly enhanced amounts of information resulting from the sharing of verbal information, so the skull would have been forced to expand. It’s an argument I’ve found easy to make myself, and is apparently obvious to my audiences. But there is an awkward and well-authenticated fact that effectively denies this argument. The human skull, and presumably the brain within it, has been growing not just for the last one hundred and twenty five thousand years, but also for the past three to four million years. The problem created for humans by an ever-growing skull, but with no increase in the diametric of the woman’s birth canal, means that women have to give birth to their young when their brains are only about forty per cent fully formed (in comparison to other mammals whose young...
are born with almost fully functional brains). For the human brain to be fully formed at birth, it has been calculated that pregnancy would have to last at least twenty-seven months and, of course, the head would never be able to pass through the birth canal. So women give birth to incredibly immature babies whose subsequent brain development will be shaped by two things: firstly the nature of our inherited predispositions, and secondly by the interaction of the baby with the dominant culture. Again we return to one of the book’s key theses; namely that humans need culture (nurture) to complete what evolution has started.¹⁰

So why did brain growth start long before the present level of evidence would suggest that we needed it to handle spoken language? I suspect, but know of no research as yet to prove this, that it’s much to do with the human capability to ‘read’ the landscape, ‘read’ (empathise with) the emotion of others, and carry vast numbers of pictures in our minds. Some circumstantial evidence of this may be provided by the work of people like Professor Howard Gardner of Harvard.¹¹ Gardner’s thesis about ‘the unschooled mind’¹² of the five-year-old, and multiple forms of intelligence, is probably describing functions which the human brain has gradually started to accumulate over vastly longer periods of time than just the last hundred thousand or so years. In other words, our big brains are the result of having to accommodate much more than just language - important, however, as language most certainly is. Remember, a picture is worth a thousand words and our memories are chock-full of pictures. Think of your computer and the amount of memory that a picture takes up in comparison to text and you get some idea of the relative amounts of data each requires. People who thought a lot in terms of visual recollection rather than symbols (which is essentially what language is) needed big brains; language is a more economic form of memory storage, but it may not be as effective.

At some time over the past one hundred thousand years humankind made what scientists call ‘The Great Leap Forward’. In a very short period of time, maybe as little as thirty or forty generations, our ancestors suddenly and dramatically became extraordinarily inquisitive, inventive, playful, and exploratory. We discovered music, art, religion, and philosophy. After several millions of years of painfully slow evolution we became conscious beings able to think and speculate in the abstract. As the science writer and documentary film-maker Clive Bronhall writes in his provocative description of human evolution ‘The Eternal Child’: “We developed minds that can think about sex while we’re building ourselves houses, or think about houses while we’re having sex.”¹³ We became, in other words, intentional in our thinking. We also became manipulative and dangerous. This was not long ago in geological terms, and forms the very first story told in the Book of Genesis about Adam and Eve eating from the tree of knowledge in the Garden of Eden, and one of their sons murdering the other. As Professor Robert Winston, writing in 2002 about the way primeval impulses shape our modern lives, said: “In punishment for eating the fruit of the tree of knowledge of good and evil, God says to Eve, ‘In pain thou shalt bring forth children.’ With knowledge comes a bigger brain and with a bigger brain comes pain - at least for mothers-to-be.”¹⁴

This brings me to within a couple of steps of why I was so fascinated to visit the Hadza people. Although we humans are born with very immature brains, and are terribly vulnerable during the first three or four years of our lives, evolutionary psychology is now arguing very strongly that, within that only partially formed brain, evolution has empowered every new born child with a whole array of innate predispositions to learn to grow their brains through interactivity with the contemporary environment. It’s as if the young child’s brain is loaded with numerous DIY manuals, all written by the experiences of our ancestors. Yet the instructions are innate; or, if you prefer, unread by those who can’t read; nothing happens unless these innate predispositions are activated by the environment. Just as home improvement enthusiasts can completely mess up a job by not reading the manual’s description of their new multiple purpose drill, so a child without an appropriate environment to grow up in can effectively ignore all the benefits of their evolutionary inheritance; in metaphorical terms they would not ever know how to switch on the drill. It is this critical interaction of our biological inheritance with the culture of the day that makes us humans who we are.

So to the last step. Human evolution does not seem to have been a story of steady, continuous improvement. There appear instead to have been a number of blind alleys. Some strains of our species appear to have evolved over long periods, and then completely disappeared such as the people whose bones were uncovered in Indonesia in 2004 and who apparently stood only a metre high so immediately being christened “Hobbits.”. The most famous of these earlier sub species are the Neanderthals.¹⁵ They appear to have coexisted alongside Homo Sapiens for thousands of years,
but disappeared thirty thousand years ago, apparently (according to our current understanding of DNA) without any trace of their genes being passed on to the Homo Sapiens genome. Our own species existence seems also to have been highly problematic. Currently it is estimated that there have been several periods in our evolution when our total numbers have shrunk to as low as something between four to ten thousand people. Some estimate even lower figures. Bryan Sykes in ‘The Seven Daughters of Eve’, suggests that every human alive today can, through DNA, trace their origins through the female line back to no more than thirty-three women living at various points in the last one hundred thousand years.

The last of these constrictions is thought to have been between seventy and a hundred thousand years ago. The whole evolutionary experience of the human race before then, and of the species that it had earlier evolved from, would have had to be contained within the genes of as few as four thousand people. Given the limited life span in those days, this would have meant probably no more than two to three hundred children born in any one year. People living on the edge of the savannah, in central Africa we think, represent the common genome of every person alive on the planet today. As our numbers have grown, and we’ve moved to every continent on the globe, we have no doubt added slight variations to that gene pool. Thinking back to the million or so people on the Stop the War march in Hyde Park, and recognising that that was only two per cent of the population of England and Wales, or only one fifth of one per cent of the population of Europe, that has to be a staggering thought. Yet the six billion people who now inhabit the earth were, it seems, all born with similar predispositions to behave in ways that were carried through that last constriction. Since then we, and our distant cousins, have spread like wildfire into all corners of the earth.

The Hadza

The several variants on the ‘out of Africa’ theory suggests that the Hadza people appear to have stayed very close to where they originated, on the edge of the Rift Valley, continuing with behaviour patterns unmodified by significant, subsequent changes. Their oral tradition tells them (and us) that while other tribes have moved around them they are still in their homeland, something that recent research on their DNA seems to corroborate. The movement of Homo sapiens seems to have been from the Savanna into the Mediterranean and then out into Asia and Europe. Maybe the Hadza have just stayed put, stuck in the Stone Age, as all our other ancestors moved north. Their creation story is fascinating. In the beginning God created the Hadza. One day God (who in their language is expressed as being female)9 told the young Hadzas to go to the river and fill their calabashes with water and bring them back to her. The young people were gone for a long time, so God went to the river only to find that they had forgotten their task and were instead frolicking in the water. God was furious, and cursed the Hadza and said that, from that time onwards, half of them would become baboons, and the two groups would fight with each other forever. Creation, and the origins of behaviour, all told in three or four sentences! The Hadza have an extremely rich oral tradition that the elders recite to the young so frequently, and so perfectly, in endless evenings around the fire, that historians accept its authenticity as being every bit as comparable to printed texts.

Readers of the novel ‘Roots’ by Alex Haley10 will remember the accuracy of his family history, told in that oral tradition, while David Lewis-Williams in ‘The Mind in the Cave’11 argues that such story telling is best understood in terms of altered states of consciousness; something which, to a western mind, is like a kind of dream that is so much part of reality that one has difficulty sorting out ‘reality’ from the imaginary.

It was all this background theory that made my forthcoming visit to the Hadza so fascinating. So let me now take you back to that day in mid-February 2003. Towards the end of the nine-hour journey, only two hours of which were on surfaced roads, we climbed high up along a tortuous, and virtually non-existent, forestry track until we entered a tropical rainforest near the top of the pass. The track was littered with elephant droppings. As it descended the other side, the track gave way to little more than a path, with vegetation scratching the paint of the Land Rover on either side.

The profusion of vegetation was intimidating but as we came out into the open savannah I felt an immediate surge of energy and excitement. For more than an hour we drove, quite fast, along the edge of a dried up lake. The grass was lush. To our right stood scattered stands of acacia trees, leading in the distance to slightly denser forest and the foothills of the scarp. Such scenery reminded me forcefully of the landscapes of Capability Brown’s work in the eighteenth century by which he created the beautiful parklands of great English country houses. A troop of baboons fled in excitement from
one stand of trees to another, and young gazelle grazed out on the plain. My mind started to play tricks on me. I found myself looking for those fine country houses that, in my English experience, always commanded such views. It all seemed so ‘domestic’ in comparison to the rain forest. This was the savannah, the place where water is to be found only in limited and unpredictable quantities.

“It’s beautiful”, I said to Daudi, my guide who, though American by nationality had grown up in Tanzania where his father had been a missionary, and had lived near Mount Kilimanjaro ever since, “It’s strange, but I feel so very much at home here”.

Daudi smiled. “That’s what many people experience when they first come to this part of Africa. They feel they’ve been here before, but know that they haven’t. You probably know the research that shows that if you take photographs of a dozen different kinds of landscape from all around the world (and make sure that there are no buildings or people in them) and show them to people from all kinds of cultures, virtually every eight year old regardless of where they come from will say that the savannah is where they would most prefer to live. As people, anywhere, get older they opt for a more wooded area, but still with open swathes of grass. Interestingly no one ever opts for either the desert, or the rainforest.

“I’ve been here almost all my life and I have escorted many travellers from different countries, and their reaction is always the same. Something deep inside them tells them that this feels like coming home. It has to be a deep-seated human instinct; after all, this was “home” for perhaps ninety-nine per cent of our ancient ancestors’ experience. There are many other instincts that we know about such as the significance of the fire as being the focus of the home; the paradox that we love to settle down and build our nests but we also like to be nomadic and go walkabout; we like the reassurance of steady emotional relationships but it appears that half of us can’t resist an illicit relationship on the side. Which makes us just like the Hadza and, amazingly, similar to the baboons which they believe are their half brothers.”

As the afternoon wore on my sense of the beauty of the place did not diminish, but increasingly I found myself intimidated by the sheer scale of it. Being in a Land Rover was fine, but I would not have given my puny constitution (though I think of myself as fit in a kind of western industrial way) much hope of survival here. This was a place where you had to be tough to survive. I was relieved to hear Daudi’s radiotelephone click on as he report-ed our position to base, but of course by doing so I was cheating. To experience the savannah, as our ancestors would have done, would have been to experience the fear of being alone in a place where only a well-disciplined team could have provided real security.

Towards evening we headed further into the forest, driving from one open glade to another in paths kept open by the constant movement of game. Acacias gave way to the much larger, clumsy looking baobab trees. I could not understand how Daudi knew which way to go, but he had obviously developed a good sense of general direction and an ability to hold on to it whenever the local terrain was difficult. I, meantime, felt utterly lost. Then, without any sense of the dramatic, we met five Hadza men. Well-formed men with straight backs and heads held high. Each was leaning on his bow, and holding a handful of arrows. Well formed they were, but they were short (less I guessed than five feet tall) and without an ounce of spare fat. They had strings of beads around their foreheads, and knives at their waists. Each carried a cloak over his shoulders. Totally confident in their bearing I could not fail to realise that they were also wearing the tattiest and oldest shorts and T-shirts you ever did see emerge from a charity shop. They were totally oblivious of the incongruity.

The men knew Daudi well, as he visits the area two or three times a year, and greeted him warmly using, interestingly to me, Ki Swahili rather than their native language. I moved forward to shake hands and formally to say “Mutana”, a Hadza greeting. I felt confused. Stone Age men naturally speaking in two languages? Daudi climbed back into the Land Rover. Three of the Hadza climbed on the bonnet to guide us to a suitable campsite, while the other two set off into the darkening forest to return to their village. These three men had no understanding whatsoever of how Daudi navigated the vehicle, for they sat shoulder to shoulder on the bonnet, totally blocking his view to the front, and with a wild gesturing of their arms and much excited chattering, sought to give him directions. It was chaos, but fortunately at no more than walking speed.

“To meet them like that was a fortunate coincidence”, I said.

Daudi looked at me thoughtfully and took time to reply. “I’m not sure how you’ll respond to this but those men told me that last night their village elder had a dream that I would come today, so he sent them to wait for us at this spot. Even though I’ve lived here for most of my life I still find such a statement hard to fathom. But of one thing
I'm certain, there was no way the Hadza could have learnt of our travel plans through any of the technologies we westerners pride ourselves on. I obviously looked totally confused. “Tomorrow we should be able to meet the elder ourselves”, said Daudi, “I’ll see what he says to me”.

As we came into another clearing two gazelle were grazing. Lifting their heads to look at us they froze for a split second and then flung their agile bodies into flight. Just as quickly it seemed, our three Hadza hunters had leapt from the bonnet, their bows at the ready, and instantly planting their feet in the brace position, pulled back their right arm and let go their arrows in unison. All this must have happened in less than three seconds. But they were too late. Their arrows fell either short or wide of the mark. Not in the least embarrassed at what might have seemed failure they laughed heartily and ran off to retrieve their arrows. The same thing happened a few minutes later, this time the target was two large birds. Again they missed, but again they laughed. Life, it seemed, was one great continuous party. This was my first shock. The Hadza were full of fun, simple, spontaneous, situation-related fun; and fun derived, more often than not, from an appreciation of the kind of sophisticated humour that ‘Private Eye’ now caters for.

We made camp shortly after; we in our tents, the Hadza wrapped in their cloaks around the fire they had earlier started by rubbing two sticks together. We had a good meal of the food we’d brought with us. The darkness in the forest lessened as the moon came out. A lion roared not far away. “Don’t fret” said Daudi, “lions won’t trouble you in a tent, and in any case they sense the presence of the Hadza men. The lions are more frightened of the Hadza, than are the Hadza of the lions”. My second surprise - the idea that the King of the Jungle had learned to respect a particular kind of human as being wiser than he. Tired after the day, we shortly went to our tents. The Hadza kept smoking their stone pipes with some concoction of leaves and roots gathered in the forest. Inhaling the smoke very deeply they seemed to hold it way down in their lungs for a long time, and were then convulsed with the most body-wrenching coughs I’ve ever heard. Then they started talking and again and again they laughed. “Every night, when I stop to light my fire with two sticks I thank my ancestors for the wisdom they have given me so that I can live in this place,” one man told me proudly through an interpreter. Then they started to sing. One of them made music by curling the fingers of both hands together and blowing through them as if they had made a human flute. The music was sharp but melodious, and could travel a considerable distance.

Eventually I slept, only to wake an hour or so later. I was terrified. My fear was primeval. In that vast open forest, without the Hadza’s enhanced sense of the presence of other living beings, I felt desperately alone. The moon had gone down and it was completely dark. The Hadza had stopped singing. Then I heard again the roar, which earlier I had been told was that of a lion. Scared people sleep but fitfully. It was like the night three years previously when I camped in a cave deep in the Kalahari Desert. Its walls were ancient Bushmen paintings of wild beasts, thought to be more than twenty thousand years old. That night the moon was full and the sky contained so many bright stars that the desert was filled with sharp shadows. My mind had raced and I would not have been in the least surprised - just terrified - if Moses or Abraham had come around the entrance to the cave to ask me by what right I was there. Ghosts I do not believe in, but spirits are a different matter when you live amongst the remains of very ancient peoples. It was not until the first shaft of light marking a new day that I felt it safe enough to sleep, and so nearly missed the cheerful camp breakfast being prepared.

The Origins of basic Human Behaviour

Daudi guided us to the first village we were to visit. There was nothing in the forest to suggest its proximity, for indeed it had only been there for a few weeks. Five grass covered shelters, held up by light branches and twigs stuck into the ground, gave shelter to some forty people. There was no furniture, no plates and apparently no cooking implements. A fire smouldered in the clearing and four or five men were just setting out, in relaxed and again jovial mood, with bows and arrows, while the leader carried a honey axe. The axe was a sharpened piece of steel wedged into a seventy-five centimetre rough length of wood from the forest, identical in design to a Stone Age axe that would have substituted a flint for the steel.

Several of the women were sharpening the points of their digging sticks by rubbing them against a rough rock. Soon all the women, five or six, including a nursing mother and a grandmother, and as many children, set out purposefully in search of tubers, the roots of a certain kind of trailing vine.

Initially we followed the men. They seemed excited, and the reason soon became clear. There
is in that part of Africa a sting-less bee that makes its hive inside a tree. These bees are very small and the entrance they make to the cavity in the tree is no more than five millimetres in diameter. The honey they produce is extraordinarily sweet, far sweeter than any fruit, and the Hadza are crazy for it. So, too, is the Honey Watcher bird, though it’s more interested in the bees’ wax than the honey. Over thousands of years a symbiotic relationship has grown up between the Hadza, and the Honey Watcher. The birds by themselves can’t get at the honey, but they have learnt that the Hadza can. When the Honey Watcher becomes aware of a lot of bee activity around a certain tree they fly off in search of the Hadza, letting out a chattering call. They circle the Hadza and then fly back to the tree concerned, all the time circling and re-circling the men and guiding them to the tree. The men then quickly locate the narrow circular entrance and, with a few deft strokes of their special axe, cut away a section of the tree revealing (if they’re lucky) a well-formed honeycomb with honey dripping from the severed timber. We found five or six such hoards of honey that morning and our fingers became immensely sticky and dirty. The Hadza men always left some honey on the tree as a reward for the birds. It was classic Pavlovian conditioning. The birds had learned the lesson well. Soon they showed us to the next tree, and the next.

We left the men and found the women, who had located a large tree, well covered in vines, which were self-rooting where they touched the ground. This was the point where the tubers were to be found. The ground was very hard and stony. Under the shade of a nearby bush two of the older children were playing with the young babies, while their mothers, the grandmother and other children were digging out the tubers. The women worked steadily, thrusting their pointed sticks under stones to get some leverage, while others worked with their bare hands to pull the stones out of the ground and with their hands to dig away the earth. They seemed to do it effortlessly, but a few minutes with one of their sticks left me sweaty, tired and completely unsuccessful. It was the older woman who seemed to be the most adept, first pulling out a series of tubers, and then cutting the fleshiest bits into lengths of about fifty centimetres. While they dug they were largely silent, but the moment they relaxed they started to talk excitedly. They took it in turns to play with the babies who were, it seemed, only left to sleep when slung in a simple hammock on the mother’s back. The hammock was frequently reversed, so that the baby was facing the mother and free to suckle.

The babies were the object of continuous attention. The more they were played with by the other children or the women the more they smiled. A Hadza baby is not named until it has ‘proved’ that it is strong enough to live, normally after about twelve months. These are not a sentimental people; life and death are all too present realities. Until recently, as with the other nomads I had met thirty years before in the Zagros Mountains of Iran, the time of death was fixed by a conscious decision taken by the old people themselves. Once they’d decided that they were no longer fit enough to move with the tribe the old person simply announced that they would stay behind the next time the tribe moved. The other villagers respected this decision and would endeavour to leave the old, dying person with a good supply of meat and water. Then they left the old one to die. Months later, if they returned to the same spot, it was unlikely there would be any physical remains, thanks to the wild animals in search of food, a scorching sun and the ever-present wind. They talk much of the world of the spirits - the living dead whose spirits are still with the tribe because they are remembered through the stories told about them, and the deep dead whose spirits are no longer remembered.

After an hour or so of digging the women had fifteen or twenty lengths of tubers and took these back to the camp, where they were simply thrown on the fire. Half an hour later the tubers were pulled out and their charred outer fibres removed to reveal what looked rather like a piece of warm, stiff rope. This was then cut into ten centimetre lengths that were passed to everyone - ourselves, the men who had been collecting honey and three other men who had come into the village during the morning. We were required to chew this tough, unappetising mass. It was hard going and tasted of a mixture of potato flour and sour cream with a whiff of garlic. The Hadza chewed an enormous quantity of these roots, and spat out the fibrous remains. It was between seasons as far as fruit and berries were concerned and therefore the only other food was honey and any meat the hunters might bring in.

That afternoon four of the white children and I were taken to what the Hadza regard as one of their special places - a large rocky outcrop poised on the edge of the scarp with a magnificent view across the rift valley. Having been told this was only a short distance away we seemed to walk, at a very fast pace, across the lightly forested upper savannah for what seemed ages. It was hard to follow our four young Hadza guides, who were forever fanning out looking for accessible game. Eventually
we reached the rocks. The view was fantastic. Earlier it had been explained to me that in the dense woods below the rock lived some big game, while on the plains beyond that were herds of gazelle and zebra and wildebeest. In the hills beyond were elephant.

Those elephants in the hills across the valley were, I was told by Daudi, ‘mean’. They had been hunted almost to extinction by another tribe in conjunction with people from the towns. They had built traps along the elephants’ walking paths and systematically killed off the older elephants for their ivory, and the younger ones simply because they were in the way. Those elephants that remain had themselves become quite savage, they were so furious that they were on the offensive and attacking any humans who came close. “It is not how it should be,” it was again explained to me, “we Hadza hunt because we need food not because we want to kill. The animals understand that balance.”

I remembered something I had heard on my earlier visit about the lions of Rwanda some years ago having developed a taste for human meat because of the vast numbers of bodies resulting from the genocide. Again, it was explained, an age-old balance had been destroyed, as the lions were starting to hunt humans not other animals.

That morning I had met a Hadza man who, on his own with nothing other than a bow and some arrows, had tracked across this vast area for three days searching out the best places to hunt. I was filled with awe at his ability to find his way around such vast expanses and never get lost. Probably we, in our sophisticated way, trivialise these separate male and female location skills when we say that women can’t read maps and men won’t ask the way. The maps of the Hadza men are entirely in their minds for there is never anyone of whom to ask a question. They find their way effortlessly over vast distances probably by detecting minute changes in vegetation, which, to them, are as obvious as street names and direction signs are to us. The women don’t need maps as they worked such small areas of land and there was never a problem that a question to a colleague could not solve. Even the structure of the male and female eye reflects these predispositions - men have highly focused long distance sight, while women are far better at seeing the broad picture.

All that was made abundantly clear to me minutes later. Rosa, at ten-years-of-age one of the youngest of the English party, was tired and wanted to go back to camp. There was no way I could have trusted myself to find the way. The youngest Hadza boy, Omba-omba, was deputed by the others to take us back. Standing little more than a metre high, aged probably about seven or eight, he set off proudly carrying his bow and arrows. We followed as best we could - he set a fierce pace. Every few minutes he would stop and, standing rigid, sniff the air and carefully move his head to check his view and listen out for unusual sounds. He would lift one foot so as to have a better feel for the footfall of any large game in the area. Reassured he then again led us forward. I trusted him completely, and I was right to do so for within twenty-five minutes we arrived at camp. Then I realised I’d temporarily lost Rosa. We retraced our steps for a couple of hundred metres and there she was, making a posy of wild flowers for her mother.

The following afternoon we went into another village, where there were more children. Next to two of the straw huts I was intrigued to see two little, very amateurish straw huts being made by the young girls. This was the closest approximation I was to see to toys. In this village the difference in the way of life between the boys and the girls was marked. The girls were obviously expected to look after the babies, and were enjoying playing with the hut building. The boys meanwhile were splitting their time between watching the men make arrows and then practising their own shooting skills. In both of these activities they were much encouraged by the men. Even the youngest boy seemed able to hold his bow firmly, while boys of only seven or eight could hold their bows, and fire with the classical composure I associated with figures of Greek archers on ancient amphora. It was rather like watching a horse with a brilliant rider. The bow and the human body seemed to become a single instrument. There was a marked difference between the boys who were largely silent and concentrating fiercely on their shooting, and the girls who were quietly chattering or singing.

The men and the boys took great delight in hunting. We could not properly observe the men at work for, quite simply, we were neither fit enough nor skilful enough in the ways of the forest to accompany them for long. While the men never seemed to hurry it was impossible, even with our longer legs, to keep up with them. As they set off they fanned out in different directions, infrequently calling to each other. The Hadza use a ‘click’ language that intersperses consonants with a click that is very difficult for a westerner to emulate. Linguists believe this is one of the oldest forms of language still spoken and probably predates the time of the ‘Great Leap Forward’. What was fascinating to me was that, apparently, animals in the wild that are normally put on full alert on hearing
human talk, accept the sound of a click language as being perfectly "natural", and show no fear in response.

Recent research into the Hadza and other such hunter/gatherers would suggest that, even with such skills, it is very much the exception for them to return with meat at the end of the day. In fact, nine times out of ten they return empty handed. If it were not for the women collecting the tubers they would starve, and were it not for the inclusion of meat – albeit very irregularly – the women would develop an iron deficiency. This seemed to have done nothing to quench their delight in these macho-type skills. Life to the Hadza man is to be enjoyed. Their sense of humour and the absurd delights them almost as much as a successful hunt.

Research conducted some years ago showed that, within a hunter/gatherer society, no more than twenty per cent of waking hours had to be allocated to the search for food, just the same proportion of time as our children spend in school. Most of the time the Hadza just enjoy themselves; isn’t that just what modern men and women, and certainly children, want to do? The more I understood the Hadza the better I felt I was at understanding ourselves.

Two miniature deer, dikdik, brought in one evening, were shared with everyone. As was the large haul of honey. Some weeks before a giraffe had been killed, we were told, providing more meat than could be consumed by all of the neighbouring villages but, within four or five hours - so fast do the forest networks communicate - hunters from a dozen other villages had moved in. Again food was shared communally, as had been the second-hand clothing Daudi had brought them on an earlier occasion.

On leaving the second village I was amazed to see a half-hearted attempt to grow maize. Daudi questioned the Elder - the man who had successfully prophesied that we would come. The Elder’s face clouded over as he explained that some Norwegian missionaries had been trying to get the Hadza women to become settled agriculturalists. Even though there is, in most years, insufficient rain to grow crops, the missionaries had given the women seeds, and spades, and shown them how to plant the crop. “Most years the crops fail”, said the Elder, “but the worst of planting crops is that, when the crops do flourish, the people who planted them won’t share out the harvest with other people. They say it is theirs because they planted it. What they don’t eat in one year they want to save for a bad harvest. They become selfish. It is breaking our way of life. In a sense it makes some people more powerful than others because they can bargain with things that previously had been owned by everybody”.

I was sure he was right. In three or four short sentences the Elder was describing a form of behaviour which exactly replays what we are now coming to understand as being the history of the human race over the past forty to sixty thousand years. As the eminent anthropologist Christopher Boehm said on reviewing the appropriate research, “The data do leave us with some ambiguity but I believe that as of forty thousand years ago, with the advent of anatomically modern humans who continued to live in small groups and were not yet domesticating plants and animals, it is very likely that all human societies practiced egalitarian behaviour and that most of the time they did this successfully.”
Chapter Sixteen

THE INNER WORKINGS OF THE BRAIN

Understanding the origins of human behaviour and relationship of current cultural priorities to inherited instincts. Progression of social organisation over the past thirty thousand years, exemplified by eastern Mediterranean, Africa and Tigris and Euphrates valleys. Contrast between innate, steadily evolved set of arrangements for raising children, and apparent collapse of such collaborative structures in modern society. Recent research on intelligence and linked role of experience. Possible curriculum based on a better appreciation of what it means to be human.

Towards the end of the 1980s the grip of Communism right across Russia and Eastern Europe was starting to collapse. First it was the pulling down of the Berlin Wall; then it was the internal reforms of Glasnost and Perestroika in the Soviet Union. The Communist Party, with its tactics of rule by secret police and terror, had been totally discredited by its last ditch effort to depose Gorbachev in the coup of 1990, and Yeltsin, as the first elected President of Russia, had faced down the army tanks and proceeded to dissolve the Soviet Union as a political entity.

Under the auspices of the World Trade Organisation, a highly qualified group of American and Western economists were invited by the demoralised and uncertain Russian leaders to advise on setting up a democratic, free market. With their own economic policies in total disarray, many top officials in the Russian government were eager to follow their advice blindly. With the state owning all the country’s assets, here was an unbelievable opportunity to redistribute them widely to the public so as to get a reformed, privatised economy off to a flying start. The advice the Russians received was based almost exclusively on the logic of neo-classical economics; namely that all humans were rational maximisers of their self-interest, and that unrestricted markets could best co-ordinate this effort. Real Adam Smith thinking. The Russians made the transition from a collectivist economy to the practice of the free market by the equivalent of sudden shock therapy. Paul Lawrence, a professor of organizational behaviour at the Harvard Business School, was one of those advisers, who was then subsequently able to stand back and observe the application of economic theory on an unprecedented scale. As time passed he was horrified by what he saw; by January 2001 the production of goods and services had fallen by fifty per cent, while some Russians had become phenomenally wealthy, fifty per cent of the population were impoverished as compared to only two per cent before 1989. Male mortality rates had risen at an unprecedented pace, political leadership was in chaos and the risk of a violent political backlash strong.

Lawrence, and his Harvard colleague, Nitin Nohria, then embarked on a very thorough analysis of what recent research shows to be the nature of the basic drives that appear to shape the choice humans make from day-to-day. In a remarkable book, ‘Driven’, published in 2002, they showed that the way of life of such hunter/gatherer societies as the Hadza most perfectly matched what they saw in the research as the four innate human drives that influence all our behaviour. They identified these as the drives to acquire, to bond, to learn and to defend. These are the basic instincts, developed over humanity’s extensive experience out on the savannah which, Lawrence and Nohria argue, shape all our behaviour. When these four drives are reasonably balanced society thrives; whenever one drive becomes exaggerated however the balance is lost and society is thrown way off course. I can’t claim that the tiny slice of time I experienced of the Hadza way of life was pure Stone Age, for there must have been many accommodations made with contemporary societies over the thousands of years since then, but the general shape of what I saw in Tanzania in February 2003 does help to paint a picture of how human behaviours were shaped before, and during, the Great Leap Forward, and probably account for some ninety eight per cent of human kind experience – this was our ‘ancestral environment’.

Take the different attitudes of the Hadza men and women - consider men setting out on a Saturday night binge, and the women quietly enjoying each other’s company, secure in the knowledge that it is they who were largely the decision-makers. In this you have people who may often look
and feel very much like us. Look also at the way the villagers self-organised around ever-shifting conditions. Consider the interdependence of age groups - even the youngest child felt that he or she had a role to play. Note the significantly different organisational skills displayed by men and women, and in particular look at the way in which they communicate with non-verbal signals.

I was struck by how much more talkative the women were than the men, and how different their topics of conversation appeared to be. The women talked to express empathy with each other, and to explore the relationships of people around them; the men meanwhile were far more economic and transactional in their speech. While research shows that men express as many ideas, but do so only silently. Most of the time a man ‘talks’ only to himself, a woman talks to other people. Which fitted exactly the Hadza lifestyle – when collecting nuts and berries there was always somebody else to talk to, but out on the savannah the hunter really was alone. It is in woman’s nature to articulate her immediate thoughts. Think of Shakespeare’s Rosalind in ‘As You Like It’ remarking, “Do you not know I am a woman? When I think I must speak.” Men see themselves as being the stronger, simply because they keep their thoughts to themselves. A disputable point!

Finally, for me, the biggest surprise was that, in the behaviour of the Hadza, I could see some of my own twenty-first century friends. The macho posturing of the young men, and the beguiling smiles of the young women; the love of a good laugh, the delights of humour and the willingness simply to stand on the top of a hill and enjoy the view. Add to this their inquisitiveness, possible short tempers and sense of adventure, and you have all the ingredients for a fabulous dinner party.

I only heard about the courtship rituals of the Hadza, but was not there long enough to see them in action. Evidently, at regular intervals throughout the year coinciding with the full moon, people from different villages come together for what seem pretty uninhibited parties. Only when the young have come through puberty are they allowed to participate, and the couplings are multiple.3 Only after several of these parties does a young couple emerge as a recognised pair. Although I know of no research that has studied such intimate relationships amongst the Hadza, this may well be related to that research undertaken recently in North America several times over the last ten years. This showed that, through kissing, a special receptor at the end of the tongue carries out an initial analysis of whether the person being kissed has chromosomes sufficiently different to your own to ensure that, upon mating, a healthy baby would be conceived. The American research shows that the more diverse the chromosomes the more ‘attractive’ your partner appears, while the more similar the chromosomes the less attractive does a kiss seem with such a person. Similar research shows the importance of smell in the selection of an appropriate mate. That pulled me up short when I realised that, before the Hadza party in this expansive way, they make a special point of washing and cleaning themselves – was that, I wondered, so that they could be sure of giving off the right scent, and was it just possible that the excessive use of perfumes and after-shave lotions in Western countries was so mixing up our natural smelling capabilities that this was a factor leading to early and multiple divorces? There must be many a PhD waiting to be written on such a topic!

In very many ways the Hadza are, quite simply, ‘us’. Or perhaps it would be better to describe them as being like us when we are at our most open, spontaneous, and unscheming, for other behaviours seem to have come into our daily pattern of activities that must have a more recent origin. Let’s briefly look at these.

The Origins of Social Hierarchies

When the elder expressed his fears that it was settled agriculture that made people greedy, he was reiterating an explanation of human society first set out by Adam Smith, the Scottish economist in the 1770s. Smith described hunter/gatherer society in terms similar to what I’ve observed here, where bonds of natural fidelity bound everyone to each other. As society progressed first into a pastoral economy, then into settled farming, Smith saw humans faced with increasing social pressures. In other words human instincts had to be constrained. Later, Smith argued, came urban life and the need for civil society and the defence of property. Smith saw the fourth stage developing all around him as Scotland, in the late eighteenth century, entered the Industrial Revolution, namely the need for commercial interdependence - laissez faire economics.

In the tens of thousands of years that have elapsed since The Great Leap Forward, it seems we have started to evolve different and additional skills and behaviours because of these ever-chang-
ing circumstances. Life has become increasingly complicated. Let me review these recent social pressures. These are the things that have taken us beyond the Stone Age existence of hunter/gatherers, and are probably very slowly influencing our social instincts.

Research by two psychologists, Alan Fiske and Jordan Peterson, is of special interest at this juncture. Working in West Africa in the early 1990s, and cross-referencing his work there with what he’d done in other countries, Fiske has identified four forms of social relationships. He grades them according to complexity. The most basic of these relationships he calls Communal Sharing, which I would use as a simple description of relationships within a hunter/gatherer society. A slightly more complex relationship Fiske describes as Authority Ranking: “this basic form of human relationship is, however, subject to destabilising turmoil whenever any parties struggle to improve their ranking, since any one person’s gain is another person’s loss”. This seems to describe exactly the elders fear about the social implications of farming, should it be introduced amongst the Hadza.

A third tier of relationships Fiske calls Equality Matching. At its simplest, this can be equated with ‘you scratch my back and then I have an obligation, sooner or later, to scratch yours’. This is the kind of relationship that exists in relatively secure, permanent and complex societies, where most people know each other, and where status relationships are well established. Adam Smith would probably have seen this as a fair description of his third stage of social evolution, namely settled agriculture with a scattering of small urban centres. This was the kind of social arrangement that grew up in the Euphrates valley ten thousand years ago, and which existed in the towns and ports of pre-industrial England. These were societies where the implications of a decision made by one person could easily be appreciated by many others; people who knew each other well enough – or thought they did – that they dared not cheat on the other.

Fiske calls this fourth tier of relationships Market Pricing. I think this approximates to what Adam Smith had in mind as the skills needed in the industrial, market economy he envisaged as beginning to emerge at the end of his life in the 1790s. Lawrence and Nohria describe this as ‘the price negotiation that occurs in a standard, one-time commercial transaction. This kind of bargaining involves bidding and counter-bidding, often with bluffing and calling of bluff, of keeping one’s rock bottom, or ‘reservation price’, a secret. It lends itself to exchanges between strangers who do not expect to trade repeatedly’. Fiske asserts that all humans seem to have a basic understanding of how to play by the rules of this game.

He suggests that these four modes of behaviour are universal and innate among all humans. If Fiske is right this opens up a fascinating set of ideas. Innate of course means that they lie dormant within each of us and are only activated should the immediate environment, both physical and cultural, stimulate them. If it took hundreds of thousands of generations of hunter/gatherers to develop the concept of Communal Sharing, this would seem to indicate that these innate skills are the most deep-seated of all our instincts. Authority Ranking would rest on top of this, although it would be nothing like as well entrenched. Bartering (Market Pricing) which is so much part of our present culture, may be the least firmly emplaced but culturally most familiar and persuasive of any of these social arrangements. Fiske presents limited anecdotal evidence that all four forms of these social modes are manifested in maturing children starting roughly with Communal Sharing for the three year old, and proceeding by the age of eight to an understanding of bartering swapping.

Tragedies occur when two partners to a deal play by different rules. This is seen not only across Africa and the developing countries but most certainly in England as well. Once a member of the Hadza leaves the security of their homelands and the omnipresent belief in community sharing, they are all too easily corrupted by others who see ways of exploiting their apparent naivety. Sadly, many a broken Hadza, as with the Aborigines in Australia or the Bushmen in South Africa, is to be found outside their homeland, tied by the need to get money for sufficient alcohol to temporarily escape from the tedium of the most demeaning of jobs. Likewise a young girl in England, or any other developed urban culture who, not yet knowing how to handle her developing femininity, accepts a relationship she sees as being that of reciprocal friendship only to find the man - having bought her affection for a few days - drops her and, as in a market economy, looks for the next bargain. The ultra materialistic young of Tokyo have developed a new concept of ‘contract dating’ that makes bartering most explicit. A girl needs the money for a new Gucci handbag, and quite openly sells herself for an erotic half hour to raise the necessary funds - a practice that, according to the Japanese Ministry of Education, is now followed by a quarter of Japanese high school girls, and presumably by boys as well.

Which brings us right back to where this argu-
ment started. However strong our predispositions - our instincts - these can only flourish when interacting with an appropriate, challenging, environment. Culture is indeed as essential as Nurture.

**Viewing the Birthplace of Western Culture...**

I finished the notes for this and the previous chapter on my last morning in Istanbul. This gave me a free afternoon for a pre-arranged guide, Nazli, to give me a tour of the city that she thought would satisfy my interests. We crossed the Bosphorus on the first of the two new bridges, and climbed to the top of the high hill on the Asian shore. The views were stunning in every direction. Laid out in all its toposcopic splendour was the historic site of present-day Istanbul on a finger of land between the Sea of Marmara and the Golden Horn. “We don’t know when it was first settled, “ explained Nazli, “but it was already so important in 125 BC for this to become the capital of the Byzantine Empire. We know that there were nearly one hundred Greek city states stretching away up through from the Bosphorus into the Black Sea established at least three thousand years before that. The Phoenicians were here before that, as were probably the Egyptians before them. You see, we are good traders here in Turkey; we have learned over thousands of years how to drive good bargains!” She smiled. I could only agree. I remembered well the traders in the bazaars and the worldwide respect of the business community for the entrepreneurial skills of the shipping magnates of Greece.

“Look the other way, to the East, across Anatolia,” said Nazli, reclaiming my attention. “This is the way all conquerors have come. It was the way the Turks moved across Anatolia and in 1453 destroyed the second Roman Empire of Constantine. They rolled on, as you know, to the very gates of Vienna. If you could see three hundred miles to the east you would come to the extraordinary ruins of Chatal Huyek, the really enormous city of eight thousand years old that was excavated in the 1960s. It’s almost as old as Jericho. Anatolia has been described by archaeologists as the homeland of the city.”

And almost as ancient, I thought, as Ur of the Chaldees outside modern Baghdad, which could be as old as ten thousand years and where the earliest cuneiform writing has been found. Three hundred miles to the north east of that again are the Zagros Mountains of Iran where I had first seen nomads on their annual migration thirty years before. That was also where I saw genuine cross-generational learning for the first time – four-year-olds being instructed in how to look after the chickens; six-year-olds taking responsibility for the goats; eight and nine-year-olds for the sheep, and twelve-year-olds for the cattle. Here, in front of me, across the Eastern Mediterranean and in the valleys of the Tigris and the Euphrates, was the crucible in which the human race had evolved alternative social structures for increasingly complex societies. Here were the first experiments in equality matching and market pricing, while in the assumed location of the Garden of Eden in southern Iraq was the place where Jews, Christians and Moslems believed all life began.

In a week I was seeing in my mind’s eye evidence for the accumulating range of behaviours that make our species the complex, ever-adapting, learning species that we are. A species empowered by our evolutionary experience, but constrained by it as well. We have more in common with the Hadza than we might realise. Every time we feel the urge to get away from it all we are probably experiencing that tension between being nomadic and settling down to accumulate our wealth – we, as city dwellers taking our holidays on the beaches of the Mediterranean or in some country cottage, are out there both with the nomads of Africa and the early city dwellers of Anatolia. Thus, faced with all the choice of a modern sophisticated culture we are in the ‘buyer beware’ culture of the bazaars. Just to further confuse us, all these impulses act within us simultaneously.

As I waited for my luggage at Heathrow a Turkish businessman got highly excited as he took a message on his mobile phone. He was especially happy and his smile invited my question. “Yes,” he said, “the Turkish Parliament has just voted against accepting the enormous bribe from the Americans to let them use our bases for the war with Iraq. I know I’m a businessman but money isn’t the only thing that matters. I am so proud of my country because I can now tell my children that money really isn’t the bottom line. Maybe today Turkey has started to grow up, and maybe this is the beginning of us turning our backs on a culture by it as well.

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... and its Possible Collapse?

The next morning, refreshed from my travels and back at home in Bath, I read a highly disturbing news item in that day’s Independent newspaper. It read, “Half of the five-year-olds starting school lack the speaking and listening skills needed to
cope complained that few children were now able to recite nursery rhymes or songs. More than half believed that only a tiny minority of pupils were capable of listening and responding to instructions.” Alan Wells, the director of the government-funded Basics Skills Agency who conducted the study, described poor communication within families as “the daily grunt” and being partly to blame. He accused parents of buying children expensive games and computers that seem to have replaced shared activities between them and their offspring. There is an ethos (among parents) which says, “Don’t worry, schools will do it all for you, and speaking and listening don’t have any connection with later attainment.”

Three other news items that week caught my over excited attention. “A growing number of primary school children are becoming so obese and unfit they can’t even take part in PE classes... waistlines of eleven to sixteen-year-olds have grown by an average of two inches in the last twenty years”9 “More than a third of seven-year-olds are seriously stressed out by compulsory national tests. One in ten seven-year-olds were so worried by SATs that they were reduced to tears and could not sleep”, reported The Guardian,10 and “Children who can’t live without TV... the children in our study couldn’t imagine life without it. Just like a light bulb, the television is always on. It tends to be put on first thing in the morning when the household wakes up and it is often on last thing at night” reported The Guardian, while a recent enquiry by the LEA in Birmingham showed that eighty per cent of three-year-olds had a television in their bedrooms.

I thought about the mental journey I had just undertaken. My conclusion was painful. Today’s children in England seem to be growing up in a world so devoid of meaning and emotional security that children further back along the evolutionary chain, in the bazaars, as it were, of Istanbul, Isfahan or Marrakesh, are better off than they are. The children of the nomads are more connected to the reality of how life works, while the children of the Hadza can be more sure of their community’s support and love for them than can vast numbers of children in the western world. My visit to the Hadza made me realise yet again that we are fast losing our grip as far as bringing up our children.

Yet still the British Government, and other governments in the developed world, with the encouragement of the World Bank and other multi-national organizations, see this breakdown in the natural order of things as a problem with an institutional solution. In the British Government’s latest proposals for reforming secondary education they undertake that, by 2006, additional funds will be available to all the country’s secondary schools to enable them to provide breakfast clubs, after-school clubs, summer schools, and homework clubs.

‘Homework’. Have we lost the significance of that word, ‘home’? Is it not here that today’s young people are experiencing the root of the educational problem? Many don’t have functional homes. Considerable numbers of children have lost contact with one of their parents before the age of ten. And what politicians so often miss is that many young parents are finding that it’s almost impossible to be the good parent they want to be, because the whole of society has become dominated by the imperative for everyone to be economically productive. This account of contemporary childhood leaves many ideas unresolved. Intentionally so. I for one don’t believe that the human race can go on like this. No one person, no one organisation, alone can stop this decline. Acting as thoughtful, intelligent people it is we - acting in our hundreds and thousands who have more power than any government. You will understand why I once said at a conference, “It’s almost as if the children of today are blowing an evolutionary whistle and saying: Hey, we were born for something better than this.”11 The Hadza have something that the children of England are fast losing; they have the love and affection of their parents and a community that understands interdependence. And they spell the word love T-I-M-E.

Inquisitive Scientists look at Learning

In the numerous presentations I make, I remind people that learning is a matter of constructing new concepts by consciously using an original insight to extend or modify an earlier idea. “We never learn anything new absolutely from scratch”, I say reiterating Howard Gardner of Harvard, “We are constantly resculpturing ideas that we already have.” However we’re not necessarily very good at doing this. The brain of an unschooled five year old is full of theories of cause and effect that the young child has formed for itself – theories which help the child survive on a day-to-day basis, as Gardner set out in his book ‘The Unschooled Mind’ in 1991. Some of these theories are naïve - in other words they make sense to a five-year-old, but become increasingly inadequate as the child’s experience of reality deepens.12 To a five-year-old it is intuitively
correct to believe that lead is heavier than feathers, while an older student with an appreciation of both weight and volume should have upgraded the naïve explanation that satisfied a five-year-old to recognise that a tonne of lead weighs exactly the same as a tonne of feathers. Learning that does not use new insight to correct earlier, imprecise explanations is useless. Yet we all fall into such traps, time and time again; old, unchallenged assumptions get us into great difficulty, because they are so deeply engrained within our minds.

In October 2002 for example, shortly before my first visit to Tanzania, I had been lecturing a group of a hundred deputy heads, all of whose schools had recently jumped through the various hoops set up by government to prove that they were of sufficient quality to become flagship Specialist Schools. They were a good, attentive audience and asked a number of insightful questions. However, later that evening, having already gone on to another conference, one of my colleagues told me that she heard one of the deputies both acknowledging the importance of what I had said, but going on to claim that I must have been wrong “because I remember being told long ago that the brain was simply a blank slate.” My colleague challenged him; “Yes,” he replied, “I suppose if I had thought it through properly I would have sensed that that was what John meant, but he never actually denied that the brain was a blank slate!”

As the quantity of information on almost everything continues to grow at a frightening pace so, almost in desperation, we cling to pictures, metaphors, similes, parables and stories to help us make sense of ideas that are outside our immediate experience but which we surmise might be significant. In the ancestral environment, right through to the eighteenth century, sense making proceeded at an unhurried pace. New ideas were assimilated and processed as and when they came up. There was plenty of time for reflection. Our generation is faced with a very different situation - we feel that there is so much to be taken notice of that we simply run out of time for reflection. Consequently our minds get filled up with unprocessed material. Conferences of academics exemplify this phenomenon almost better than anything else. The first lecture may, at least in the United States, be at 7.30am and the last one twelve hours later - all interspersed with trade fairs, receptions and dinners. My briefcase becomes ever fuller of papers, and my mind aches with unprocessed ideas. By allowing ourselves to be treated in this way we deny the truth of what we are purporting to teach. The brain is not simply a blank slate, and a conference not just a tool with which to write even more on that slate in progressively finer writing.

In an important article on the psychological foundations of culture,13 published in 1992 by the two evolutionary psychologists, John Tooby and Leda Cosmides, we’re challenged to reconsider, from the perspective of the evolutionary nature of the brain, what we actually mean by ‘learning’. For nearly a century, the authors argued, social scientists have believed that ‘sense’ is made by the individual out of the multiplicity of stimulants received by the brain “because the social world inserts organisation in the psychology of the developing individual.”14 Simply put, this assumed that without the external input of how to structure ideas so as to create useful knowledge, the individual just did not know what to do with ‘all this stuff’. Evolutionary psychology replaces this external view of learning with the belief that what we call learning turns out to be ‘a diverse set of (internal to the individual) processes caused by a series of incredible, intricate, functionally organised cognitive adaptations, implemented in neurological machinery’. In effect, Evolutionary Psychology in 1992 was forestalling what the neurobiologist Gerald Edelman was to tell me in San Diego three years later; namely that the brain is full of innate predispositions ‘to make sense’ of its external environment in ways which, over eons of time (and mainly in the Pleistocene period), have been evolved as good strategies by our ancestors so that we can meaningfully join ideas together. Learning is essentially about making connections for yourself.

In ‘The Blank Slate; the modern denial of human nature’; published in 2002, Steven Pinker extended this argument when he said that the mind had to be built out of specialised parts if it were ever to solve specialised problems, ‘Only an angel could be a general problem-solver; we mortals have to make fallible guesses from fragmentary information. Each of our mental modules solves problem by leaps of faith about how well the world works, by making assumptions that are indispensable, but also indefensible - the only defence being that the assumptions worked well enough in the world of our ancestors.”15 Our brains, it seems, are adapted to that long-vanished way of life of the hunter / gatherer, not the brand new agricultural and industrial civilisations. They’re not wired to cope with anonymous crowds, schooling, written language, police, courts, armies, modern medicine, formal social institutions, high technology, and other newcomers to the human experience.”16 Our brains are, as Howard Gardner argued in 1983, equipped with multiple forms of intelligence, each one of which
helps us, as it did our countless ancestors, to look at different aspects of a situation.

Steven Pinker has to be one of the most prolific and fascinating writers of recent times; four mighty tomes have come from his keyboard in less than ten years; ‘The Language Instinct’ (1994), ‘How the Mind Works’ (1997), ‘Words and Rules’ (1999) and ‘The Blank Slate’. They amount to nearly two thousand pages of closely argued ideas, describe with a candour that force the reader, time and again, to go back and challenge long-held beliefs about how we once thought things worked. The sheer volume of his scholarship is daunting. He writes, he says disarmingly, for all those who are “curious about the mind” and with the hope “that scholars and general readers might profit from a birds eye view of the mind, and how it enters into human affairs.”" Pinker is essentially a synthesiser, who is able to draw on a vast range of ideas. “There is little difference (from a birds eye view) between a specialist and a thoughtful person,” he writes, “because nowadays we specialists have to be the lay person in most of our disciplines, let alone in neighbouring ones.”

Pinker asks why it is important to sort out all these ideas and indicates that “the refusal to acknowledge human nature is the equivalent to the Victorian’s embarrassment about sex, only worse; it distorts our science and scholarships, our public discourse, and our duty to our day-to-day lives.” Pinker carefully disentangles the moral and political issues that have confused and obscured scientific findings, and rationally examines who and what we are. “When it comes to explaining human thought and behaviour, the possibility that heredity played any role at all still has the power to shock. To acknowledge human nature, many think, is to endorse racism, sexism, war, greed, genocide, nihilism, reactionary politics and neglect of children and the disadvantaged. The new scientific challenge to the denial of human nature leaves us with a challenge. If we are not to abandon values such as peace and equality, or our commitment to science and truth, then we must pry these values away from claims about our psychological make-up that are vulnerable to being proven false.”

“Humans behave flexibly,” argues Pinker, “because they are programmed; their minds are packed with combinational software that can generate an unlimited set of thoughts and behaviours.” Which is a straightforward explanation of why behaviours change so easily – it sets continually changing variables in conflict. “People are”, Pinker affirms, “qualitatively the same, but they differ quantitatively.” In strictly biological terms, there-

fore, I may be more similar to a Maasai warrior in Tanzania than I am to one of our neighbouring Somerset farmers a couple of miles up the Langridge valley from where I live. Samuel Johnson famously made the point in 1721, but without the evolutionary psychologist’s technical knowledge, when he wrote; “We are all prompted by the same motives, all deceived by the same vanities, all animated by hope, ordered by danger, entangled by desire and suffused by pleasure.” The abundant evidence that we share a human nature does not mean that the differences among individuals, races or sexes, are also in our nature. Confucius was pretty spot on when he wrote; “Men’s natures are alike; it is their habits that carries them far apart.”

It is when Pinker and other evolutionary psychologists turn their attention to how children learn that they show just how essential it is that policy-makers should recognise the true realities of human nature for “the most obvious area in which we confront native way of thinking is in the school-house.” Any theory of education has to be based on the most carefully thought through theory of human nature. In the twentieth century, as Pinker argues, the dominant theory of human behaviour was undoubtedly that of the blank slate, as set out by John Locke three hundred years before. “Children come to school empty and have knowledge deposited in them, to be reproduced later in tests (the Savings and Loan model)... Children don’t have to go to school to learn to walk, talk, recognise objects, or remember the personalities of their friends, even though these tasks are much harder than reading, adding, or remembering dates in history. They do have to go to school to learn written language, arithmetic and science, because these bodies of knowledge and skills were invented too recently for our species-wide knack for them to have evolved.” In other words it’s essential that a quality education should balance thinking with doing. It was the argument I’d made at the Winspread conference when I said that the present system of education was effectively ‘inside out’ in its lack of acknowledging the significance of a child’s informal learning experiences.

Our generation is fortunate. We are getting closer to helping men like my grandfather and great-grandfather understand the relationship of nature to nurture. In a book fascinatingly entitled ‘The Scientist in the Crib’, written by three neurobiologists who had recently had their own babies - Gopnik, Meltzoff and Kuhl – they observed: “For human beings nurture is our nature. The capacity for culture is part of our biology.” It was early in 2003 that the science writer and journalist, Matt
Ridley, captured the sense of this new understanding in a title with just three words: ‘Nature via Nurture’. In replacing ‘versus’ with ‘via’, he gave a whole new twist to our understanding of humanity and, to me, a new respect for the way in which the subtlety of language can be applied to such good effect. Nature via nurture is the most succinct way yet of describing evolutionary psychology.

“Genes are designed to take their cues from nature.” Ridley writes: “To appreciate what has happened you will have to abandon cherished notions and open your mind, you have to enter a world where your genes are not puppet masters pulling the strings of your behaviour, but are puppets at the mercy of your behaviour; a world where instinct is not the opposite of learning, where environmental influences are sometimes less reversible than genetic ones, and where nature is designed for nurture. The human brain is built for nurture.”

Experience is what counts. This, of all recent books, is the one I believe would most repay close study by all those interested in just how we humans become the people we are. Ridley argues that the brain is grown, rather than assembled. This is an important distinction. The genes of animals with smaller brains simply stop the growing action at a certain point, while animals with larger brains, like us, have genes that stop the same growing action at a later point. This applies to both the brain and other parts of the body. “A chimp has a different head from a human being not because it has a different blueprint of a head, but because it grows the jaws for longer and the cranium for less time than does the human being. The difference is all in the timing.” The significance of timing is enormous. It’s an issue taken up by Clive Bromhall in his book ‘The Eternal Child’ published just a few month’s after Ridley. Bromhall argues that the achievement of the human species is that we have survived simply because we have learnt to slow down some aspects of our development. By doing this it has enabled us to retain into adult life many of the features normally associated with youth - energy, imagination, risk-taking and playfulness. In other words – we can have old heads on young shoulders essentially because the environment can slow down the impact of one set of genes (in this case those of the body) while other genes are, as it were, turned up (in this case those of the brain); it’s a controversial, if intriguing, explanation.

Bromhall goes on to say; “The startling new truth that has emerged from the human genome - that animals evolve by adjusting the thermostats on the front of genes, enabling them to grow different parts of their bodies for longer - has profound implications for the nature/nurture debate. Imagine the possibilities in a system of this kind. You can turn up the expression of one gene, the product of which turns up the expression of another, which suppresses the expression of the third, and so on. And right in the middle of this little network, you can throw the effect of experience. Something external - education, food, a fight or unrequited love - can influence any one of the thermostats. Suddenly nurture can start to express itself through nature.”

Am I just thick…?

The question of intelligence fascinates all of us “Am I just thick?” asked the eleven-year-old girl a day after I’d spoken to her and one hundred and fifty other eleven to thirteen-year-olds at the Yokohama International School in Japan, “or is it that I’m only bright at the things that really interest me?” Her friends grinned; “She’s very good at annoying the boys”, said one of them. “Does my brain get better through use though?” asked a third and, quick as a light “What sort of use?” asked a fourth. “It’s not fair if I’m not helped to use my brain properly, because that means I’ll never do as well as those who understand themselves better!”

Ridley’s findings on the nature of intelligence, drawn largely from studies on twins, converged nicely with the work of David Perkins, the co-director of Project Zero at Harvard, explored in his fascinating book ‘Outsmarting IQ: the emerging science of learnable intelligence’. I tried to explain the distinction Gardner makes about different kinds of intelligence to those inquisitive eleven to thirteen-year-old girls. It seems, from this research, I explained, that about half of what we normally describe as being ‘intelligence behaviour’ has its origins in genetic factors. Quite simply some people are born with a Rolls Royce of a brain, and others with a clapped out old Cadillac. The face of the girl who first asked the question fell; “That’s me!” she said, obviously tempted to walk away.

“Hold on”, I said, “That’s only half the story. A quarter of what we mean by intelligence relates to being intelligent in a particular kind of environment. You girls”, and here I picked my words carefully, “are very comfortable in this environment. You know your way around very well. Suddenly nurture can start to express itself through nature.”

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“Hold on”, I said, “That’s only half the story. A quarter of what we mean by intelligence relates to being intelligent in a particular kind of environment. You girls”, and here I picked my words carefully, “are very comfortable in this environment. You know your way around very well. You’re feeding your brains with a lot of stimulation. That helps your brain to grow quickly. Someone born with a great deal of genetic inheritance living in a non-stimulating environment will not grow her
master and apprentice: reuniting thinking with doing

brain as well as any one of you can, even if you don’t start with the same advantage. It’s stimulation that matters so much. Then there is a third component; about a quarter of what we mean by intelligence actually relates to how well you think about things. David Perkins calls this reflective intelligence. It’s all about asking good questions. It’s the way you five girls started to ask me questions this morning more than a day after I had talked to you about this. It’s about using your theoretical and your practical knowledge. It’s about finding your way around. It’s about being inquisitive. Our brains grow through asking good questions.”

Perkins once told me a story that makes this point well. He and his new wife had just moved into a tiny apartment at the top of a long, twisting staircase. They had very little furniture but decided to spend most of their limited funds on a big, comfortable sofa. They got it to the bottom of the winding stairs and it got jammed there — right at the very bottom. They tried again and again, and it remained stuck. They were beside themselves with frustration. Then a couple of great big burly removal men walked by on their way home at the end of the day, they saw the problem and offered to come in. They looked at the stairs, looked at the sofa, smiled and picked it up and walked backwards. They then turned the sofa upside down and approached the staircase from the other side. That enabled them to pass it up through the first part of the staircase. For the next level they turned the sofa on its end and thereby reached the second level. At that point they turned the sofa the right way up and got it up to the top of the staircase. In other words they thought about the problem in a very different way.

“That, David told me”, I said to the girls, “is what reflective intelligence is all about. Seeing things from a broader perspective than just listening to a lecture. That is what each of you can do if you learn to think of issues imaginatively. The person who can do this gets far further than someone with all the genetic bonus points.” Those girls were fascinated. Who knows where that conversation which took place in a park in the middle of Yokohama would take them in years to come? “What do you know about William Wordsworth?” I asked them on the spur of the moment. It seemed they knew quite a lot, and more than just about the daffodils. “He’s one of the most famous English poets” said the first girl. “Correct”, I said, “But he almost failed when he went to Cambridge University, and got only the lowest class of degree.”

There were smiles all around. This was the kind of open-ended discussion that youngsters of that age really enjoy. “Weren’t you just going off for some coffee?” the first girl asked. I nodded. “We’ll all come with you”, she said, looking at her friends. Pausing slightly at such a Pied Piper-like situation, I made a weak excuse of having some work to do. I’m sure they would have talked for ages about a topic we normally think is essentially a matter for graduate or post-graduate dissertation.

If I’d been giving a lecture rather than just chatting to those girls I might have gone on to quote Ridley again; “The surprise hidden in the average figures (about intelligence) is that the influence of genes increases and the influence of the shared environment gradually disappears with age. The older you grow, the less your family background predicts your IQ and the better your genes predict it. By adulthood, intelligence is like personality: mostly inherited, partly influenced by factors unique to the individual, and very little affected by the family you grow up in.” What this seems to reflect is that much of the intellectual experience of a child is generated by others. An adult, by contrast, generates his own intellectual challenges. The environment is not some inflexible and unreal thing; it is actually identified by the observer, and given an identity by that person’s perception of what it is. “Having a certain set of genes predisposes a person to experience a situation in a certain kind of way. Having sporty genes makes you want to practice sport; having intellectual genes makes you seek out intellectual activities. The genes are the agents of nurture.”

Ridley makes a further, and very important, point when he says that, “Genes are likely to be affecting appetite more than attitude. They do not make you intelligent; they make you more likely to enjoy learning.” It is not so much when stimulus and rewards come together that learning occurs, but when the individual notes a discrepancy between what they observe, and what they expect to observe. It is then that the individual has to rethink an assumption in the light of changing experience; that is when learning occurs. “The environment acts as a multiplier of small genetic differences, pushing sporty children towards the sports that reward them, and pushing bright children towards the book that rewards them.”

Those young teenagers in Japan were like teenagers everywhere; inquisitive, excited, moody, confused, and full of short-term enthusiasms. Later that morning in Yokohama I spoke to Neil Richards, the head of the International School, and responsible for promoting the International Baccalaureate in Japan. “It seems to me,” said Neil, “that the topics which you are bringing up should
be absolutely at the core of the school curriculum. These are issues that not only help youngsters understand themselves better (which means they are fascinated by them) but it would also give them the framework to join so much of what they have to study together. It seems that schools should work to show how themes such as the Origin of Man, the Functioning of the Brain, and the whole issue of purpose, values and spirituality should be constantly recurring themes within the curriculum. Schools with such a focus would appear to be more relevant to youngsters lives, as well as to the context within which they live them – what a difference this would make to the approach to learning!\

In a study on adolescence made in 2000, the Chicago psychoanalyst Mihaly Csikszentmihaly wrote; “Teenagers are maddeningly self-centred, yet capable of impressive feats of altruism; their unpredictability, their shifting from black and white and from hot and cold, is what adolescence is all about. Whether these adolescents will grow up to be confident and productive adults is to be found in how they experience opportunities on a day-to-day basis.” Worryingly, the opportunities for such intergenerational experience seem to be in decline everywhere. It is said that American small towns were far more community conscious before the invention of air conditioning than subsequently, for with no air conditioning everyone used to sit on their front porches on rocking chairs, fanning themselves in the cool of a summer’s evening and talking to their neighbours. Air conditioning was wonderful, so wonderful that everyone moved indoors and kept the windows tightly shut, and didn’t talk to anyone. So self-contained did each home then become that they never even noticed the strangers on the streets. Nowadays a sense of collective insecurity permeates entire communities as people move from air-conditioned car to air conditioned home, and everybody fears a stranger. Children are, by far and away, the biggest losers in such communities, for parents effectively keep them shut in.\

In his book ‘Bowling Alone’[7], Robert Putnam has studied this phenomenon more closely than others. He is largely responsible for introducing the concept of social capital: the sum of all the little things that, on a day-to-day basis, make life more pleasant, reassuring and, in a word, ‘comfortable’. As such he is a frequent visitor to those politicians, including Prime Ministers such as Tony Blair and Bertie Ahern in Ireland, who are concerned that the collapse of community is impeding governments’ ability to provide social support for all. It is an expression that Putnam attributes to L.J. Hanifan,[8] who was at that time in the 1920s the State Supervisor for Rural Schools in Western Virginia. Hanifan put it very nicely, more than eighty years ago; social capital is “those tangible substances that count for most in the daily lives of people: namely goodwill, fellowship, sympathy, and social intercourse amongst the individuals and families who make up the social unit; the individual is helpless socially if left to himself. If he comes into contact with his neighbour, and they with other neighbours, there will be an accumulation of social capital, which may immediately satisfy his social needs which bears a social potentiality sufficient to the substantial improvement in living conditions in the whole community.”\

It is the absence of this generalised reciprocity which often makes life for today’s young people now so difficult. The adult world just seems too busy to think beyond its immediate needs in a way our ancestors did: “I don’t need that patch of ground behind my garage, so why don’t your kids use it to make some money growing tomatoes, or whatever, and in exchange you could do my tax returns for me every year.” It’s about creating such little niches of opportunity for things that never show up on either the national or individual’s balance sheet. These are the opportunities that youngsters desperately need. I had it from old McFadgen, who taught me to carve, and from Mr Roast, who taught me how to rebuild a Tudor house. ‘Children need communities, Communities need children’, I entitled an article published some years ago in an American journal.[9] It’s a simple statement, but it’s full of meaning. The energy of youth is, within an integrated community, a marvellous correction to the rationality of adulthood. Social capital takes a long time – many generations – to build up, but it can be destroyed extremely quickly.\

The Industrial Legacy – Learned Helplessness\

It was a winter’s afternoon in what used to be called the Black Country, that part of the West Midlands where owners of coalmines, canals, blast furnaces, steel rolling mills once became fabulously rich, and where hundreds of thousands of working people laboured until the day they died. Heavy industry ‘limped on’ right up to the 1970s but, when competition from overseas markets became too intense, the smokestacks fell, the fires went out, and working men and women found themselves equipped with only redundant skills and the legacy of an education system which for seven or eight
generations had inculcated an attitude, of what I was told that evening by a local headteacher was ‘learned helplessness’. That woman’s analysis was perceptive. Industrial management had, for generations, denied ordinary working people any sense of responsibility for their own actions. Parents had not thought it worth encouraging their children to do anything other than accept the way things were. Primary schools were the first point of contact where the experience of institutional learning first hit a collapsing society. The schools faced an uphill struggle with insufficient resources, and it had been like this for generations. As inadequately prepared youngsters went into secondary schools, so the secondary teachers blamed the primary schools for what they could never have achieved. Local education officers, under pressure from central government, responded by becoming ever more prescriptive. “With ever more instructions to perform in a prescribed standard way, our teachers are now becoming subject to ‘learned helplessness’. So, you are quite right John to remind us that all quality learning, is in effect, ‘messy’; only simple memorisation tasks are linear, most learning of any substance is a matter of joining many different ideas together in many different formats. Unless government honours this reality we will continue to lose heart as we push children against the grain of their brains.”

As it happened I had to fly to Bratislava in Slovakia that evening, to address a gathering of independent policy centres funded by the financier, George Soros, to develop curriculums in ex-Communist countries that would help young people to think things out for themselves. That woman’s analysis was a world where individuals have to be given the space to work things out for themselves. However much such commentators may seek to deny this, administrators just don’t like trusting other people to do things for themselves; in a sense it’s easy to understand – learned helplessness gives administrators a job to do, which they would quickly lose if people can work things out for themselves. It really is as simple as that.

It’s not easy to describe how the brain functions. Sometimes I describe its scale in terms of the numbers of its neurons or synapses, or in terms of its plasticity as well as its neural pruning. I describe innate predispositions as if they are D.I.Y. books waiting to be pulled off the shelf. I describe the wonder of the innumerable connections - both formal and random - that it makes, and I tell of its ability to think laterally as well as the ease with which it falls back into outdated assumptions. It doesn’t work like a linear computer, and it creates itself through use. I describe such learning as being self-organised, spontaneous, and endlessly flexible, defying any clear description of purpose. All this can easily confuse my audiences, who may find the words attractive enough to give me a good ovation, but then find that I have left them with no easy alternative model on which to develop their ideas.

I get impatient with statisticians and their claim that, eventually, they will find a way of measuring everything and correlating every possible variant. I annoyed a professor at that meeting in Bratislava; he came from the University of Vilnius in Lithuania, and his faith in numbers was as great as my disbelief. But he granted me one point. So far statisticians have made little progress in relating the formal to the informal experiences of learning. “Just to say that Bulgarian students get better results in physics tests than the Danes is to totally miss the point, if the average Bulgarian is so disenchanted with the subject that he destroys all his books immediately the exam is over, while the Dane is sufficiently interested in the subject that he spends his own money in years to come buying journals, and eventually decides to become a physicist. I agree with you that learning is messy, but how do you quantify that?”

Home Truths

Flying back from Vienna the following morning I was too tired to read, but not tired enough to sleep. As I sipped a glass of excellent Hungar-
ian wine I knew that an image was forming in my mind - an image that, to me at any rate, said almost everything that needed to be said about human learning. It was rooted in my own experience of the past four years, a time in which I was constantly trying to balance my time between the affairs of the Initiative, and that of renovating our house – a continuous reminder of the need for balance between thinking and doing. There is not a corner of the house that I don’t know, nor any space that does not hold a separate emotion, nor a building task that doesn’t remind me of either packing for an overseas trip, an incident that I was trying to describe for this book, a set of negotiations for a training programme, or the weekly struggle to reserve enough time for the family to be together. Only I know where I botched a job, left off an undercoat, or put in too much plaster. I know in which places I was feeling good about things, and where I was frustrated. As the heating system comes on early in the morning I sense the hot water coursing through the pipes, restricted or unrestricted by the thermostatic valves, each of which is individually responding to the ambient temperature. In Autumn I think of the places on the roof in which leaves can gather and block a down pipe, and in Winter I know where to look for frozen pipes. There is an old expression; “We design our houses, and our houses then shape our behaviours”. That has to be very true, both literally and metaphorically for our brains ‘process’ our thoughts through the sum of all our previous experiences.

This house has become an outward manifestation of how my mind works. I know the moods of the different rooms, and I know how differently the house reacts to a summer’s day, or a winter’s night. So, when I first started to write this book, I moved out of my study with its insistent telephone, fax and computer screen to a table in front of one of the enormous windows in our bedroom, a window facing due south that catches lots of sunshine. Here I could write easily, with the inspirations of the view, the sense of history, and the constantly shifting mood of the sky. Here my mind could race, and the words flowed. Then, months later, I knew I had to take a much more systematic approach and underpin my free writing with a careful selection of significant facts and the construction of a disciplined framework if I were to hold my audience’s attention. Broad skies had to be replaced by an inner sanctum, a place I could trust but which had few regular distractions. A different corner of my mind. So I retreated to the panelled dining room in the semi-basement, a room with an enormous table and adjacent to the comfortable smells of baking and brewing coffee coming from the kitchen, but far away from the executive function of the study, with its daily load of addictive trivia. To my wife’s distress I’ve colonised this space for months now to the exclusion of all else. Clusters of books, piled ten or twelve high relating to different ideas almost over topple the table. Papers, newspaper cuttings, copies of emails, of letters and technical reports have proliferated onto side tables and so too has a crop of blue, yellow and pink post-it notes sprouted from all kinds of inexplicable places. A draft of one chapter hides comments on another, and carefully annotated emails remind me of revisions still to make. Trivia gets mixed up with all this - letters from friends, biscuit paper wrappers, dried up pens, old newspapers, photos and empty coffee cups.

I’m sure you’ve picked up on the analogy. My opening stream of consciousness took place in that part of my brain much influenced by external factors - by the sky and the clouds, the constant movement of people, and the sound of children in the school next door. This is the generalised, big picture, synthesising aspects of my brain. But my brain needed another perspective. I knew I had to build other kinds of connections much deeper within my consciousness. Connections at a more systematic, more abstract level, disciplined and uncluttered by the inspiration of the broad view. I needed to let my mind float away and hear the voices from long ago of John Milton and William Lovett, Robert Morant, R.A. Butler and Robert Ascham, not just the very public statements they made, but some of their more private recollections which can tell us so much about why they held their particular views, (such as Florence Nightgale’s comment of the young Robert Morant when she interviewed him for the post in Siam, that he would have a great future providing “he does not always strain at his tether in doing over much work.”). I had to scan endless tables of statistics, and follow the arguments of scientists working in disciplines never alluded to when I was a student at university. That was when I retreated into the dining room.

My youngest son, Tom, a young man not renowned for any sense of tidiness or order, looked in the other day and for a moment stood, repeatedly incredulous at the chaos that surrounded me. For indeed it must have seemed vastly messy to anybody other than myself. Yet to me it represents an ordered confusion of innumerable interconnecting possibilities; ideas in one paper, lead to a cross reference to another, to an experience encountered...
on a particular trip, and the emergence of a valid generalisation. I think in pictorial terms of connections that I can scarcely describe in words.

As long as no one tries to tidy all this up, I feel safe. The significance of this muddle lies in the position of each pile, and its relation to the others. Weeks ago even I began to despair of its creeping nature, and foolishly I tried to tidy it up. It was the worst thing I could have done, for instantly I lost a mass of possibilities. For days I could not find what I was looking for, and even more important, the connections I was trying to make were lost. The room with the beautiful view, the study with its executive function, and the apparent messiness of the dining room are all external manifestations of the very structure of my brain. I guess that many of you will already be envisaging your own thought processes in the same way. The glory of our mental powers is that their strength lies in just that self-designed messiness, the hidden connections which Vaclav Havel defined as the essence of education.

To complete my analogy, of course the greater part of my life is lived outside the house and its specialised functions. Conferences are important to me for all the people I meet, and the perceptive questions I am asked and struggle hard (and not always successfully) to answer. It’s richer because, as a family, we enjoy each other’s interests and share good and bad times together. When I’m too tired to string together another sentence I retreat to the workshop and find a different kind of challenge in shaping a piece of wood, and great anticipation in the aroma of brewing coffee! When I awake in the morning I need a jog along the canal to freshen me up for another day at the writing table. These are not luxuries, for it is when I am most relaxed that more often than not, I get the inspiration for the next piece of writing, or find a phrase that better describes what was the previous evening a dull, colourless sentence. Our brains, yours and mine, exist in the world at large and certainly not just within our heads.

How we grow our minds when young conditions the range of faculties we create in our brain to deal with ever changing circumstances. Everything, it seems to me, that is emerging from research on the brain would suggest that we are a species with virtually unlimited intellectual potential if, that is, we appreciate the nature of the brain. We have been enormously empowered by our Stone Age ancestors, but with that empowerment also comes a number of constraints. We can get it all dreadfully wrong if education is driven simply by the needs of short-term expediency. Unless we are careful we could use all our newfound understandings to create battery hens, rather than free range chickens. That’s what makes a proper consideration of these issues so urgent.
Part Four
OUR POSSIBLE FUTURES

The last three chapters reflect on matters raised from our recent experience of education, and the much vaunted school reform movement, to the issues that need to be faced for the future. Chapter Nineteen is then followed by a Postscript, dated July 2004, that adds an immediacy to the need for fundamental changes in the way society treats its young people.

In Dubai, in late January 2003, the headmaster of The British School in Muscat, summed up a four day conference that I had been addressing by saying: “I’m a pretty conservative kind of person, otherwise I wouldn’t be a headteacher. I like my comfort zone. Since coming to the Oman I realise that you don’t have to go into the dark, and if you want to see the stars in all their glory you have to dare to go deep into the desert, away from the light pollution of civilisation. Only then, when your eyes become acclimatised to real darkness, can you begin to appreciate the sheer brilliance of the stars. Then, and only then, will you see which way to go.”

That is a good way of looking at the whole of this book. Now, in this section on ‘Our Possible Futures’, it is time for the stars to shine through. Chapter Seventeen is about the moral confusion of our times. It is not necessarily an easy chapter to read, and many readers may well find it necessary to read it a second or third time. This is the chapter in which the modern world’s material expectations hit the deepest of humanity’s inherited predispositions for a balanced life. Years ago such a chapter might have been entitled ‘Do we work to live, or live to work?’ Now the issue has become even more acute. The chapter centres on who we think we are, and given who we think we are, what rights and dignity should we then assign to other people. Are we ‘Pilgrims or Customers’ nicely summarises the philosophical dilemma mankind finds itself forced into.

‘Honouring Adolescence’, Chapter Eighteen, explores my passionately held belief that there is something in the underlying principles which western countries are applying to education that seem to have resulted in the most awful consequences in narrow thinking, dependency and a sense of detachment from every-day, real-world problems. My argument is that a too heavy emphasis in adolescence on sitting listening to instruction in classrooms actually nullifies the potential for creativity, enterprise and personal responsibility. I find the doctrine of subsidiarity most helpful in articulating what a proper evolving relationship should be both between teachers and pupils, and between parents and children. To develop a system of education based on the principle of subsidiarity would, effectively, turn present day schooling ‘upside-down and inside-out’.

Chapter Nineteen, ‘Into the Dark to see the Brilliance of the Stars’ takes the reader through an account of education in England (with many references to what is happening elsewhere) over the past forty years into the key issues that now face parents and politicians alike. It is ironic that it was Keith Joseph, the politician who seemed to me to have been the most thoughtful and intellectually astute of all ministers of education in the past quarter of a century, whose institutional model was the autonomous self-governing school, who set in motion in the name of ‘effective education’ a vast new complex of legislation and regulations that were eventually to become central to every aspect of the life of every school in the country. And now, after seven years of a Labour administration, this seems to have created a belief, widely held, ‘that schools can do it all’. They can’t. The closing chapter points to the need for a completely different model of education that genuinely appreciates that learning is a whole life activity. Especially it goes where politicians fear to tread in stating that our educational ‘crisis’ is not indeed a crisis of schooling but, at the most basic level, represents a collapse of those voluntary structures – the home and the community – that are the preserve, not of politicians, but of ourselves as ordinary, responsible citizens sharing a powerful vision for the future. This country, as with other advanced societies, has a spiritual/philosophic vacuum at its core; many people recognise this, but don’t have the language to express this. I suggest that as a starting point, something that every person wanting to act responsibly can appreciate, we all work at understanding the Native American proverb ‘We have not inherited this world from our parents, we have been loaned it by our children’. If we don’t understand this the world will quickly forfeit its future.
In October 2002 I had been invited to address a major conference of teachers in Birmingham when, late the evening before, I was told that my time slot was being cut as a “very important speaker from Downing Street” had expressed his willingness to address the conference at short notice. I came out of my session breathless as Tony Blair walked up on the stage. For an extremely busy man he spoke most eloquently about the importance of education and roused the spirits of teachers like a general facing his troops.

Listening carefully, I was struck by two things. He yet again reiterated his favourite political mantra - real Adam Smith stuff - that competition was the best way of raising standards in schools and therefore it was totally right that parents should hold the schools accountable for the education of their children. He then went on to exhort the teachers to think of all possible ways of improving secondary schools, and invited the audience to let him know what we thought.

As it happened I was flying to Tokyo that evening, so I had an opportunity to think about what the prime minister had said and, as I did so, found myself drafting a letter to him. I kept the letter short. I congratulated him on his personal commitment to education - and I meant everything I said. My second point was, however, a rebuke: every time that you or any other politician tell parents to hold the school accountable for the education of their children, I said, you deliver a devastating, perhaps unintentional, subsequent message, namely that it is the school’s job not the parents’ to bring up their children to be fully responsible adults. I then went on to make the argument that it was in the failure to appreciate the biological opportunities of adolescence that secondary education was failing. I indicated that modern research is showing that the practice of secondary education simply does not match the opportunities which we now know exist in the adolescent brain. “Only by restructuring secondary education to reflect what we now know about the adolescent’s deep need to experiment, and take increasing control of their own learning and progression, can we ever hope to get the improvements, Prime Minister, that we all seek.” I concluded by suggesting that, in verifying what I’d said he should not refer my letter to the Department of Education “who see every problem as having a school-based solution,” but rather to those neurologists and psychologists with a professional interest in adolescence.

I was disappointed, but I suppose not surprised, to get the standard Whitehall-style reply: The Prime Minister thanks you for your letter, but you will appreciate he is too busy to reply, so we are referring your letter to the Department of Education. Yet I did write again, but heard nothing until, some three weeks later, I had a curious letter from the Customer Focus Team at the Department of Education. It said: “As part of our continuing programme of listening to our customers we are researching what customers think of the quality of our replies to letters... you are one of our recent customers.” Six times the letter referred to me as a customer. “Customer”? Is that what we are to think of ourselves as - a model based on how much money we spend on a range of alternatives? Are parents simply the customers of a school, rather than partners in the complex task of bringing the next generation of children into adulthood? Are children customers of what their parents might have to offer? Whose children are they in any case, the parents’ or wards of the state? Or are they simply young customers in the making? We seem to have got this all the wrong way around. Neither the church nor the government should ever control what is taught in the school, as Marx argued in 1875, for it is better that the state should be educated by the people.
‘Customer’ surely defines a specifically materialistic concept of life. My life has worked on a very different model, namely that of John Bunyan’s pilgrim, a man making his troubled way through life with a heavy load upon his back, beset on all sides by temptations and threats to belief. A very human kind of being who could see beyond him the House Beautiful, yet could still flounder in the Slough of Despond. A Pilgrim moved by the story of the Good Samaritan to know that, however rough the going was for him, there were always others who were worse off. A man who grew stronger with every obstacle that he learned to overcome.4

Pilgrim or customer? A creator of his own eternal destiny, or a purchaser of a range of goods and services as defined by someone else? A thinker able to take responsibility for his own actions, and willing to accept responsibility for working for the common good, or a man who, in his frustration that nothing he has so far pulled off the shelves of a supermarket quite suits his taste, searches for yet another perfect brand? That one has to raise such a question about who we think we are - pilgrim or customer - has to be a sign of the moral confusion of our times. And these are confused times.

Brave New (troubled) World

“Every so often,” writes the classical historian Chester Starr, “civilisation seems to work itself into a corner from which further progress is virtually impossible along the lines then apparent; yet if new ideas are to have a chance, the old systems must be so severely shaken that they lose their dominance.”5 That, surely, has to be where we are now. At a time when only twelve per cent of the British population described themselves as being “not spiritual”, 6 the vast majority are either indifferent to, or appalled by, the attempts of conventional religious organizations to come to terms - not only with problems of injustice and poverty - but with what sexuality means to our definition of humanity. Richard Holloway, the frequently controversial and thought-provoking former Bishop of Edinburgh, observes that “it would be difficult to exaggerate the moral confusions of our day and the urgency and importance of finding an agreed basis for our conduct towards one another as sharers of life on this planet.”7

Both notions - progression and confusion - reflect our muddled sense of community and lack of a set of shared values and common goals. Even the word “common” sounds a dissonant chord within modern Western society. From birth, we have told ourselves that individuality is the supreme goal, and that only in differences can we find our own identity. Theories that emphasise our common humanity are viewed with suspicion. Special interest advocacy groups claim that individual needs are overlooked when theories of commonality are pursued. They have solid grounds for such claims; in the past, as in the present, homogenous communities have, as well as their benefits, bred prejudice and concealed suffering. Now in 2004, with a new appreciation for the importance of such individual needs, sexual homogeneity is fast becoming a thing of the past, and its challenging formal religious structures to reinterpret their basic belief in ways that shake their members to the core. Not only is this merging of lifestyles and cultures happening in metropolitan centres but, with the costs of travel and technology plummeting, the ability to and the necessity for, each of us to interact with cultures far removed from our own is increasing all the time.

Nevertheless, any vigorous, multicultural community that still seeks to be coherent must be able to claim and honour certain ties that bind it together. Honouring “the dignity of difference” declares Rabbi Jonathan Sacks, is the only way to avoid the clash of civilizations.8 Differences in belief, argue such men as Rabbi Sacks, reflect man’s continuing search to find meaning; they are a sign of hope, not despair. If, in our time, we are to avoid the Balkanisation of communities, cities and nations, Holloway’s question is critical: how do we find an “agreed basis for our conduct towards one another?”

We each experience moments of truth that force us to think deeply. I well remember that day in Estonia, some five years ago, when an English speaking Russian cornered me with the profound question, “Who are you?” She challenged me to explain the values that defined what we were wont to call proudly the Free World. “When the Berlin wall was there you in the West defined yourselves negatively; you were against Communism. Now that Communism is no longer a threat to you, your reason for being seems empty. Surely you are about more than just money?” she taunted me.9

It was a question similar in its profoundness to one put to me by an intense, gifted seventeen-year-old in the Sixth Form when I was Head some fifteen years before. He was experiencing both a personal and an intellectual crisis, having recently read Richard Dawkins’ ‘The Selfish Gene.’ He looked at me: “If I’m no more than a collection of selfish genes, why should I bother with life? What’s
wrong with suicide?” It was a chilling argument that he advanced.

Of course we are more than selfish genes, I wanted to assure him, and we are more than customers I wanted to tell both the Estonian questioner and the English Prime Minister. Yet my own intellectual base was stronger on philosophy and religion than it was on a knowledge of maths, science and economics. The discussion I had with that young man showed me that, if I were to make the case that life was sacred, I would have to understand the sciences far better. Faith has to do more than cover up for intellectual laziness. That scared me, as I believe it does our troubled world; unthoughtful religious dogma destroys spiritual life. It frightened me as I started to move into such unfamiliar territory that I, like Charles Darwin, might lose my faith.

When I was thirteen, there was an incident that had left me confused. It was the day I was taken by my parents to visit the public school I was shortly to attend. “I hope,” said my father to the headteacher, “that my son won’t be taught evolution.” Although I can’t recall the Head’s exact response - he was an inscrutable character - I certainly remember it being ambiguous. There was something going on I did not quite understand, but it took me a long time to realise as much.

It was to be in San Francisco, half a century later, that I began fully to appreciate the long history behind my father’s well-intentioned question. I could also begin to see that, contrary to my fears, I need not necessarily lose my faith in the concept of the Pilgrim by delving deeper into questions of science. The two approaches were not, I realised, mutually incompatible. It was in 1998 that I first attended a meeting of Mikhail Gorbachev’s State of the World Forum, an annual gathering of some nine hundred of the world’s most outstanding thinkers and scientists. It was at that meeting that I heard an eminent Austrian biologist say, with the greatest of sincerity, “The future sanity of the world depends on the coming together of two great disciplines that haven’t spoken together for more than a hundred years - Biology and Theology”. In a split second I was back to that conversation between my father and my future headteacher. Fifty years on I found all my senses alert to a challenge I had been subconsciously ignoring, I was a slow, slow learner.

If I felt I had been in denial, then that denial appeared to extend far beyond my own lifetime. The ‘How’ of life, as it were, was being studied in a very different way to the ‘Why’ of life. If spiritual truths were as important as I believed them to be, why had we allowed them to become so marginalized? My attempt to convince that confused seventeen year old of the sacredness of life, based on both philosophical and religious concepts, could not bring solace to a young mind shaped by the theoretical advances of modern science. My protracted denial, and the denial of others like me, was also increasingly out of step with the assumed expectations and ambitions of modern society.

If, in 1965, I could define my role as a teacher as being in loco parentis, thirty years later there was such confusion about the role of parents, that the underlying principle for how teachers thought they should operate, was in tatters. As a Catholic bishop commented in the 1980s, “To teach children the Lords Prayer is meaningless to many of them, even harmful; they either have little appreciation of fatherhood, or find it totally intimidating.”

Since Darwin, probably the biggest scientific challenge to established religion has come from the relatively new science of evolutionary psychology, the discipline that I find most helpful in understanding the centrality of learning to us humans. Evolutionary psychology’s founding principle rests on a simple question: if every page of Gray’s ‘Anatomy’ applies to every person, in every country on this entire planet, why should the anatomy of the mind be any different? It’s the issue that Darwin raised back in 1859 when he suggested that “psychology will be based on a new foundation... the acquisition of each mental power and capacity by gradation”, in other words through ‘evolution in the brain’. It was the refusal for more than a hundred years, both of religion and of psychology, to try and understand what this meant, which has resulted, as the Bishop of Oxford Richard Harries says, “in spiritual people objecting to Christiani- ty.” Robert Wright, the journalist and commentator who writes most knowledgeably about evolutionary psychology, argues in his two books ‘The Moral Animal’ and ‘Nonzero’ that evolutionary psychologists are, at root, “trying to discern a second level of human nature, a deeper unity within the species.” They are focusing “less on surface differences among cultures than on deep unities.” Evolutionary psychology believes that the mind, an organ like the heart or the lungs, evolved and developed in much the same way as other parts of the body. It was not until the mid 1970s that psychology was prepared to accept this. Evolutionary psychology, the offspring of conventional psychology and sired out of biology, requires considerable interdisciplinary thinking; and that makes it a difficult intellectual challenge. Evolutionary psychology does not fit snugly into university departments or faculties,
yet its impact on how we think about ourselves is becoming increasingly influential.

Morality as part of our Genetic Inheritance

Take the fundamental question of how much are we in control of what we do? Evolutionary psychologists are certain that particular forms of behaviour are closely aligned with the “deeper realities” which are to be found, they believe, in all human beings regardless of their culture. The preliminary answer to the question about control seemed to be “not very much at all”. “Personal reflection and self-examination,” writes the theologian Richard Holloway, “as well as the study of human nature through the biographies of others, shows us that we are largely, though not necessarily completely, determined by forces that are beyond our control.”

Wright agrees: “We’re all puppets and our best hope for even partial liberation is to try to decipher the logic of the puppeteer.” However, Matt Ridley, in ‘Nature via Nurture’ proposes an ever finer adjustment to endless arguments about the relative significance of the two. “Genes”, he says, “are designed to take their cues from Nurture.” Ridley goes on to quote research that shows how animals actually adjust the thermostat on the front of their genes, so enabling them to grow different parts of their bodies for longer. A chimp for example has a different head from a human because it grows the jaws for longer, and the cranium for less time than humans. “Imagine the possible implications of this”, writes Ridley. “You can turn up the expression of one gene, the product of which turns up the expression of another, which suppresses the expression of the third. Right in the middle of this little network you can throw in the effect of experience. Something external - education, food, a fight or unrequited love, say - and influence any one of the thermostats (on the genes).”

Elsewhere Ridley surmises “Your genes are not puppet masters pulling the strings of your behaviour, but are puppets at the mercy of your behaviour; a world where instinct is not the opposite of learning, where environmental influences are sometimes less reversible than genetic ones.” We now have to understand that culture matters quite enormously.

Take the issue of sex, something it is said men think about once every three minutes and women once every ten minutes. From Oedipus to the Oedipus complex, human sexuality has been a universal scapegoat to explain our behaviour. In as far that, from the beginning of time, religions have come about to provide satisfactory explanations about both our existence and our behaviour one towards another, sexuality is a central feature of spiritual discourse. It’s hardly surprising, therefore, that Wright devotes a large proportion of his ‘Moral Animal’ to discussing the subject and its role of ensuring the successful transmission of genetic material. The findings Wright syntheses, however, are not the stuff of poetry or song but rather relate to stimuli that cause the other person to trigger a response that changes the chemical balance in their brain.

It is the response to our sexual impulses that has created the moral maze in which male and female bonding then occurs and has given birth to much of the morality that governs human sexuality. It is important to understand this proposition. At root, Wright argues, the differences between male and female attitudes to sex and marriage can be traced almost directly back to the level of investment required. With each successfully fertilised egg, a pregnant woman undergoes a gestation period of approximately nine months, followed by a period of nurturing that lasts years. For that first nine months the woman carries the child within her, eats enough to support the foetus, and goes through a whole variety of hormonal and emotional changes before birth. The level of investment required by the newborn baby after birth scarcely needs mentioning. To successfully transmit their genetic material into the next generation, the statistically most viable route for men to follow is that of maximum procreation: sleep with as many women as possible and spend as little time as possible with each one.

Although aggrieved women worldwide may disagree, most men actually do not follow this strategy apart from, possibly, in their fantasies. Indeed, as Wright notes, “in every human culture on the anthropological record marriage - whether monogamous or polygamous, permanent or temporary - is the norm, and the family is the atom of social organisation.” Somewhere along the line, extensive male parental investment entered our evolutionary lineage for the simple reason that, although the scenario described above may appear to be statistically advantageous for the male genes, his offspring are not much good if they end up as tiger bait, human babies being far more vulnerable than baby chimpanzees. In other words, successful reproduction most certainly does not end with a live birth; if a woman was not supported out on the savannah by a man able to bring home the meat while she nursed the child, the child would perish (see Chapter 15). High levels of paternal as well as maternal investment are essential for ensuring the
transmission of genetic material. As Wright puts it, “genes inclining a male to love his offspring - to worry about them, defend them, provide for them, educate them - could flourish at the expense of genes that counselled continued remoteness.” Thus, he argues, love grows from the dictates of natural selection, love not just for the child, but also for the woman: “the genetic payoff of having two parents devoted to a child’s welfare is the reason men and women can fall into swoons over one another, including swoons of great duration.”

Love between a man and a woman, that venerable inspiration for poetry, music, literature, and fine art, is just nature’s way of sustaining the species, argue the evolutionary psychologists. Morality is part of our genetic inheritance; it was not invented by priests.

Although the majority of societies known to anthropologists - most of which have been hunter/gatherer societies - have permitted a man to have more than one wife, within these societies polygamy tends to be the exception rather than the rule: “for eons and eons, most marriages have been monogamous, even though most societies haven’t been,” says Wright. He then explores the current situation in the United States, his home country. Given the high rates of divorce that’s accepted in society, and of subsequent remarriage, America has become what Wright calls “a nation of serial monogamy, and serial monogamy in some ways amounts to polygamy.”

The social and political ramifications of this conclusion are important, and worrying in as far as they fly in the face of biological realities. Given that monogamy is, theoretically, the only system that can provide a mate for just about everyone, a polygamous society naturally limits the number of available women. “While a male ferocity, however, can be dampened by circumstance, the most significant being laws that effectively share out women equally so that every testosterone-aggressive male ends up with one.

An unmarried man,” Wright observes, “between twenty-four and thirty-five years of age is about three times as likely to murder another male as is a married man the same age.” Furthermore, he is also likely to “incur various risks [as he seeks] to gain the resources that may attract women. He is more likely to rape. More diffusely, a high-risk, criminal life often entails the abuse of drugs and alcohol, which may then compound the problem by further diminishing his chances of ever earning enough money to attract women by legitimate means.” With serial monogamy a few men get a lot of women; so inevitably some men get no women - and that drives some of those men crazy.

Whilst the rigid sexual mores of the past held many women in suffocating marriages, on aggregate such strict codes were more beneficial to society as a whole than the looser codes we may now prize. High divorce rates really do, it seems, contribute to an erosion of the societal fabric.

As Wright further explores the inherent moral tensions that are a characteristic of thinking people, he introduces the concept of non-zero-sumness, the idea that, through cooperation, two people can be better off than they would have been had they pursued their own, separate, paths. There’s a lovely Chinese proverb that captures this perfectly; Hell is a banquet table piled high with delicious food, hungry people are seated on either side, each one supplied with a pair of chopsticks which are so long that even with arms extended, no one can get food into their mouths. Heaven is the very same banquet table, but here the guests are smiling and chatting, enjoying the delicious food. The difference? They’re using their long chopsticks to feed each other. This idea of cooperation, non-zero-sumness in Wright’s terms, accompanied by reciprocal altruism, is a very major driving force behind evolution. On balance, Wright asserts, over the long run “non-zero-sum situations produce more positives sums than negative sums. Cooperation, in the long term, is more beneficial than competition.”

Balancing individual competition, with group collaboration, began millennia ago; it has kept on happening generation after generation, serving as the ratchet to increase social evolution, as societies became more complex and interdependent.

This in turn explains how reciprocal altruism - in layman’s terms the notion of doing good to those who do good to you - has evolved. Imagine a cold winter in which circumstances have provided your family with more than enough meat to last through to the spring, then think of another family that does not have enough meat. Operating under the twin logic of non-zero-sumness and reciprocal altruism, you would give your family’s excess meat to the hungry family, under the unspoken assumption that, should the situation ever be reversed, you would receive meat for your family.

I observed all these forms of behaviour amongst the Hadza. Founding such life or death contracts on unspoken and physically unrecorded assumptions may seem insubstantial, especially when compared with today’s lengthy legal contracts, but
in the tightly-knit communities that characterised our ancestral environments, unspoken assumptions carried significant force because they were part of that society’s belief system. It’s only in our more fragmented, transient societies that written contracts have assumed such significance. So, out of genetic dictates, did such moral notions as “do as you would be done by” arise, and were articulated by the earliest of law makers, Moses and Abraham. Rules, which were unthinkable to break if you lived in compact, coherent communities, but which, it seems, can be broken with impunity in the anonymous conurbations of present times. Charity, the very mention of which evokes religious imagery, seems, in such a context, to be nothing more than an anachronistic by-product of our evolutionary heritage: we give simply because we hope at some specified time in the future to receive. In hunter/gatherer societies such thinking made sense, but now that our relationships are so temporary, and the people we meet from day-to-day less likely ever to re-enter our lives, charity makes little sense from an evolutionary perspective, yet most people still yearn for a life where human relationships can still be meaningful. Is it any wonder that we complain about big cities feeling lonely while small communities feel more caring? “Morality is the device of an animal of exceptional cognitive complexity,” Wright concludes, “pursuing its interests in an exceptionally complex social universe.”28 Does that simply mean that Man created God as a means of making life tolerable?

In Robert Wright’s second book, ‘Nonzero’, he develops the idea that out of mankind’s initial, and fumbling, attempts at cooperation between individuals - operating under the dictates of non-zero-sumness and reciprocal altruism - cooperation grew between far greater entities. As populations increased, and villages evolved into chiefdoms, then into cities, and then into nation-states, the potential gains from non-zero-sum relationships increased exponentially. With increasing populations, control over resources becomes vital, and conflict between communities inevitable. In such circumstances leadership and hierarchies naturally emerge, together with the thirst for power which, wrote Immanuel Kant, “drives [man] to seek status among his fellows, whom he cannot bear yet cannot bear to leave.”29 Herein lies the crux of our human problem, for just as we developed cooperative skills, so too did we develop the ability to organise and push others around; we can, to paraphrase Adam Smith, invent Oxfam, apartheid and nuclear war all at the same time. No wonder we’re morally confused, and seek for explanations at a superhu-

man level.

It is here that the work of Lawrence and Nohria in their study ‘Driven: How Human Nature Shapes Our Choices’, earlier referred to in Chapter Sixteen, has a further relevance. The authors devote a great deal of attention to the concept of models, simple stories formed by the human mind over long periods of time to explain the world in ways that help us make decisions about the future. Just as Adrian Mole was trying to do in his search to understand his place in the universe, Lawrence and Nohria suggest that these different stories (myths) go through the same Darwinian ‘V/S/R process’, (Chapter Three) that accounts for the origin of the species. Initially the individual is presented with a Variety of narrative frames, such as Christianity, Islam, Buddhism, Communism or biological determinism. Then the mind selects the frame or model that is the most congruent with its own experience in explaining the world in a way the individual understands. Once that framework has proved versatile and reliable, the brain will retain it and, until it faces a serious challenge to its legitimacy, it will serve to inform and direct thought and action.

Searching for Something Bigger than Ourselves

So powerful is the drive to learn - or, to put it another way, the drive to ‘make sense’ of existence - that we ignore the inquisitive person at society’s peril. The problem of our time, a greater problem than it was in previous centuries, is that an ever increasing proportion of people don’t believe that all the bits can ever come together because, they think, there never was an overruling design, and ‘sense’ can’t be made out of chaos. Yet we are a persistent species and we have a deep need, it seems, to be able to explain and rationalise the world. This tendency, Lawrence and Nohria caution, is the ‘dark side’ of the drive to learn, “the capacity to believe plausible but inaccurate stories, the tendency to go on mind journeys of unchecked fantasy, the attraction of novelty for its own sake, and the general susceptibility to incomplete ideologies.” We have to believe something, it seems. The early twentieth century poet, G.K.Chesterton put this neatly, “When men give up believing in God, they will believe in anything.”

Now, in the early twenty-first century, Richard Holloway argues that Christianity has allowed itself to become an incomplete ideology, and as a former bishop he must see this from the inside. Most of the time people seem unwilling to challenge their belief systems in the light of new understandings.
Nevertheless there is something about Christianity, and indeed about other religions as well, that still hold a number of highly intelligent people in its thrall. There is something, it seems, so precious that it just won’t go away. The apparent choice for Holloway is stark: “Either abandon Christianity, because it is so manifestly out of tune with what you consider to be the best values of contemporary culture; or cling to a version of Christianity that is profoundly antipathetic to the freedoms of post-modern society.” But he then goes on to ask, “Is there a third approach which is not a middle way between belief and unbelief and is neither diluted fundamentalism nor watered-down scepticism?”

Holloway certainly believes that there is. He sees with great clarity that the mythical and narrative power of Christianity has become smothered by orthodoxy and dogma. What is needed, he contends, is a breaking apart of the original myth - the complex story earlier told for an illiterate people - to discover anew its transcendent, life-giving intensity. “If religious narratives are to retain their power,” he writes, “they must be capable of constant reinterpretation.” We must relearn Christianity, imbuing it with the kind of metaphorical power it had in the years following Jesus’ death, when orthopraxis (imitation of Jesus through action) had not yet been overtaken by orthodoxy (simple belief in things about Jesus). At this point in its history Christianity was about disturbing the world, not making it more comfortable or more secure. As the modern church crumbles, Holloway, the bishop who resigned before his time over the issue of the ordination of homosexuals, sees reason for optimism. In almost Biblical metaphor he sees the risen Christ standing, revealed, amongst the rubble. When old mental frameworks begin to break apart, unable to respond to rapid social change there is great confusion as new stories struggle to find acceptance, which was what, coincidentally, so attracted those entrepreneurs in Venice. That is precisely where early twenty-first century society finds itself now.

As the old and venerable walls of two millennia of Christianity collapse, a brave new belief system seems poised to take its place. Unfettered and increasingly evident on a global scale, capitalism, with its birth in the eighteenth and nineteenth centuries, appears to have reached its apogee in the twenty-first. With its basic premise, that we are all essentially customers driven to acquire, we are each responding, as Lawrence and Nohria explain, to the oldest and most basic of the four human drives. Acquisition has been an essential part of our psychological makeup for millennia and continues to be so, indeed there seems to be a strong causal connection between a low position in any given cultural hierarchy and high instances of mortality and morbidity. The evidence is overwhelming: an ability to acquire more of this world’s goods than your neighbour almost certainly leads to better survival prospects.

It is upon the rock of acquisition that the belief in capitalism has been founded. But in metaphorical terms is it a rock of salvation like a lighthouse or a treacherous reef destroying all who approach it? ‘Get more, wants more’ seems to be a well-tested truism; the greedy person is never satisfied, as the Hadza man explained about those who plant crops expecting to be the only ones to benefit. Now add to this Lawrence and Nohria’s observation that none of the four drives can exist independently of the other three, and that if any one becomes too dominant, at either a micro or macro level, individuals as much as whole societies are then thrown off balance. These are the ambitions (drives) that make us human, but we let them get out of proportion at our peril. Yet this is just exactly what we seem to be doing, in England and in many other lands. The drive to acquire appears to have reached unparalleled proportions, and it seems that people’s expectations have grown beyond any realistic possibility of achieving them. In terms of John Bunyan’s Pilgrim we have each filled our rucksacks to bursting point, so that they are now too heavy to carry.

Society is starting to pay the terrible price which is involved in such a Faustian bargain. E. O. Wilson wrote in ‘The Future of Life’, “The mood of Western civilization is Abrahamic: ‘May we take this land that God has provided and let it drip milk and honey into our mouths for ever’. Now more than six billion people fill the world. The great majority are very poor; nearly one billion exist on the edge of starvation. Half of the great tropical forests have been cleared. Species of plants and animals

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The hero of Christopher Marlowe’s ‘Dr Faustus’ is based on a magician and astrologer of that name who was born in Wurtenberg and died in about 1538. The idea of making a pact with a devil worldly reasons is of Jewish origin. The basis of the Faustus story is that he sold his soul to the devil in exchange for twenty-four years of further life during which he was to have every pleasure and all knowledge at his command.
are disappearing a hundred or more times faster than before the coming of humanity. An Armageddon is approaching, but it is not the cosmic war and fiery collapse foretold in sacred scripture. It is the wreckage of the planet by an exuberant, and ingenious humanity. A global land ethic is urgently needed. Surely our stewardship is the only hope? We will be wise to listen carefully to the heart, then act with rational intention and all the tools we can gather and bring to bear.18

The past thirty years have seen the rape of our planet proceed virtually unchecked and often even unnoticed. In July 2002, a study by the World Wildlife Fund gave that home - our only possible home in the universe - another half-century to live.19 Mankind’s inexhaustible lust for consumption has doubled since 1970 and continues to accelerate by one and a half percent a year. This may not seem like a phenomenal growth rate, until you consider that, according to Wilson, the human population exceeded the Earth’s sustainable capacity around 1978. The front-runner in the race to global devastation is, not surprisingly, America. Far and away the most unrepentant in this regard, the United States consumes more than twice its nearest competitor, yet has only four percent of the world’s population, America consumes twenty seven percent of the oil produced each year. Whilst it takes 12.2 hectares to support the average American and 6.28 for each European, it takes only half a hectare to support each citizen of tiny Burundi. If the rest of the world - to put this in perspective - were suddenly to reach American levels of consumption, we would require four more planet earths from which to draw our resources.

Every day, I noted in a speech I gave in Australia in July 2003, thirty thousand children worldwide die from preventable diseases. More Americans bought more gas-guzzling SUVs which will contribute further to global warming so destroying more of the precious ozone layer that makes life on this planet possible. While global warming may well be part of the explanation for the unseasonably good summer days of recent years, it’s also why the country of Kiribati in the Pacific – that collection of tiny, low-lying islands which, because they are so close to the International Date Line became the first nation to enter the twenty-first century – may also be, wrote the Australian philosopher Peter Singer, “the first [nation] to leave it, disappearing beneath the waves.”20 Maybe even within the next twenty-five years.

What is not often discussed, at least amongst the giddy cheerleaders of capitalism, is the fact that two hundred of the richest corporations command resources equal to the combined wealth of the poorest eighty percent of the world’s population.21 The implications of that are staggering. Consider too the fact that the assets of the world’s three richest people exceed the combined GNP of all the least-developed countries and their six hundred million people.22 Or the fact that, according to the United Nations, the income differential between the world’s wealthiest and poorest twenty percent was thirty to one in 1960, sixty to one in 1990 and seventy-four to one in 1995. These are the concrete results of what Lawrence and Nohria describe as our over-emphasis on the drive to acquire.

According to Matthew Fox, the former Jesuit priest and author of ‘The Reinvention of Work’, “poverty is not a certain amount of goods, nor is it just a relation between means and ends; above all it is a relation between people.”23 What he says makes perfect sense – poverty is relative. If you live in a community in which every single person makes, say, five dollars an hour there will be no such thing as poverty. The same goes if everyone in that community made only two dollars an hour. There is, however, one caveat. You should not be able to know of people in any other community who might be making more than you are. Once you are aware that they’re earning ten times what you earn, then you realise that you are poor. Of course there is a standard of living below which no human should fall, but Fox’s point still holds: poverty is more about relations between people than about relations between people and their money. This has serious consequences for a key determinant of average life expectancy, it turns out, is the difference in income between the rich and the poor in any given community. The more homogenous a community, the happier people are and the longer they live, which probably explains why fifteen percent of Americans, as long ago as 1995, had a clinical anxiety disorder.24

Extrapolate the word ‘community’ to embrace the whole world, throw in television, newspapers and the Internet and you have a clear recipe for disaster. Fewer people are happy when they see how much richer other people are. The drive to acquire lies dormant, just below the surface like so many of our predispositions - give it a prod or two and suddenly most of us can become envious, even greedy. The mediaeval church really did understand the self-inflicted poison of the seven deadly sins - those aspects of acquisition, avarice, envy, lust, covetousness, pride, sloth and gluttony - which now fuel the modern advertising industry.

It’s not just the countless millions upon millions of second and third world citizens who find
themselves labouring under abysmal working conditions to sustain ever more expanded profits for corporate giants such as Gap, Nike, Wal-Mart and Starbucks that suffer. Matthew Fox insists that the working conditions of the average, suburban American need just as much radical rethinking. Fox’s own thinking reflects that of David Jenkins who, when Bishop of Durham in the early 1980s, challenged his flock to accept the responsibility to create a Heaven on earth, not simply a Heaven in the Hereafter. For Fox, “there can be no joy in living without joy in work.” Here he makes a fundamental point: work is not only the means by which we feed ourselves and our families - although that is an undeniably important aspect of it - but also it is “a metaphor and symbol for what we cherish.” Work, for Fox, is much more than just a job; a ‘job’ as Dr. Johnson defined it in 1721, as “petty, piddling work; a piece of chance work.” The activity of what we do is nothing less than an expression of who we believe ourselves to be”, writes Fox, who went on to quote Saint Thomas Aquinas as saying, “By their works ye shall know them”. Yet work is so very rarely like that for many people, and the resulting damage to the human spirit is enormous. Fox goes on to define work as the roll (from old French “rolle” meaning the roll of paper from which an actor read his lines) we see ourselves performing in the unfolding drama of life. The life story, in reality, of the Pilgrim.

But what can be done when entire industries with budgets larger than most Third World countries are predicated on keeping as many people in “jobs” (as opposed to work) as possible? The gigantic worldwide advertising business is founded not on satisfying needs, but on expanding wants, for as Fox asks: “Is [the purpose of advertising] not to pump up the wants of those who have extra means? And does this economy not then oppress those whose true needs are not yet met?” Yes, and yes again. But the problem goes further than mere advertising.

Fritjof Capra believes that ethics refer to a “standard of human conduct that flows from a sense of belonging”, while Matthew Fox sees in the original meaning of the word ‘religion’ as something that can ‘bind us back (re-ligio) to our common origins. But instead of returning to traditional creation stories with all their beauty and simplicity Fox argues that: “a new creation story is essential for our species, for it has the potential to awaken our wisdom.” For once the priest agrees with the scientist, as E.O. Wilson writes: “If Homo Sapiens as a whole must have a creation myth - and emotionally in the age of globalisation it seems we must - none is more solid and unifying for the species than evolutionary history.” He continues by suggesting that the ‘evolutionary epic’ might be a story that could serve as our “binding myth in the modern scientific age - a myth not in the sense of an untruth, but in the sense of a story that explains our existence and helps us orient ourselves to the world.”

A Crisis of Meaning

When Capra observes, however, that “mainstream religions have not developed an ethic appropriate for the age of globalisation” it seems that he is probably closer to an answer than either Fox or Wilson. Although I’m certain that we need a story, a narrative strong and inclusive enough to bind together our fractured society, I’m not convinced we need a new creation story, nor am I convinced that, if we did, evolutionary history would be emotionally and spiritually satisfying enough to provide it. When Capra says that the spiritual life is “a direct, non-intellectual experience of reality,” I believe he highlights, albeit indirectly, the flaw in Wilson’s solution. Evolutionary history, whilst a fascinating and deeply instructive body of science, cannot appeal directly to our “non-intellectual experience of reality.”

Some truths simply do not conform to mathematical equations. Einstein knew this. That’s why he once said: “Not everything that counts can be counted; and not everything that can be counted actually counts”. An over-enthusiastic expectation that the hypothesis as being set out by modern scientific studies could be equally dangerous. Kenan Malik in his fascinating book, entitled ‘Man, Beast and Zombie: What Science can tell us about Human Nature’, warns us that our very success in understanding nature (Evolutionary Psychology and Cognitive Science) has generated deep problems for our understanding of human nature. “[Evolutionary Psychology] views man as a sophisticated animal, governed as animal is by evolutionary past; [Cognitive Science] treats the human mind as a machine, or as a ‘Zombie’ as contemporary philosophy refers to entities that behave like humans but possess no consciousness. Man as beast, or man as Zombie? To many the triumph of Darwinism and Artificial Intelligence seems to have solved the age-old problem of how to understand human beings in a materialist universe. But this is an illusion, I suggest, fostered by the abandonment of any attachment to a humanistic vision. The triumph of mechanistic explanations of human nature is as
much a consequence of our cultures loss of nerve as it is to scientific advance.”

These last two sentences fascinate me. “An illusion, fostered by the abandonment of any attachment to a humanistic vision.” This is similar to something that was said by Sir John Eccles who, through his work at Cambridge on neurobiology, which gained him a Nobel prize in the 1980s, felt it necessary to write: “I maintain that the human mystery is incredibly demeaned by scientific reductionism, with its claim in promissory materialism to account eventually for all of the spiritual world in terms of patterns of neural activity. This belief must be classed as a superstition. We are spiritual beings with souls in a spiritual world, as well as material beings with bodies and brains existing in a material world.” Matthew Fox nicely captures the duality of our consciousness in a very simple, pictorial way. He wrote: “As I looked out over the stunning beauty of San Francisco Bay I realised that San Francisco Bay was in my soul, but my soul was not contained in San Francisco Bay.”

Fox’s words made a considerable impact on me, for the very day I first read them I was flying out of San Francisco to San Diego to meet Gerald Edelman. A man of enormous, direct and highly focused energy, he assured me over an excellent lunch that he and his laboratory would, within five years, have solved the riddle of consciousness.

“Once we have done that”, he said uncertainly, “what is the big idea around which we will then organise ourselves?”

Now is the time for big ideas, Shirley Williams, the daughter of Vera Britten who wrote the poem about the suffering of the First World War and a founder member of the Social Democratic party in England in the late 1970s, describes these times as “an almost uniquely turbulent assault upon tradition,” when she looked at world society from the perspective of international politics after World War I and II, and the horrific conflicts in Vietnam and Cambodia. The world, she observed, has lost a sense of a global morality: “How can any kind of moral structure be re-imposed on a world so far gone in degradation?” Just over three years ago I received an interesting email from a school psychologist at the Jakarta International School in Indonesia. It read as follows: “The biggest crisis we are facing is a crisis of meaning. The tremendous social changes of the last hundred years have stripped modern society of that which gives us meaning, be it in our roots to our ancestors, religions, spirituality, our relationship to nature. Within this crisis of meaning our young people are facing a moral crisis - a crisis of values. Without these anchors young people no longer understand the value of perseverance, learning for learning’s sake, etc. Instead our daily lives are filled with the pursuit of money and temporary ecstasy. Both of these goals are unfulfillable and result in a misguided frenzy in the pursuit of the next thrill, or in depression.”

I certainly don’t think it’s because we’ve lost the institutional trappings of Christianity that this crisis has occurred. Rather it is because the values that the Abrahamic tradition taught us have been left spinning in the wind, with no framework - no narrative - to help us structure them. In his most recent book entitled ‘On Forgiveness’ Richard Holloway suggests that organised religion may be seen as a rocket, designed merely to launch its satellite in to space: “Religion has thrust its best values into the human orbit where we hope they will continue to do their work long after the vehicle that got them there has disappeared.” In fact, Holloway argues persuasively elsewhere that a break with religion may be a positive thing, as society is moving “from a rules morality to a values morality, from a morality of command to a morality of consent.”

Probably he offends those still hankering for a simple faith when he says: “The attempt by humans to discover a morality apart from God might, paradoxically, be God’s greatest triumph; and our attempt to live morally as though there were no God might be the final test of faith.” Could a revolutionary new understanding of a synthesis between science and theology be a framework for “a morality apart from God”? Could we finally be finding a way to the fullness of Pope John Paul II’s plea that “Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes”? Cutting-edge science is, after all, currently in the midst of discovering how central spiritual belief is to the evolution of the human mind. Steven Pinker has recently referred to religion as “One of the deepest mysteries of the human species.”

Slowly, ever so slowly, theology and biology are discovering their commonality. We have to be careful. If God could be ‘proved’ we would have no need of faith. In such a world we would have no decisions to take. In that sense we would not be fully human. We would be back in the Garden of Eden before having eaten the fruit from the Tree of Knowledge. More than that, I suspect our minds would become so over-awed with the concept that we’d flounder still more than we do at present. As Hamlet said to his friend, “There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy.” I don’t believe that we have
come close as yet to understanding the Mind of God.

Richard Holloway puts the scale of all this nicely into perspective: “To us the sun appears to be the largest and brightest of the stars, but it is actually the smallest and the faintest...It is that violent and blazing star whose light and heat comes to us from ninety-three million miles away that makes it possible for us to sit comfortably in our homes thinking about it.”

Do we actually sit comfortably as we ponder such an awe-inspiring vision of the universe, or do we feel that we now know too much for our own comfort? Wasn’t the human mind better able to appreciate the human scale of the story of Adam and Eve? If our planet is such a puny object, then where does humanity fit into such an explanation, and what happens to our best hopes and fears for all that we hold dear? Are they really too insignificant to matter? Is there any connection with the stories that have been told over hundreds of generations that inspired, and sometimes terrified, our ancestors? Have we, in two hundred years, persuaded ourselves into thinking that we, and we alone, are the measure of everything? Have we yet found a story that could compel a future William Blake to write:

“To see a world in a grain of sand,  
And Heaven in a wild flower,  
Hold Infinity in the palm of your hand  
And Eternity in an hour”

Have we yet created a new story that parents can tell to their children which, in the intimacy of the nursery or by the side of the kitchen table, enables us parents to be true to our own beliefs and uncertainties while filling our children with awe, wonder and a passion to become involved in life? Although religious establishments have soaked history in blood for too long, the narrative and explanatory power of religious belief has also brought great happiness and succour to millions.

Although these ancient narratives are indeed capable of stimulating radical, personal transformation, they are equally prone to encourage profound blindness, and a retreat from the inquiries of science: the rise of creationism promoted as a valid alternative to evolutionary theory illustrates both the explanatory power of religious texts and the dangers that they present. As I was told in Ireland in 2002 by a remarkable Catholic nun, Sister Teresa McCormack, Head of the Presentation Sisters, as she was dying of cancer, “We have to rediscover the Jesus story as it was before Christi-
passage of life from one generation to the next that I suggest, is why visitors to the Venetian island of Torcello are so affected by the tears on the face of the Teotoca Madonna. We sense, even though we can neither effectively put this into words never alone prove it, that we are all part of something bigger than ourselves.

We have, for the most part, also failed to treat each other as equal parts of such a wondrous creation. Some have, however, and I stand in awe of the goodness of Nelson Mandela, or the young German theologian, Dietrich Bonhoeffer, facing execution in his lonely prison cell on the day war ended – (his death was the voice of triumph, not the Nazi bullet) - or of the Chinese student facing down the tank in Tiananmen Square. We are all part of a most awesome species. Are we up to using our minds to care for a world of which we are only temporary tenants? Can we start to bring heaven to earth, not for some but for all?

Which brings the conclusion of this chapter back to the opening question: are we Pilgrims or Customers? Aristotle once observed that only in our relationships with each other do we each discover our true humanity. In the final analysis what we make of our humanity is up to us. Are we as individuals and as a society authentic? We may never find the answers to all the questions we could ask but are we constantly searching for the truth, and respecting all those other honest seekers on their own unique journeys? I’m reminded of the words of Oscar Romero just before he was murdered on the steps of his cathedral in San Salvador in 1984:

“This is what we are about. We plant seeds that one day will grow. We water seeds already planted, knowing that they hold future promise. We lay foundations that will need further development. We provide yeast that produces effects far beyond our capabilities. “We cannot do everything, and there is a sense of liberation in realising that. This enables us to do something, and enables us to do it very well. It may be incomplete, but it is a beginning, a step along the way. We may never see the end result, but that is the difference between the master builder, and the worker. “We are workers, not master builders, ministers, not Messiahs. We are prophets of a future not our own”.”
Ever since the English started to plant colonies in other lands, we have exported English assumptions about education. One of the first acts of the Massachusetts colony was to establish the Boston Latin School, only three years after the arrival of the Pilgrim Fathers. The English built schools in India for the children of their civil servants and military officials, and English missionaries took the English middle-class model of education to the most distant parts of the world. The year before the Tutsi and the Hutus descended into genocide in Rwanda a researcher found that ninety-two per cent of the children of Rwanda (most of whom lived in the remote country districts) wore school uniform - just as the original missionaries had done as children themselves in Tunbridge Wells, Cheltenham or Wimbledon. Common Entrance, O Levels and A levels became common currency from India and East Africa to the Caribbean.

As trade developed in the early twentieth century those English schools overseas proliferated, soon to be joined by international schools such as in Yokohama, Seoul, Cairo, Jakarta and Taipei. The ideas of Kurt Hahn (the founder of the Outward Bound movement) for an education that would involve both body and mind, that he first developed at Gordonston and then internationalised at the first of the World Colleges of the Atlantic in South Wales, led to the creation of the International Baccalaureate examination. The ‘I.B.’ is now taken by over twelve hundred schools around the world and is held in high regard in many countries. These schools intrigue me; often with a superficial resemblance to an English public school, they have a more socially all-inclusive atmosphere comparable to a good comprehensive school, and are held in high regard. Their curriculum (as they often state euphemistically) is based on the English model but making full use of the national and cultural heritage of the host country.

Many of these schools form loose affiliations for mutual support, one of which is BSME - the British Schools of the Middle East - comprising some sixty schools from the eastern Mediterranean, Arabian Gulf and the northern Indian Ocean. In January 2003 I was invited to join the BSME in Dubai to explore the implications of these ideas for their schools. It was to be a leisurely conference and I would have five sessions over a four-day period. Dubai must be one of the most extreme examples of a country marked by the turbulent changes of the last half-century. When the British pulled out of the Gulf in 1971 Dubai was little more than the tiny capital of a kingdom of warring sheiks. Then oil was discovered, not a vast amount but enough, it was calculated, to give the kingdom a thirty year spending spree which the ruling family decided was sufficient to turn Dubai into an Arabian version of Beirut - a flesh-pot of the kind that could satiate the needs of the nouveau riche, both from the Gulf and from the Indian Ocean. It is an amazing place. Dubai has the only seven star hotel in

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*26 The International Baccalaureate Organisation was established in the late 1960s, initially to cater for the educational needs of globally mobile students in international schools; it was a deliberate compromise between the specialisation required in some national systems (i.e. the UK) and the breadth preferred in others (i.e. the US). The IBO Diploma was first awarded in 1968. Since then two further programmes have been added – the Primary Years Programme for students between the ages of three and twelve and the Middle Years Programme encompassed the years of early puberty through to mid-adolescence. (WWW.IBO.org).
the world, a thirty storey structure that looks like the upended bow of a dhow, the traditional Ali Baba type wooden sailing ship with a sharp prow. The hotel maintains a fleet of Rolls Royce taxis, and so tall are the office blocks north of the Creek, and futuristic their design that, blink once and you could believe you were in southern California. The economy is amazingly dynamic and the demand for labour so great that seventy per cent of those who work in Dubai come from other countries.

I was nervous as my British Airways Airbus gave a wide berth to Iraqi airspace, which, at that stage it, appeared Britain and the United States could invade within two weeks. Dubai airport was enormous. The sound of a massive firework display momentarily threw me off my guard, then I saw a sign ‘Help celebrate Spring Shopping Festival’ it said. ‘Fly. Buy. Dubai’. I had landed in a consumers’ paradise. The fear of war subsided a little as I was driven to the hotel, but the mood of the sixty-five or so delegates was far more sombre. A number of their colleagues had cancelled at the last moment. The English School in Baghdad had long been closed, but the heads of several of the schools in Kuwait, Saudi Arabia and Qatar had decided to remain at home, so uncertain was the political climate. As I turned on the TV in my room I had a

The conference didn’t start until the following afternoon and so the next morning I went to the museum. This was genuinely fascinating: from ground level it looked, as indeed it was, the original nineteenth century fort built to guard the entrance to the creek. In one corner of its courtyard a twisting ramp led down to a vast underground complex of ultra-modern exhibition areas totally hidden from the surface. I wandered from display to display, mesmerised by what could be done with imagination, and money, to make history totally absorbing. One of the displays showed the building of a dhow, in this case a small one of little more than six metres in length, with static figures depicting the different trades of a shipwright. I must have stood there for a long time for an assistant approached me; “If you’re that interested you could get a taxi to take you to the far end of the creek, outside the city, where a group of itinerant ship-builders are building two very large dhows.”

I checked my watch. I had time, and hailed a taxi whose driver expressed surprise at my intended destination, but then became increasingly fascinated as we approached the two great dhows on the beach. Every bit of twenty-five metres or more in length, they seemed quite enormous from the ground, and my initial wonder was at how the flimsy wooden scaffolding kept them from falling over. There were some fifteen men working on the two boats. Behind them were large stacks of uncut tree trunks, and a saw pit where this timber—mainly tropical hard woods brought in from India and Pakistan—was cut into planks and ribs. It was nearing their lunchtime, and a goat killed earlier that day was being cut up into pieces and cooked as kebabs on an open wood fire.

My taxi driver became a good translator. These men had arrived eighteen months before, commissioned by a Dubai merchant to build two large deep-sea sailing dhows. They had rented a stretch of beach for two years and turned this into a temporary shipyard. “Some of us are Indians, some Pakistanis; one of us is from Iran and four from Arabia” I was told. In answer to my question about an architect’s plan, the leading carpenter said, “No, we didn’t need any plan on paper. It’s all - and he touched his head - “in here.” For an hour I wandered, intrigued, as I watched these skilful men of very different ages organise themselves around a project where each respected the skills, and needs, of the other workers. As they laboured so they talked and shared ideas, and although they did not appear to be hurrying their every move was efficient and effective - just like those of the Hadza in the African savannah.

I sat on a baulk of timber as they ate their lunch, chewing a fresh lamb kebab which they had given me. It was my turn to listen to them. “We come from different countries and we belong to three or four different religions. We love each other as if a big family, and we love God in different ways. So why are you Christians trying to kill the Moslems in Iraq, or is it that you - who already have so much - are greedy for their oil?” There was silence for a while as they enjoyed their food, the leader obviously trying to put a thought into words. He prodded the fire and eventually spoke to my interpreter.

“The chief of carpenters says that he wants you to know that we are all brothers beneath the skin”,

	
said the interpreter, selecting his words carefully. I was transfixed by the scene - I could have been on the beach in Galilee - when three military aircraft flying low over the creek rudely shattered the peace. I smiled back and offered each of them an English handshake as I climbed back into the taxi. Now I felt ready to address the conference for I had my unifying theme for the next few days, “We are all brothers beneath the skin”.

The conference started that afternoon, and I explained to the delegates, how, over the course of five sessions, I would develop my ideas. From the start it was obvious that they were going to be a good group to work with, attentive, thoughtful, practical and intelligent. The kinds of people who knew all about the minutiae of school administration, but realised that such matters could be delegated; what they could never delegate however was their responsibility to think strategically - that was why I had been invited to address them. In age they ranged from a couple in their early thirties to seven or more of whose teaching careers went back almost as far as mine to the late 1960s. “By and large”, one said, “we learnt our craft in England when teachers were expected to use their professionalism on a day-to-day basis to make decisions. Nowadays, it seems to us, this professionalism has been replaced by the need to follow a prescribed set of actions defined by some nameless official who can have no real understanding of the dynamics of an individual classroom. We prefer being overseas”

The flip side of this was that they didn’t have much job security. The fortunes of such schools rise and fall, largely reflecting trade conditions - the British Schools of Kuwait have still not recovered from the 1991 war - and the vagaries of their governing bodies.

“We have some absurd situations to deal with, of course. Many of the wealthiest families send their sons to our schools. Frankly I don’t think they know why - other than seeing it as a status thing, for many are totally idle, but charming at the same time. One boy always arrives just as the bell rings, in a chauffeur driven Rolls Royce. Almost invariably he forgets his satchel and, almost invariably, five minutes later a second Rolls Royce arrives and out steps a chauffeur holding the satchel! We have seven sons of one of the ruling families in the school, but we suspect that a further twenty or thirty of the children for whom we have no records of their paternity are actually his children as well. When it comes to Parents’ Evening it’s the chief servant of the family who comes to school, not the parents. If a young teacher can deal with the contrast of such a situation with, a few minutes later, a set of English parents getting neurotic about a Cambridge University entrance exam, well then, they can handle anything!”

A New Design Brief for Schools

I wanted a story to help them rethink the very nature of schools as institutions in the light of what we now know about the dynamics of human learning. Schools still run to a very old design brief, I wanted to explain forcefully and if we really understood the new research about learning then we would need a totally new design brief. “In 1927 Mercedes Benz built fourteen hundred of those beautiful cars that so capture our imagination.” I told them. “The directors called for a consultant’s report that would show, given the expected technological developments that were likely to occur, how many cars the Company could expect to build in fifty years time. Eventually the report came back. By 1977 the Company could expect to build forty thousand cars a year. The directors were furious. The consultants should be sacked, for they had failed to take into account that there was no way that the schools could train forty thousand chauffeurs a year!”

“It seems stupid, doesn’t it?” I said as they laughed. “We know (contrary to American High Schools and their driver education classes) that most seventeen-year-olds, paying a professional instructor for twelve or fifteen hours of driving lessons (and with plenty of practice in driving their own terrifying parents around country lanes and inner city roundabouts), can learn to drive a twenty thousand pound car through practice well enough to pass their test within a few weeks.” Learning in real time, these descendants of Stone Age men realise that a driver’s licence is a ticket to an even larger hunting ground, be the ‘game’ girl-friends or boy-friends, football matches or distant pub. They just get on and learn to do it. Schools, those institutions largely created by the Prussian mind in the late eighteenth century, and so much loved by British Victorian administrators, are simply by-passed by young people with the energy to do it for themselves. For one of the most practical skills needed in today’s world, schools just don’t matter.

That may sound a harsh judgement, but the same thing is happening with Information Technology (IT) where it is often the pupils who learn to use new programmes far more quickly than the
teachers. Some may think that strange, but it’s not. It’s what many thousands of generations of our ancestors have done, living in small, self-contained communities where one person’s weaknesses were compensated for by another’s strengths. They simply shared experiences. Years ago when teachers had more access to information than pupils, the classroom was indeed the door to learning and the teacher often held the key. Now new technologies make all the world’s information available through the judicious use of a keyboard, as likely to be found in a child’s bedroom as in a classroom. We have yet to come to terms with just what a fundamental shift this means in terms of what teachers have to help children to do, namely to work things out for themselves. “It’s only when I have a chance of doing something for myself that I really understand what it’s all about”, said that eleven-year-old boy back in Sussex described in the Introduction. That’s why I.T. is so attractive to many youngsters; it puts them in charge. In turn that is just what our Stone Age instincts tell us is a key survival skill.

“That may be true”, I was told recently by a seasoned but now disillusioned teacher, “but it’s simply cheaper and quicker to tell a child something than it is to allow the child to work it out for itself.”

Cheaper, and less threatening to a teacher’s sense of owning something a child has not yet got. Here we start to get to the crunch issue. However much teachers or parents may deny this, for reasons that often seem perfectly justifiable to us at the time, we are in fact in the control business. It stems from a simple misconception. As adults we know more than children, but too often forget that the most effective way for children to be as good, if not better, than ourselves, is for us to get out of their way so that they can figure it out for themselves. We forget that many of our most powerful learning experiences were when, as young teenagers, we were really up against something which we had to work out all by ourselves. It was often terrifying, but we learnt fast.

The transition from dependent child to independent adult is not easy for either parents or teachers to accept. It’s easy to love a very young child. They need us in such obvious ways. They learn quickly, and often seem to regard us - at least for a short time - as knowledgeable and acceptable role models. As they get older we may get upset when, for the first time, a child throws back at us some of our deeply held beliefs, and then goes ahead and reinterprets these through their own experience. “He/she is developing a mind of his/her own”, we ruefully reflect, often not quite certain that, by our standards, he or she is really up to such independent judgement.

And so begins the process of adolescence, that second period of synaptogenesis, when the brain is literally sorting itself out. Adolescents are impulsive, and that scares us because such behaviour is potentially risky. We forget, however, that they too are the latest descents of our Stone Age ancestors, and that such impulsive behaviour is an inherited genetic adaptation that our ancestors valued because it gave the tribe, or the clan or the family, the energy to do the unexpected. The initiation rights of the American Indians, similar to those of Arabia or Africa, carried out in the teenage years seem cruel and barbaric. But these primitive people knew something that we often forget: unless young people are successfully weaned of their dependence on their parents, or teachers, they will never become fully functional adults and, instead, become a threat to the well-being of the rest of the tribe. Young people who failed to make it in times gone by, were often driven from home by their parents, probably to perish on their own in the wild. Life has always been tough; adolescence gave young people the risk-taking attitudes that enabled them to put their as yet naive skills to the test. In the process of such risk-taking most of them became successful, functional adults.

In recent years scientists and educationalists have become very aware of the significance of the first period of synaptogenesis, and the predispositions which make it possible for very young children to learn certain things almost automatically as they soak up experiences from their environment. The emerging research on the second period of synaptogenesis, that comes in the teenage years, is just starting to focus on how adolescents learn. I see this period as being as much as a time-constrained predisposition, as are those instinctive learning behaviours we associate with the youngest children. Like the innate predispositions of the first few years of life, if adolescents don’t capitalise on these to work things out from experience, they simply lose out on the opportunity. They fail to develop the competence that enables them to stand on their own feet.

Here is the heart of my argument. I suspect that too heavy an emphasis in adolescence on sitting listening to instruction in the classroom actually nullifies the potential for creativity, enterprise and personal responsibility that these tempestuous years exemplify. Eventually, I’d suggest that an overemphasis on instruction during these years deprives the young person, possibly forever, of developing sufficient personal creativity to take
control of their own destiny, and can create instead a dependency in later life on ‘systems’. This kind of opting-out is destructive of individual and community responsibility.

Subsidiarity

As parents in the modern world, many of us find it easier to deal with our children before the onset of puberty than we do in adolescence. Sometime it’s as if the adolescent child seems to see right through us. Maybe that is exactly what they’re doing. It’s not very comfortable to have an active young mind calling your bluff and showing that you are, in fact, compromised by the system. Your job may well not reflect what an adolescent son or daughter might regard as interesting, worthwhile, rewarding or - fearful accusation – socially irresponsible. Your response that you’re only doing it to keep them in the style that they think is their due, meets all too often with a dismissive shrug of the shoulders. They’re not convinced. The work that keeps you in its clutches day after day, year after year, does not seem real to an adolescent. Our Stone Age ancestors probably didn’t suffer such inter-generational turmoil in quite the same way, because hand-to-mouth existence meant that children experienced first-hand every day what their parents did and why. To them, money came from the work you did, not from an ATM. Encouraging young people to think things through for themselves is what my whole career has been about, yet thinking things through for themselves is what my whole career has been about. 

Subsidiarity – “It is wrong for a superior body to hold to itself the right of making decisions which an inferior is already well qualified to make for itself.” This was set out by Pope Pious XI in the encyclical ‘Quadragesima Anno’, which stated simply and unequivocally that it is wrong for a superior body to hold on to the right of making decisions which an inferior is already well qualified to make for itself.

I am passionately concerned that there is something in the underlying principles which Western countries are applying to education, that seems to have resulted in the most awful unintended consequences of narrow thinking, dependency and a sense of detachment from every-day world problems, and I believe that the doctrine of subsidiarity shows just what this is. As teachers (including the very best) or parents (including the very best), we’re nothing like as good as we should be in letting our own young do things for themselves. I personally find the doctrine of subsidiarity most helpful when articulating what the proper evolving relationship should be between teachers and pupils, and parents and children. I stress the word ‘evolving’ for that is what it has to be. This is what I, as a father first and foremost; feel is my prime responsibility for my own children. It’s also the model I’ve sought to apply to other people’s children, entrusted to me within a classroom. For many years now I’ve recognised that a very major problem in formal education - indeed I think it is probably the root of all other problems - is the over-dominance of the teacher (and sometimes the over-dominance of a caring parent) over the child that wants (in an evolutionary sense ‘needs’) to exercise the right to do something for itself. It is not, I must stress, that I’ve anything against good teachers. Nevertheless, young people are far too often lulled into a false sense of security by the good, caring teacher (and the good, caring parent) to the point where they miss out on developing their own sense of direction and control.

Subsidiarity - “It is wrong for a superior body to hold to itself the right of making decisions which an inferior is already able to make for itself” – was first defined as a Catholic doctrine by Pope John Paul II in 1931 as a means of reinforcing the confidence of Catholics in Eastern Europe who were coming under increasing pressure from their new Communist leaders to accept Party dogma, rather than working issues out for themselves. More recently it had been held as a guiding principle of federation within the European union and in the Maastricht Treaty, and a clause within the Treaty of Rome states, “In areas which do not fall within its exclusive competence, the community shall take action in accordance with the principles of Subsidiarity.”
To my mind parents and teachers, policymakers and politicians have to think very carefully about the doctrine of subsidiarity. I’d argue that it should be the end point of the intellectual wean- ing process. And by ‘end’ I don’t mean the final act. I mean it should be the ‘end’, or the ‘aim’, of the whole education process. Subsidiarity has to start when children are very young. Leave this sense of self-control too late and a sense of dependency, tinged with laziness, creeps in. Miss the biological imperative to start taking control during adolescence, and the youngster will grow into a dependent adult. Our world is full of people who’ll agree with much of what I’ve said but won’t accept that they can do anything about it. They are wrong. They, in their tens of thousands, are precisely the people who change things. Too many adults were, as children, ‘over-schooled, but under-educated’, leaving them, years later, to always expect that someone else other than themselves will always take the lead.

Back that evening in Dubai I thought it prudent to restate the broad argument. It was not the late twentieth century that invented the concept of lifelong learning. I explained, we are simply attempting to rescue an intrinsic human disposition from the desolation of the industrial approach to intelligence over the past two hundred years or so - namely the ability, and the desire, to work things out for ourselves. In this salvage process, however, governments and major educational international institutions seem poised to make yet another mistake. As the twentieth century gave way to the twenty first, educational policy makers saw the opportunity of extending institutional provision of education on a scale hitherto unthought of: university lecture halls for fifty per cent of the population of late teenagers. Our Stone Age ancestors would have gone crazy. School-based skills in isolation can never be the measure of everything that matters.

Modern society is in danger of missing the point. A point that has actually been known for many years, but so often neglected. If young children were to receive an education that consciously sought to give them a progression of skills and attitudes which, as they grew older, would put them more in charge of their own learning, this would release that deep-seated urge to be responsible for themselves when it is at its strongest. To be without a job, hanging out aimlessly on a street corner, is the result of our culture, not of our nature. We adults, teachers, parents, administrators and, above all politicians, have a vital lesson to learn; we have progressively to surrender much of the control function that has dominated education for far too long. All of us need to work towards that defining moment for each child when, as a mark of the sheer quality of the education they’ve received, we have such confidence in them that we know that it’s in their best interest to go forward on their own. A few will make mistakes, and most will learn to correct them. This is the beginning of real learning.

Just think about what that would mean in a school. Then think about what it would mean in a home. Think what responsible children would look like. Think what it would mean if the resources that are currently allocated to secondary education in most countries, were allocated to the primary sector, and the staffing allocated to primary schools were transferred to secondary schools. It couldn’t happen overnight and only as the younger pupils from a restructured primary education moved into the secondary school would they know how to respond to being required to work an ever greater proportion of their studies out for themselves.

To make my point I told the delegates a story, recounted by my colleague Janet Lawley. Appointed Headmistress of Bury Girls Grammar School in early November one year to start work in January, Janet was forced to leave her ‘A’ Level Geography class in her previous school with no teacher for the last two terms of their course; twelve years before there had been harsh restrictions on replacing teachers mid-year. It was not the most gifted class she’d ever taught and several students had only indifferent GCSE results. There was no alternative, however, but to show the students how they could divide the syllabus into twenty-one sections, and then have each pupil undertake the responsibility for teaching a section each to the rest of the class. With no one to rely on apart from themselves, and knowing how important a good result was to each of them, every pupil worked extremely hard. No one dared to let any of the others down. When the results came out they were better than any that Janet had achieved in some thirty years of teaching - every student got a Grade A. Why? “Not until I knew my part of the syllabus so well could I teach it to my friends”, said one of the students afterwards. “Teaching helps you learn something better”, said another. That is a most powerful clue as to what is wrong with schools - most children are not personally committed to what happens in a classroom; they receive adult ideas without turning them into their own knowledge.

I think we have to reverse the current assumptions that we in England and in many other countries have a problem with our children, especially
teenagers. I’d suggest we rephrase the scenario accordingly; I think teenagers have a problem with us because we just don’t know when to let them take over. Why? Well, perhaps it’s because, deep down, we know that we never gave them the skills when they were young to have both the confidence and competence to do so when they were older. It’s a problem of our own making because we’ve never really understood the tenet of subsidiarity. We have to look more carefully at ourselves, rather than simply blaming the teenagers.

This is a hard argument for secondary teachers to accept, used as they are almost every day to battling with teenagers who they see as being old enough to know how to create trouble, and not old enough to avoid it. To these people whose professional lives have been tied up with secondary schools my case flies in the face of everything they have ever experienced; what their school - their pupils - need is more teachers, smaller classes and sanctions for those who won’t toe the line. Many primary school teachers, each one of whom probably knows each child they teach better than can secondary teachers who teach to greater numbers of pupils, but for less time, understand the principle of subsidiarity more clearly. They see the changes going on in the child as it gets closer to puberty, and feel confident that the child who has done well up to that time is ready for a more personally challenging way of learning. They also see the child who, for any one of a number of reasons, has lost ground in primary school, and fears the child will feel ever more antagonistic towards the secondary school.

In the long run I believe it will be easier for lay people - parents, members of the community and employees - to accept this argument than it will be for the professional educators, policy makers and the politicians. Parents, living as they do from day-to-day with children, see the reality of childhood most clearly. So, too, do many teachers, especially the ones who are able to spend the majority of their time with the children rather than acting as administrators. Administration has become both a means, and increasingly, an end in itself. The problem doesn’t start in the schools for although every institution needs some form of administration to keep itself going, good teachers know how to keep this in check, to ensure that administration is always subservient to the learning needs of the children. The problem goes back a couple of hundred years to pre-Victorian times. England has always sought to get education on the cheap. Therefore for generations the attitude of successive governments has been to accept that an only moderately well qualified teaching force, paid only moderately well, has to be administered by a relatively small number of better qualified people who tell them what to do. That is bad enough in itself as a management strategy, but given what this book has set out as being the individual’s motivation to take control of his or her own learning, what makes it far more serious is that those who are in ultimate charge are just too far away - both in years and in their assumptions about how children tick - to appreciate the numerous unintended consequences of the directives they issue. All this is compounded, in a very English ‘officers and other ranks’ fashion by paying administrators more money than teachers. This often corrupts what were earlier good teachers because, as they’re promoted they find themselves taking on the assumptions of their senior colleagues, and starting to apply the same administrative strategies that so distressed them as teachers.

The people who will be most challenged by subsidiarity are the politicians. They have come to assume that progression up the party ladder can be achieved quickest by appearing to be reforming education, for concern about young people runs deep in every community and will get them votes. Politicians and their so-called reforms come and go with the seasons. They rely on highly competent civil servants to tame their most extreme policies into something that is both realistic and achievable. Their greatest achievements are that they stop the system from breaking up, which, paradoxically, is where I think they most fail the country. In place of a vision we have a mosaic of sticking plasters

*28 There is a final twist to this story. In May 2004 Janet was to address the afternoon session of a training programme for head-teachers of a group of primary schools. She arrived just before lunch, and decided to sit in on the last quarter of an hour of a lecture being given by the newly appointed, and young, adviser. “I wonder what was your most powerful-ever learning experience?” she asked the assembled group of heads. After a few minutes the young adviser said, “I’ll tell you about my experience. It was when I was in the last year of my Sixth Form course when our Geography teacher left us at Christmas, and we had no-one to teach us for the last two terms. It wasn’t until that moment when we had to learn how to teach others that I really woke up to how exciting learning can be. That’s why I’m doing what I’m doing now... helping all of you to understand that to make youngsters too dependent on ourselves is bad teaching.”
designed and administered by an army of advisers and inspectors, chief officers and professional assistants desperately trying to make a good job of a system long past its sell-by date. Many of them recognise this and so cynically defend their own children to independent schools. Essentially it is because they see themselves as managers; always answerable to someone else. They don’t see themselves as actually being in charge - in fact no one does. The system itself goes unchallenged. There’s a vital distinction to be made between managers and leaders: managers do things right, leaders do the right things.

“The challenge in England,” I said to those English trained teachers in Dubai, “is that we know we need quality education but most people don’t feel seriously enough about this to be prepared to pay for what quality education would really cost. Not that money is the only issue, but in the English home counties at the beginning of 2002/3 school year independent day secondary schools were charging roughly three times as much money as government was providing for a pupil in a state school.” This is essentially a political issue, I went on to explain, for England has experienced political double speak for generations. Politicians may say that education is at the top of their agenda but unless their constituents have a vision of what quality education for all really means, they will never hold their politicians to account. It seems that too many of the population fall for the politicians’ explanation that the problem is with the teachers, not with society at large. If my explanation is right then that means the problem rests squarely with each one of us. Unless we, as knowledgeable members of a Democracy, are prepared to tell people what is going wrong with the experiences of young people, and what needs to be done to rectify the situation, we shouldn’t be surprised that politicians simply opt for the course of least resistance - they stick with the status quo, and add a few further frills of their own.

We sat, the sixty of us, talking long after dinner that night, as the warm breeze from the Gulf started to blow across the patio by the pool. We were more than a couple of thousand miles from England, but the conversation reflected the deep concern, the passion and the fears I had heard in so many English staff rooms over the past half dozen years. It was more relaxed probably because their working conditions were easier than those at home, yet these headteachers’ vision was all the stronger because they could see the situation more clearly with the benefit of distance.

“We have employed several newly qualified teachers in my school”, one head reflected, “people who trained in the mid 1990s. Some of them have the potential to be very good teachers. They’re much better with their paperwork than ever I could be, but they think in straight lines from calculated inputs, to objective measurement of predetermined outcomes.”

“The one thing such young teachers fear” said another head, “is to be put into an unstructured situation. Without the assurance of a plan in front of them they easily get lost. They keep very much within the bounds of their subjects. They work hard, many of them, but they are time watchers; it’s as if they mentally say ‘I’ve been paid for this number of hours and after that I will stop’. As for having a ‘big vision’, well forget it. Remember most of the more recently trained teachers will have studied no philosophy, and what they know of the history of education dates only from 1988 - what we’ve been discussing over the last three days would have been news to them. Any suggestion that education was about equipping youngsters to make the world a better place, rather than simply preparing them to be successful in a consumer society would leave them baffled and I think very unsure of themselves, even though personally they might well be excited.”

“As for your suggestion about Subsidiarity,” interjected another, “which incidentally I think is a marvellous way of looking at evolving relationships between teachers and children - well that would simply destabilise such teachers. Their very authority comes from the way they control the child’s entrance and progression through formal structures. They don’t want to be control freaks, but that is what they inevitably are. It’s as if society has so lost faith in itself that it requires teachers to shape pupils in ways that conform to the shifting expectations of politicians. Can you, John, explain the last twenty or so years in terms of a political battle to fit children into a particular orthodoxy? I would value your thoughts on that because it seems to me that political imperatives have completely overtaken what we used to define as the needs of the child. When I started teaching I wanted to change this. We were a questioning group of people well used to reading Neil Postman’s ‘Teaching as a Subversive Activity’. That revolutionary zeal seems now to have totally gone. It seems to me, seeing all this from a distance, that England has completely lost the plot.”
Suffering from the ‘Affluenza’ Epidemic

The following morning I attempted to rise to the challenge. “I have one advantage over most of you,” I explained, “in so far that being older I can see further back. I first went to nursery school in 1944, the year of Butler’s Education Act that defined the educational structures we all grew up in. This was a profoundly different world to that of today; steadily, remorselessly, the social structures that Butler took for granted have changed beyond recognition. Many of these changes most of us would approve of - the country is freer now of the class prejudices of years gone by, but there is less social cohesion, and that is troubling. When I went to boarding school in 1953 television was still in its infancy. On a Sunday evening, having changed into our pyjamas, we were allowed down into the house-master’s drawing room to listen to a BBC Radio serialisation of Nicholas Nickleby, as we sipped our hot chocolate. It was the treat of the week and that must sound quaint to some of you! Most of us had hardly seen a television set, yet our teachers were frightened of its potential, negative influence. We were required to write essays on such titles as ‘Will television kill conversation?’ or ‘Is television the death knell for reading?’ Not until I was seventeen did we hire a television set, just for the Christmas week, and I was enthralled and watched first one and then another programme - all by today’s standards very bland. With horror at the end of the holiday, I realised that I had done none of the reading I had intended. Nor had I done any more work on the model of the ‘Golden Hind’ (the ship in which Francis Drake sailed around the world) that I’d started to build the previous term and intended to paint over the holiday.”

I went on with my explanation by noting that I was at university just as the contraceptive pill became available. By modern standards we would seem to have been a sexually repressed generation. Added to that was the fact that I was at university in Catholic Dublin where ‘love and marriage [went] together like a horse and carriage’ was the assumed ethic, more frequently honoured perhaps in the breech, than in the observance, but only under cover of much secrecy. Often with horrendous consequences. I recalled that when one girl in my year married, her father literally gave his son-in-law a ‘shot gun’ on the day of the marriage and forbade his daughter ever again to return to the family home. I was twice aware of marriages arranged within a week, only years later to dissolve in bitterness and recriminations. And, being Ireland in the ‘60s, the evening Irish mail boats were greeted in Holyhead and Liverpool by nuns hoping to deter terrified young Irish girls from going ahead with the abortions they sought in England. Sex was often more frightening than exciting.

The pill changed all that. Sex was no longer just the reward for marriage. “The Joy of Sex”, often in a brown paper wrapping, was read as much on Dublin buses as it was in England. As I moved into my first teaching post at Manchester Grammar School I experienced first hand the confusion of teenagers who were not frightened by the possible consequences of their sexual activity, though one Sixth Former I knew ‘was not careful’ and ended up in a Registry Office wedding to which he had been dragged both by his and his girl friend’s parents. In a short while many of those parents became so envious of their children’s apparent ‘freedom’ that they started to experiment in ways that shattered what had earlier seemed to be stable families. Divorce laws were made easier, and by the time I became Head in 1974 I was aware of the steady rise in the number of children from divorced parents - something which I had never encountered in all my time at school in the 1950s. Steadily I became aware that if a pupil was seen by his year tutor to be behaving in an irrational way the first assumption was that something was starting to go wrong in the family. The change of emphasis was subtle, but significant. For better or worse, explanations for unacceptable behaviour were now sought not in the youngster’s inability to reach a mature decision about his behaviour, but more in the environment from which he came. In a society that now saw it right to challenge anything and everything, old-fashioned notions of deference to seniority, tradition and experience disappeared, and it was my generation which was caught with one foot in the present, and one in the distant future.

Women were quicker to realise their new freedom than men were to recognise the unfair assumptions that had often been made in the past about the dynamics of family life. An erosion of religious belief and the growth of consumerism meant that more and more people were not prepared to wait for their rewards in an uncertain hereafter. Expectation of what might comprise the good life made it increasingly hard for husbands, as the single wager earner, to support a family on a single income, while the attractions to a woman of having her own income and life-style without the necessity of having children, became for many a persuasive alternative to conventional marriage. Within little more than a generation society was in a turmoil, and the school was the battlefield,
littered with social casualties. Add to this the increasing disparity in wealth and social cohesion collapsed. One estimate has it that while in the 1950s (when I can claim to know something about what life was like) sixty per cent of British people thought that other people could be trusted, that figure had fallen to forty-four per cent in 1983, and twenty-nine per cent in 2001. As affluence has increased so ‘got more, wants more’ has started to play into the English social experience. We are suffering, someone recently had said to me, from an “affluenza epidemic” and don’t really feel too good any longer pushing our own full trolleys to the supermarket check-out when we knew that a quarter of the world was starving, and half the world’s population has still to make their first ever telephone call.

Similar things were happening across many Western countries. Vaclav Havel warned the Czech people that, having got the one party system off their backs with great energy, they were now face to face with their real enemy; namely their ‘indifference to public affairs, conceit, ambition, selfishness, the pursuit of personal advancement and rivalry.’ It sounded just like England.

In the late 1980s, just as cognitive science was starting to show the critical relationship between the formal structured learning in school and the informal learning experienced on the street corner and in the home, so the clamour from politicians for economically productive women to be in fulltime work reached a crescendo. “Good schools alone can never be good enough” people like me started to warn; “Children’s learning is never simply linear, neither is it objective.”

In the world we have come from, I reminded my Dubai audience, we were accustomed to learn in unstructured situations. Children don’t need quality time with their parents; rather what they need is to be with their parents when they are in good moods as well as bad; when their parents are frustrated and when they are happy. When they are fighting their corners at work or coping with misery and grief. The trouble is that fewer and fewer children are coming from functional homes. In seeking to explain the reasons for the differential between high and low rates of employee pay, a study made in America, published in December 2001, found that over fifty per cent of the variables were due to ‘soft’ factors such as motivation, industriousness, the ability to delay gratification, punctuality, perseverance, leadership and adaptability; less than fifty per cent could be attributed to educational attainment or cognitive ability.

All of which interested the Dubai headteachers, as it does anybody with a serious interest in the origins of our so called ‘education problem’. Quite simply societies that don’t hold together socially find it extremely difficult to raise bright, adaptable youngsters. Societies that haven’t worked out what it means to be morally aware can’t expect their young people to develop moral values simply by teaching them in the abstract. In my terms people who don’t know if they are Pilgrims or Customers default to the latter – it provides more immediate gratification. Modern life requires an increasing number of decisions about balance. Many of these decisions require us to be intelligent and thoughtful and willing to defer gratification. It’s hard to be thoughtful if you are living in a ‘noisy’ environment; on the other hand if you want to dodge the issue then you turn up the music, and relax. In this we are again right back with the Hadza - constantly having to balance the delights of laziness with the all-engaging addiction of being a workaholic.

Many of the social changes of the last forty years have crept up on society over the course of considerable time, so that – in the short term - they are hardly noticed. Academics say that in most social change there are just too many variables to definitely prove cause and effect for there can be no precision in a judgement if it can’t be tested empirically, Or so they say. No one, it’s said, can ‘prove’ that watching too much television is bad for us. No one can ‘prove’ that affluence is necessarily good or bad. For that matter in our post-modern world what is meant when something is defined as ‘good’ and ‘bad’, in any sense other than being relativistic? What is good for one person, may, so the argument goes, be bad for another. Before any judgement can be made, researchers say, a self-contained case study is needed with no more than one possible variable.

In the recent study on the impact of television on the tiny state of Bhutan, the isolated Himalayan kingdom of Shangri-La, it seems there could be just such a self-contained study with only a single variable. Bhutan is a mountain kingdom of seven hundred thousand people that, until the 1970s, had no roads or electricity. People there used to think nothing of walking three days to see relatives, whilst the Bhutanese who live on the equivalent of a thousand pounds each per year were thought to be amongst the happiest, and the most law-abiding people in the world. In June 1999 all that changed dramatically when the king agreed to the installation of five large satellite television dishes that would make Bhutan the last country in the world to have access to television - all forty-six channels, largely of Rupert Murdoch’s Star TV network. The
The king authorised this on the basis that it was likely, he thought, to maximise what he called ‘Gross National Happiness’. At the same time, however, the king warned his people that “not everything you see will be good, but it is my sincere hope that the introduction of television will be beneficial to our country.”

It seems, from the study, that the king was being vastly over-optimistic. The people of Bhutan - just like the Hadza - would stop anything routine they were doing if there was the chance of seeing something novel; it’s a basic function of our brains that we always give precedence to novelty. After four years there have been ‘dramatic changes’ (according to Bhutanese academics): crime, corruption, an uncontrolled desire for Western products, and changing attitudes towards love and sex. One third of girls now want to look more American, with whiter skin and blonder hair, and are adopting new attitudes towards relationships, wanting boyfriends not husbands, and sex not marriage, are undermining traditional behaviour. Thirty-five per cent of parents say they would prefer watching television to talking to their children, while fifty per cent of the children say they watch television for up to twelve hours a day. Theft, violence and prostitution were, before 1999, virtually unknown, but no longer. With astonishing speed it seems television has created a nation of hungry consumers from a kingdom that once acted collectively and spiritually. The Bhutanese are suddenly a people who have become ‘preoccupied with themselves, rather than searching for their selves’. In the face of television, with its elusive promise of a future materialistic paradise for the consumer, the real Shangri-La, is rapidly disappearing.

Some of that sounds tragically like the English experience. Throwing its lot in with a culture of acquisition, Bhutan is simply doing what the OECD, the World Bank and the World Trade Organisation urges all nations to do with the aim of increasing world trade. England, as much as Bhutan, needs to recognise at both a political and individual level, that choices invariably involve unintended consequences. My earlier visit to Estonia in 1998 had vividly portrayed this possibility in the four possible future scenarios I was presented with - the ostrich, the crow, Icarus and the flamingo. Those two American academics from Harvard, Lawrence and Nohria, had concluded their five year study of Russia by saying that any person, or nation, who allowed one of the four drives to dominate over the other three would eventually implode. What countries needed was “a well-rounded, seasoned general practitioner for an entire human society, an expert, to use an old fashioned term, in applied, political economy,” they said?

“Isn’t that exactly the mistake that British politicians have made over the past twenty or more years,” asked John Scarth, the Headmaster from the Oman. “To assume that it’s the drive to acquire which compels both the individual and the economy at large. Haven’t we all felt, at different times, the ground shifting beneath our feet?”

Another said, “We seem to have lost any sense of moral purpose in education. We have a curriculum for a materialistic world, and we just don’t think this is good enough. Isn’t each one of us frustrated that the vision we are supposed to be working towards is fundamentally flawed? Surely that is the real crisis that we’re facing, we are finding ourselves doing something that we’re not really believing in? Is education really about preparing children to conform to a Dubai kind of materialism, rather than the serenity of those carpenters John talked about down by the creek? We have lost a sense of balance. We are forgetting what it means to be human. How, on earth, has this happened?”
Over lunch that last day in Dubai, I tried to formulate, in as simple a manner as possible, just how all the political upheavals of the last thirty years could have lead an English headteacher to observe "we are finding ourselves doing something we’re not really believing in." I found myself thinking about that secondary modern school I had taught in for a number of weeks during 1962-3. It was a pleasant, relaxed place full of moderately well-behaved youngsters who just couldn’t wait to leave school and get into a job - which they would readily do given the high levels of semi-skilled employment at the time.

Nothing that Ellen Wilkinson, or her successors as Minister, had been able to do in the years after the Butler Act of 1944 had persuaded the English that such schools had any real parity with grammar schools, for everything that English culture believed about education stressed the differences between the elite and the proletariat. Ellen Wilkinson was expressing an empty but pious hope when in June 1946 she commented, of the public schools, "My own view is to make the schools provided by the state so good that it will seem quite absurd to send children to these (public) schools."

Meanwhile in the world which Rab Butler understood, miracles could be worked by good headmasters. The 1944 Act called for a vast increase in such people, for it required the establishment of hundreds more new grammar schools and more than a thousand new secondary modern schools. If there had been a clear understanding of what such schools were to be about then the shortage of appropriately qualified people to become headteachers might not have mattered so much. As it was, however, there was a frightening lack of clarity about what these schools should do, and the means by which they might achieve their goals. All of this had to be worked out separately in each school by men and women of genuine goodwill and enthusiasm but lacking, all too often, the intellectual gravitas that Butler had simply taken for granted.

The mid 1960s, when I started teaching, can now be seen in retrospect as a period of unrealistic optimism. It had started with the post war recovery of ten years earlier, but was to be rudely shattered ten years later when it became abundantly obvious that the British economy, having been held together in a ‘belts and braces’ fashion for a generation, was being rapidly overtaken by those nations who had invested heavily in new industries and appropriate industrial infrastructures.

English education fell foul of this lack of foresight; the massive structural reorganisation of secondary education demanded by the Butler Act required funding which Britain in the immediate post war years could never afford. Slowly, as conditions improved in the late 1950s, attempts were made to breath life into the tripartite system of secondary education so carefully crafted by Rab Butler, but it was too little, far too late. The country had no faith in a three tier kind of secondary education. In 1965 a Labour government instructed all LEAs to draw up plans for a comprehensive system of secondary education; what hadn’t been achieved under the three separate roofs of grammar, technical and modern schools would now have to happen under a single roof. It must have been one of the least carefully considered, under-resourced major social reforms that any country has ever attempted to impose on its population. Half-baked compromises including schools on split sites, limited support for teachers and the unrealistic expectations of parents were compounded by Harold Wilson desperately looking for votes in the General Election of 1974 by claiming that “comprehensive schools will be grammar schools for everybody.”

For the second time in a generation England was to embark on a reform of secondary education with no clear sense of direction, and with precious few
people qualified to lead the new schools. I was one of these unqualified people when I was appointed deputy head of the old Stevenage Grammar School in 1972 at the age of thirty-two, becoming head only two years later. Two early meetings in my first term stand out as if they were only yesterday. The first was a meeting of the twelve heads of the Stevenage comprehensive schools - as of a year before nine of them had been secondary modern schools, one a technical school, one the old Girls’ Grammar School and, with myself as the head of Alleyne’s, an old boys’ grammar school. All the heads were significantly older than I was. I was nervous that I would find it hard to keep up with what I’d anticipated would be an extremely fascinating conversation. It was a mighty letdown. They talked of nothing but mundane detail. As the months went by I had to recognise that they either could not, or would not go beyond matters of management, and immersing themselves in matters of detail left no time for a deeper questioning of what it was all leading to. The invitation to attend the second meeting came from the headmaster of the old Grammar School in Hitchin some four miles away. “I suggest you join the Headmasters’ Association (HMA)” he said. “They’re a good group of people from across the county and by belonging to the Association you’ll have the backing of their legal department should anything go wrong.” It sounded like good advice and so I accepted the invitation, and several days later drove to a hotel some miles away.

“Ah, so you’re Abbott”, a much older man greeted me. “Let’s see, you’re the new man at Alleyne’s, aren’t you? Don’t you come from Manchester Grammar School? Jolly good. I’m sure you’ll do well.” And he then drifted away, social chit chat obviously not being his strong point. He would have got on well with Edward Thring, and Robert Morant would have respected his judgement. But in the context of a comprehensive school he was an anachronism. There were some thirty men in the room but only two or three women. We settled down to what I expected was business. Their business, I was quickly to discover, however, was how they could subvert the policies of the education office by clinging to the ethos and working assumptions of the grammar schools of which they had all formerly been heads. Their antipathy towards the comprehensive ideal, which they were now being paid to implement, was absolute. I forced myself to keep quiet. I had accepted the post at Alleyne’s because I believed in comprehensive education, yet amongst these people it was assumed that my job was actually to subvert that process.

Weeks later it was explained to me that the National Association of Head Teachers (NAHT) had emerged out of the NUT (the National Union of Teachers) as the association for both primary and secondary modern heads. As NUT policy was fully committed to comprehensive schooling, every former head of the secondary modern schools that I knew chose to become a member of the NAHT. The Head Masters’ Association (and note the male gender) had grown up earlier in the century to support the heads of county grammar schools, and had made common cause with the members of the Head Masters’ Conference who were a far smaller – even though highly influential – group of men. Having been invited to join the Head Masters Association, and not the NAHT, my colleagues were making assumptions about my opinions even before I had formed them. I was learning fast; English education was riddled with compromises, and social distinctions. I noticed one curious, and perhaps insignificant fact that says a lot about the English. Almost invariably the ex-grammar school heads wore sports jackets or blazers while, again almost invariably, the ex-secondary modern heads wore lounge suits. The former grammar school heads made the point that they were so superior they could dress down, while the others felt it necessary to dress up.

In those early days of reorganisation no-one, including the chief education officer, seemed to have any clear idea of what would make a good comprehensive school head. And no one was prepared to acknowledge the magnitude of the challenge of creating comprehensive schools for children from all kinds of social backgrounds, in a country that had - for centuries - seen in education the means by which to maintain social divisions. This short-sightedness was to be the rock on which the whole enterprise floundered – and like any shipwreck the broken bits littered the shoreline for many years. In the thirty years of ill-conceived reforms that have characterised almost the entire working lives of many teachers, England is still paying the price for never recognising that, without a quality education for everyone regardless of cost, this country will remain socially divided and never fulfil its potential.

Distance lends a Sense of Perspective

So that afternoon in Dubai I started to explain this lack of clarity of purpose with regard to comprehensive reorganisation. It had been different in Wales and Scotland, I said, where historically attitudes towards schooling had been more positive,
and the social pretensions of the middle classes less overt. I explained that the Scots had long held education in high regard, reflecting the more egalitarian nature of their society that, only some two hundred and fifty years before, had evolved out of the group loyalties within the clan system. Doctor’s son and labourer’s daughter would sit, if intellectually up to the task, at adjacent desks in Dollar Academy, the Nicholson Institute or Portree High School, and compete as equals to get a place at St. Andrew’s, Edinburgh or Glasgow Universities. There are public schools in Scotland, but they cater mainly for people living south of the border - they have never distorted the Scotsman’s belief that education is a serious, and significant activity for all pupils.

Wales, for much of the early twentieth century, was predominantly a land of determined working people who valued education as a way in which their young could escape the limitations of work in the mines or the factory. The chances of a child going to a grammar school were roughly twice as high in Wales, as they had been in many parts of England. In Northern Ireland it was different again with all the additional problems created by alternative forms of sectarian schooling.

It was in England, especially within the densely populated home counties where most of the public schools were to be found, and where the post-war expectations of the rising middle classes who hoped eventually to send their children to independent schools, were most intense and where, by the early 1970s, frustration with post-war consensual politics was at its greatest and its opponents most vocal.

Specifically it was in Hampstead and the other enclaves of the traditional rising middle classes of London that a Right Wing intelligentsia identified within education all that they saw was wrong with a socialist society. While Shirley Williams sought to commend English secondary education for its diversity, the Right Wing - in the famous (or infamous depending on your perception) - Black Papers argued that comprehensive education was undermining everything that earlier had made Britain ‘great’. Increasingly policy makers sought to correct what they saw had been the post-war drift towards ever greater levels of public ownership and unsustainable social reform. By the late 1970s the British economy was stagnating, and the Conservative victory of 1979 was unsurprising. Under the Conservatives education faced three distinct threats: from traditionalists who wanted nothing to do with either comprehensive or modern schools, from civil servants who wanted more central control, and from theoreticians in the party who wanted the whole system remodelled on the principle of the free market. Education, especially secondary education, was to become even more of a battlefield - the children and the teachers the chief casualties in a struggle now lasting more than twenty years, its origins lost deep in English social history with too many of its present day combatants being woefully ignorant of what should have been, and still are, the genuine issues.

Margaret Thatcher was faced with the most daunting of problems when she became Prime Minister and initially decided not to take on education as a major issue, appointing a ‘wet’ Mark Carlisle as Secretary of Education, who introduced the Assisted Places Scheme that provided a much needed ‘life raft’ to independent schools still suffering from the removal of the Direct Grant four years before. It was the surprise move in late 1981 that shook the education establishment to its roots, when Keith Joseph, Margaret Thatcher’s right-hand man, was appointed Education Minister. And that establishment badly needed shaking, for it had allowed more than a decade of under-funding and political neglect to lower its sense of responsibility for a system that was desperately under-performing and for which the politicians were (in an amazingly cynical twist) to blame the teachers. The educational establishment rounded on Joseph for his commitment to free market policies in strictly obstructionist terms, and failed to see in this rather detached academic a politician who was determined to get to the heart of every issue. The education world was not used to this level of public scrutiny. Education officers had grown up on the gentle slopes of post-war consensual social policy and were used to befuddling issues with endless statistics, high-flown words and the pitfalls of ‘special pleading’. Joseph was more than a match for them, and they tired more quickly than he did.

When Keith Joseph responded to my letter in late 1981 I came under great suspicion from colleagues as someone who, by indulging in a reasoned debate with the Secretary of State, was seen as suspect. History has been kinder to Joseph than were his contemporaries. I shan’t forget the conversation that I overheard between him and one of the prefects as he was walking around the school; “It’s strange that I’m Minister of Education and Science”, he said in a totally disarming way, “as I know nothing of science, and little of education, but I hope I’m learning fast. You must understand it is not the job of ministers to intrude into detailed prescriptions for either education or science; it is my job to listen to a wide range of advisors on
policy issues, and then shape up legislation that best enables the policies we believe are best for the country to be implemented.” In this Joseph came from an older, almost Butler-type tradition, where the central powers of government were limited, and intelligent, autonomous local institutions were expected to adopt their own procedures. But Joseph was forced to recognise that in education, as in other spheres of social policy, too many institutions took their autonomy to such lengths that they effectively undermined the common good.

Why, in a country that prided (and still prides) itself as a bastion of democracy, should this have been the case? The answer is not hard to find. Most adults had not, as children, grown up in schools that could in any real sense be taken as good models of how people should behave in a democracy. Given the cheese paring approach to schools for more than a century, relatively few children emerged from the experience with any personal commitment to reasoned debate for, as far as most of them were concerned, school was a place where you did as you were told. It was not where you learnt how to work out – with others – the rights and wrongs of a situation. For the majority of English people schooling had been a form of social control, and their attitude to those in power either one of grudging acceptance or outright confrontation. It’s unsurprising therefore that local authority politics became an arena for the extremists. Moderate opinion simply withdrew from the confused, often turgid and petty political process. The failure of local politicians to acknowledge the significance of the issues was all part of the long-term English disease.

It is ironic that it was Keith Joseph whose institutional model was the autonomous and self-governing school, and who set in motion, in the name of ‘effective education’, a vast new complex of legislation and regulations that were eventually to become central to every aspect of the life of every school in the country. I’m sure this was not his intention, but the Ministers who followed Joseph - Kenneth Baker, John MacGregor (in a limited way), Kenneth Clarke, John Patten, Gillian Shephard, David Blunkett, Estelle Morris and now Charles Clarke – pursued and extended this legislation in ways he would probably not recognise. There was a moment however at which, if the academic community had made a good counter case, Joseph would have been prepared to alter his stance. But the case was never made, and by the time Kenneth Clarke became Minister, professional opinion was easily ignored.

Without my recognising it at the time, when I called for young people to become responsible for their own learning at the 1987 CBI Conference, I was defining a strictly old and conservative view. Twelve months later, when Kenneth Baker, by then Minister of Education, opened the next CBI Conference, he chose to use the opportunity to announce his programme for City Technology Colleges, which represented a radical departure in conservative party thinking. These colleges would be funded not locally through the L.E.A., but be directly funded through central government, which would also control them. This control mechanism was a far more revolutionary step than were the technology colleges themselves. It marked the beginning of the end for local democratic control of education, and heralded the beginning of the extremely rapid growth of central government control, consolidated in the Education Reform Act of that year.

Central to Conservative policy from the start was a leaner government, lower taxes and therefore more opportunities for individuals to make their own choices within a free market. I’ve always found it next to impossible to ally my philosophical beliefs with any particular party political stance. In my belief in the significance of individuals taking responsibility for their own future, I’m obviously a Keith Joseph-type Conservative. In my conviction that every child is entitled to a quality education that needs to be properly funded through appropriate levels of taxation, I’m in the Dennis Healey mould. When it comes to my conviction about the need for communities to support each other, I’m probably back with Rab Butler or the Social Democrats. As an educationalist I have a great affection for the disciplined study of subjects such as History and Philosophy, and am therefore probably a Wykhamist, yet I also believe, along with Plowden, Piaget, Livingstone and Howard Gardner, that learning proceeds from the inside out, and in terms of educational theory I am therefore a constructivist. And I’m right there with that angry old cabinet maker turned politician, William Lovett, in my belief that education is too important for governments to be allowed to meddle with for short term electoral gain. And going further back I would have stood with the democratic principle’s of Thomas Jefferson in Virginia. So, politically, I guess I’m a hybrid.

Consequently I had great difficulties with Margaret Thatcher’s policy of tax cutting in favour of those who were already well off having still more opportunity to make still more choices, while at the same time such choices were being restricted for the less affluent. I saw it all too clearly as a
headmaster. As the Conservatives tried to raise standards at the same time as cutting taxes, they took to blaming the financial difficulties of schools on what they saw as the extravagant spending of Local Authorities, who in turn blamed the schools. In the mid-1980s, as both the attack on the Local Authorities intensified, and the middle classes found that they now had more disposable income, I started to notice a number of what had earlier been very loyal parents deciding that they could now, after all, afford to send their children to independent schools. Often feeling a tinge of conscience about this they would seek to justify their decisions by alluding to an increasingly ardent media determined to highlight what they saw as the faults of comprehensive education. That really hurt. Those were bad days for public education. By 1985 the fees charged for day pupils in independent secondary schools in the Home Counties were already nearly fifty per cent higher than the per capita allocation that a state school received for each child. In my judgement it is much harder to provide a quality education when you are responsible for the full ability range, and the widest possible social intake, than it is to educate a socially selective group of relatively unified intellectual ability. And, of course, it’s getting even more difficult now.

School Reform – from Conservatives to New Labour

It was not until the Conservatives’ third electoral victory that the full extent of their radical new policies became apparent. These policies passed into law in the 1988 Education Reform Act, having been pushed through by Kenneth Baker’s enthusiasm in less than six months. In its scale Baker was pleased to liken this to the Butler Act of 1944, the Act for which Butler prided himself as having taken three years to build the necessary political and social consensus. Consensus was out as far as the Conservatives were concerned in 1988. The Act consciously set out to destroy the educational culture that had developed between 1944 and 1970; it marginalised the old social order (such as the LEAs and the voluntary bodies) and created powerful new institutions like the Office for Standards in Education (OFSTED), the City Technology College Trust (CTC) and the Schools Qualification Agency (SQA). The Act symbolised the Conservatives’ three overarching themes; modernisation, marketisation and tradition. Modernisation of the curriculum was carried out along very traditional lines with separate disciplines which, as more and more pressure groups became involved, became so desperately content-heavy that the demands these placed on teachers actually reduced the amount of time spent in primary schools on the basic 3Rs; “reading, ‘riting and ‘rithmetic,” or what Thatcher herself announced as being the “5Rs”; for she added two more of her own - “right and ‘rong!”

It was to be modernisation through marketing, something that a report by the accountants Coopers and Lybrand had called for to achieve ‘fundamental change in the education system’. The Act immediately reduced the opportunities for individual teachers to shape the curriculum to fit the needs of particular schools or pupils. Teachers were to become accountable to centrally defined national standards and the era of local initiatives was over. The impact on pupils was enormous; in future there would be very clear specifications of what they had to learn. It was to be a lot. There would be far fewer opportunities for pupils and staff to go off camping for a week, and teachers would be left with insufficient energy to take pupils on expeditions that might last the whole summer holidays - if, indeed, the teachers were ever able to prove to the Health and Safety executive that they would be ‘safe’. Teachers became - were obliged to become - single minded. What was not on the syllabus was not worth thinking about. The kind of youngsters who in the ‘60s and ‘70s had been quick to take up political or social crusades, now sat attentive to their textbooks, nervous of the next test. When a public debate was held before a packed audience of nearly one thousand people in Bath Abbey in November 2002 about a possible war in Iraq, there was hardly a person under the age of twenty to be seen. Two seventeen-year-olds told me later that they had so much work to do for the exams that their teachers had told them they could not spare the time.

In a blatant attempt to limit the power of the LEA, the government authorised parents to vote on whether or not to take a school out of Local Authority control, and place it instead directly under central government. With a significant financial incentive from central government for schools to move away from the LEA, very many parents voted to do just that. While I personally had been much bruised by the stifling attitudes of an LEA (as explained in detail in my earlier book ‘The Child is Father of the Man’) I still firmly accepted that the principle under which they had been set up was totally right - namely to balance the needs of different schools within a community by some form of differential grants. It was, to my way of thinking, right because the needs of all pupils, not just those
in the successful schools, have to be developed
to the full. Again it comes down to a moral issue:
which model are we following - that of the pilgrim
or the customer? No doubt the answer was obvious
to the accountants, but I for one believe it’s wrong
to assume that what is financially most efficient
is what the whole country actually most needs.
I never did allow my life to be ruled by my bank
manager.

Finally, the Act defined educational aspirations
strictly in terms of the school. It was in the school
where the entire learning process was expected to
happen; it was the teachers who were the agents of
delivery of the national curriculum, and it was the
job of parents to partner the school in the achieve-
ment of a range of objectives. The principle that
dominated the early years of my own teaching
career had totally gone from the Act - namely
that of ‘in loco parentis’, with the teacher acting
in place of the parent. Gone too, it seemed, was
any sense of the teacher having a vocation - the
person who does something because they feel that
it’s their role in life. In its place there is now The
School Effectiveness Movement, whose literature
and research findings provide the agenda for end-
gle training programmes, professional certifica-
tion and a language that, in subtle and not so
subtle ways, promotes the belief that learning and
schooling are, in practice, synonymous.

The Labour party that came to power in 1997
would not have been recognised by its social
democratic predecessors. Underpinning all New
Labour policy was the belief that the direction of
the economy should be decided by market develop-
ments with as little state intervention as possible.
David Blunkett, as Education Secretary, told the In-
stitute for Economic Affairs in 2001 that “the work
of the DfEE fits with a new economic imperative
of supply side investment for national prosperity.”
New Labour’s belief in the superiority of business
management has led to strategies in which such
‘management by objective’ permeates all aspects of
schooling. Within ‘The Third Way’ it is the party’s
belief that, at the point where an acceptance of
market dynamics meets government action, here
exists its commitment to education. In other words
education is now seen primarily as an instrument
of economic policy. Tony Blair sees in the new
technologies the access to rich veins of what Cast-
tells calls ‘informational capitalism’, and access is
there for those who can ‘reprogramme themselves’
for the ‘endlessly changing tasks of the productiv-
ity process’. People who can do this, argues the
Prime Minister, are the key to future prosperity.
They are the new elite in a twenty-first century
Platonic model where other workers are necessary,
both as producers of more routine services, and as
customers, but they are definitely subservient to
the re-programmable capitalists. Such assumptions
are totally in line with O.E.C.D. statements where a
knowledge society is seen as entirely dependent on
da dynamic society that is constantly evolving, and
where multi-skilling and flexibility are at a pre-
sumption. According to this vision schools must ‘lay
the foundation for lifelong learning and sustain
innovation, expertise and improvement’.

“First the Conservatives told us what we had to
teach”, explained the Chief Adviser of a Midlands
LEA in 1998, “and now New Labour is telling us
how to teach.” Four years later another such chief
adviser of a different authority told me that to
criticise such politically motivated advice would be
to virtually ensure that you were seen to be un-
sound, and so your Authority would fail to get the
essential grants needed to operate. He insisted on
maintaining anonymity for his observations.
This is not a policy that is heading towards greater
social equality. Indeed it seems that O.E.C.D.
and other comparable organisations such as the
World Bank, are warning all governments to steer
clear of social equality issues as they are assumed
to weaken a country’s economic determination.
These policies are not about the development
of social capital, and in the long run that has be their
Achilles heel, for national governments have to be
concerned at all times, not only with how a nation
makes its money, but how opportunities within
that society are equally apportioned. In 1995 Will
Hutton wrote “Society is dividing before our very
eyes; opening up new fissures in the working
population, which has split into three groups:”

thirty per cent who are absolutely disadvantaged,
thirty per cent who were marginalised and inse-
secure and forty per cent whose market power had
increased significantly since 1979. As a business
strategy to ensure that you remained in power, to
be certain of the support of the upper forty per cent
and the majority of those in the next thirty per cent
who are nervous as to whether they were going up
or down, has to be a winner. A winner, that is, if
the country continues to believe that it’s all about
money, and being acquisitive. If Lawrence and
Nohria are right, however, such over-simplistic as-
sumptions will always crumble, because they defy
the re-programmable capitalists.

In January 2001 I was again invited to Down-
ing Street, but on this occasion the visit was not
deemed of much significance for I met with a
young man who had only been in the Policy Unit
for six weeks. He listened attentively, and as I fin-
ished observed that I sounded just like his mother who, he explained was headteacher of a primary school and “who seems to think just like you”. I should have realised that this was the kiss of death. For, subconsciously, he was linking me with everything that the present government has deemed to be the root cause of England’s downfall. I was, in the words of Chris Woodhead, the Chief Inspector for OFSTED, one of the ‘blob’.9

The “blob” was a term Woodhead borrowed from the United States to describe “the elders of the tribe. An entity that defends its turf with the tenacity of a wolverine, yet is as slippery as, and hard for reformists to wrestle down, as a greased cow in a swamp.” I doubt if any of the other members of the establishment Woodhead castigates in his book “Class Wars” would ever have seen me as one of their number, but attention to the accuracy of what conclusions he drew was of less concern to Woodhead than the attention he attracted for his simplistic and confrontational statements. A clever orator, who was highly skilful in tuning his message to the expectations of his audiences, he eventually resigned as Chief Inspector in late 2000. Before that, in his Message for the New Millennium he stated, “The purpose of education in the twenty-first century is exactly as it was in the nineteenth and twentieth century; to initiate the young into those aspects of our culture upon which their (and our) humanity depends.” Fine words, but Woodhead’s understanding of history was obviously weak for, as you’ll now be aware, many of England’s present problems are the result of our having failed to give countless generations of young people just that appropriate induction. That I had also argued that we should now look more closely into what is involved in learning how to learn, so annoyed the former Chief Inspector that he specifically linked my name with what he saw as “the challenge now is to expose the emptiness of educational theorising that obfuscates the classroom realities that really matter.”10

New Labour seeks to distance itself from the consensual, professionally implemented kinds of change represented by the comprehensive reforms of the late 1960s and 70s - reforms driven by the then Labour agenda. These reforms failed in England, so the story now goes, because teachers didn’t know what they were doing and were not properly managed. Teachers, according to this strategy, were not a source of reform, but rather a barrier to reform; they were “forces of conservatism”11 in Tony Blair’s own words. Labour appointed Michael Barber to drive their new policies forward. Barber had formerly been the Dean of New Initiatives at the London Institute of Education and was typical of the new generation of political advisers who were coming to dominate Downing Street. He was intellectually sharp, incredibly hard working, un-charismatic and, in the conviction that he was always right he was a curious mixture of Quaker and fundamentalist. A latter-day Robert Morant. In early 2000 he gave a lecture with the arrogant title “Fusion; how to unleash irreversible change.”12 With all the commitment I bring to the ideas explored in this book I’m convinced that it’s irresponsible to think of totally replacing one orthodoxy with another. This is not how progress is made. “Irreversible change” is a terrifying prospect if there is any chance that it is wrong. And already many of Labour’s policies are being shown to be just that - wrong.

The net result of all this? In the words of Ken Jones, Professor of Education at Keele, “Schools have been defined more strongly than at any other time as places where management author- ity, rather than collegial culture, establishes the ethos and purpose of the school.”13 Welcome to the epitome of Frederick Winslow Taylor’s scientific management. Professor Richard Pring of Oxford went further; “The teacher delivers someone else’s curriculum with its precisely defined product and there is little room for that transaction in which the teacher responds to the needs of the learner. When the learner becomes the client there is no room for the traditional apprenticeship into the community of learners. When the product is the measurable target from which performance is audited, then little significance is attached to the struggle to make sense of the deviant or creative response.”14 Goodbye to the critical scholar and the perfection-seeking craftsman.

The Headteacher of a primary school in Staffordshire summed up the frustration of the profession in an email he sent me in June 2003: “Let’s face it, we’ve been trying to pour new wine into old bottles from so many sources that education is not meeting many needs of individuals or the wider community. Everybody has opinions about education and those opinions find their way into the school scene more or less diluted. The result, after a hundred years of State education, is a complete mishmash that still effectively only acts as a gatekeeper system to a university. The question is how on earth can radical change be started and sustained? With the politicians so much in control, thanks Mr Callaghan, and parents seemingly happy to be led and support the system, it leaves everyone in education struggling to make progress. I guess it won’t be educationalists at all but the
lack of recruitment and retention and the growing ‘on-line’ schooling that will most affect schools in the future. Are schools doomed to become ‘child-minding’ communities sorting out university admissions, or can there be a radical new future within the short/medium term?”

In any other profession such a criticism would sound warning bells for politicians. But not in education in England in 2004. For many long years the media has taken every opportunity to rubbish the teachers as being self-serving, or worse, so any such an expression of outrage is simply ignored.

Or take the comment of a Deputy Head in Northumberland the following month looking for further promotion. “Working towards headship creates a bit of a problem I think, whilst we are asked to quantify our values and mould them into a coherent vision for education, we are also conned into making sure these values and visions tow the party line. In fact it’s been all too easy to become engrossed in measuring pupils, analysing data, implementing national initiatives, tracking results at the same time as losing track of the real meaning of learning.” Or indeed listen to a chief education officer explaining how all his problems are being compounded by the fact that he is conscious of “man marking” from the DFEE in every step that he takes. So much for subsidiarity when applied to teachers and local authority officers as professionals.

The country ignores these criticisms at its peril, for good teachers and administrators are a precious commodity and they have to be grown and cultivated over many years; they can’t be churned out on a production line, sausage fashion, from colleges all following near identical syllabi. Like any apprentice a teacher needs time to be nurtured, supported and encouraged so as to grow, one day, into a master craftsman – the kind of teacher children respect and remember with grateful affection many years later.

Meanwhile the pressure of the free market to sort out which category a child will fit into is frightening. In The Guardian in January 1999 the columnist Ros Coward wrote of witnessing “scenes at the entrance exam for one so-called comprehensive school - a flagship for the borough of Wandsworth. One child was sobbing and shaking as she went into the room, another wet himself during the exams. More dramatic was the child who ran out of the hall in tears, chasing his mother down the road. Mother and child then stood in the street sobbing and screaming at each other. “It’s your future,” she shouted. “If you don’t go back in I’ll have nothing more to do with you.” “I’m not going back in there,” he yelled and ran off, leaving his distressed mother to scour the streets by car. Under the banner of improved educational standards, maltreatment is ignored. It’s not surprising these ten-year-olds buckle under the pressure. Most of the children at this school were on their fourth or fifth exam of the season - normal for young Londoners of that age. Many ‘desirable’ schools are grant-maintained and conduct their own exams. There’s no guarantee of local places and no way of expressing preferences so children enter all the exams.”

It is not that people like me are unduly soft or unwilling to recognise that children have to learn - hopefully in a not too intimidating a fashion - that life is harsh as well as exciting and fun. In the modern preoccupation with trying to ensure that young children will end up with ever more of the appropriate currency for a consumer society, we are destroying childhood. Whilst writing this chapter I heard of a fifteen-year-old son of a friend preparing to take fifteen G.C.S.Es later this summer. As a German professor told me nearly twenty years ago, society has become preoccupied with creating the perfect child, rather than the contented child.

Independent Education

There is one other element of this story that needs introducing and that is the steady rise of independent education, especially at secondary level, which now accounts for about seven per cent of the child population of England – the highest proportion in the whole of the OECD. In the market economy which now dominates the thinking of socialists as much as conservatives, the competition that independent schools represent is seen as a theoretical good, and the social inequality it’s thought to perpetuate by others is seen simply as an unfortunate by-product. It is important to realise that it has not always been the case.

Talking to those heads in Dubai – English schools in so many of their traditions, comprehensive in their intake of pupils, but very definitely independent of any direct government control – I felt it appropriate to express my deep personal concern that independent schools were losing their pioneering tradition. Setting this in context I explained that, as long ago as 1893, seventeen of the schools which in 1944 were members of the Headmasters Conference - and at that stage this was a much smaller body than today - had been receiving grants from local authorities, known from 1919 as
Direct Grant Schools. These were schools which welcomed government subsidy, either for idealistic reasons or because they were having difficulty filling their places at the fees they felt it necessary to charge on the open market. In the early stages of World War II, many a public school head feared that their school would be easily abolished if ever Labour came to power. Some, it was rumoured, considered buying up old estates in Ireland as places to which they would bolt in such an eventuality. In 1942, the Governing Bodies Association went as far as to write to R.A. Butler inviting the Board of Education to further extend the Direct Grant to provide for between one quarter and one third of the entry to such schools to be funded by government and opened to pupils of all backgrounds. In 1944 and 1945, a number of what are now proudly flourishing public schools were saved from possible extinction by this government grant - it was an act of political expediency designed by the impoverished Labour government, as it struggled to find the money to provide secondary education for everybody. For thirty years the direct grant schools tempered the difference between the social classes. Manchester Grammar School (MGS) was such a place: through its membership of the direct grant and HMC, it was able to take bright children from all kinds of social backgrounds, and proudly claimed that it gained more Oxbridge places than any other school in the country.

In 1974, Labour moved to destroy the direct grant system. The Labour party was struggling with both its idealistic stance on egalitarianism, and the difficulty of creating meaningful comprehensive education when a significant proportion of the population totally opted out of the system. Just a few of these former direct grant schools chose to become comprehensive. The greater majority, however, decided to go fully independent, and initially many had a tough time surviving. In the late 1970s, several of the better known of these schools found it convenient to take girls into their Sixth Form, a practice that became common in the 1980s, so increasing the pool of potential students. Others looked for students from overseas, who would often contribute generously to the school’s building fund on admission, as I found at Millfield in 1974 when I became guardian to the two young sons of the governor of the Iranian province of Hamadan.

The late 1970s proved a hard time for the middle classes and the public schools suffered accordingly. One of the first acts of Margaret Thatcher’s government in 1979 had been to introduce the Assisted Places Scheme, which immediately created a total of thirty thousand youngsters whose fees were at least partially funded by government – very roughly it amounted to one hundred and fifty places at each of two hundred or so schools. The Assisted Places Scheme was a political life raft that lasted long enough, as far as the independent schools were concerned, to keep them afloat until a more flourishing economy – with significantly lower taxes for the better paid - led to the boom conditions of the late 1980s and 90s. In the current boom conditions that seem to show no signs of disappearing for independent schools, it would be as well for those public schools that were kept afloat for years by government grants to resist using the phrase (which some do in their prospectuses) as they retell recent history that they ‘reverted to full independence’ in 1975 or 1976, as a demonstration of an implied superiority to the state schools in England. In the action which they took then, they demonstrated their wish to satisfy the needs of those parents who, for one reason or another, did not wish their children to sit at desks adjacent to local boys and girls. This socially divisive behaviour was surely not what had been in the minds of many of their original founders whose benefactions are now being used in ways which surely would not please them.

In recording this sequence of events I do so not because I bear a grudge against such schools, nor an idealistic belief that parental choice should not be allowed. Far from it. I greatly enjoyed my own time at a traditional public school in the 1950s, and owe it much. I benefited enormously from teaching at MGS. I know from the handful of public schools with which I’m now closely connected that some excellent teachers staff them; they often have superb facilities, and their classes contain many gifted pupils. Yet, the gap – not just in resources and staffing, but in social expectations and assumptions – which now exists between the two (let’s call them ways of life, rather than simply systems) is so great that it even undermines our sense of national identity. In the 1950s if, after university, old boys from my public school went to work in London, they frequently lodged free in the School Mission in Whitechapel in exchange for spending several evenings a week working in the local youth clubs. We were undoubtedly privileged, but we were also educated to have a strong social conscience. However imperfect and immature we might have been, the expectation was that we were some kind of pilgrims in the making. Things seem now to have changed, and such young men working in the city after university delight in buying (on a vast mortgage) a luxury apartment in Canary Wharf, in gated communities far away from work-
ing class boys’ clubs. In 2003 the President of the Girls School Association found it necessary to take parents of the most expensive schools in the country to task for withdrawing their daughters from speech days and Carol services as the parents considered the time better spent on family shopping excursions. Or take the case of another head who was rebuked by a wealthy father for promoting his daughter to become a school prefect; “I want none of that. To do the work of a prefect would divert my daughter from getting a top grade in her exam, and that is what I am paying you for.”

The independent schools of England, as elsewhere, have to come to terms with the problem of being rich. If they don’t, and as their pupils emerge not as pilgrims but as sophisticated customers with insatiable appetites, we will all be in trouble. That was not what William of Wykeham had in mind for Winchester in 1382 or Paulinus of York in the seventh century, or John Colet of St. Paul’s in 1509. It was certainly not what a man like J.L. Paton, one time highly successful High Master of MGS who in the early 1920s ran a soup kitchen for the poor most winter evenings when the grammar school boys were at home doing their homework, understood education to be about. On his retirement in 1924 Paton went on to found a teacher training college in St. John’s Newfoundland, one of the poorest, coldest and most remote parts of the Empire.

It’s worth recalling Dr. Arnold’s greatest fear; “there is no earthly thing more mean and despicable in my mind than an English gentleman destitute of all sense of his responsibilities and opportunities, and only revelling in the luxuries of our high civilisation and thinking himself a great person.” With privilege comes responsibility for others, as well as ourselves. That was what that old irascible chartist William Lovett was all about. It is a concept the independent schools of England have to honour if they wish to continue to place so many claims to greatness on the basis of their antiquity and the importance of their founders.

I moved to conclude my explanation. “You, in Dubai, are independent schools, but you are not weighed down with lengthy tradition. To an extent to you are freer than most schools in the world to adjust your curriculum, and the way you organise your students, to take advantage of the research into human learning. You know enough about the mistakes of the past to ensure that you don’t repeat them. That is quite a responsibility.”

A Curriculum for the Future

There was a long silence in the room in Dubai when I finished speaking. Then, individually in hushed tones of conversation between two or three people, then in larger, more animated conversations, I could sense people’s anger and frustration growing. These were English men and women (one or two were Scottish, one was Welsh and several had Irish connections) but while they were living and working a couple of thousand miles from home, they still felt part of the English system yet never before had they felt more grateful that they were outside it.

They talked for an hour or so, then, after we had had tea, I sought to draw the five-day programme together. “I would give you three suggestions that you could all do within your schools right now that would make an enormous difference.” Firstly, I suggested to them that if their pupils were to be qualified to play their part in helping to take humanity through the difficulties which the twenty first century would inevitably face they needed a curriculum, right now, that joined the issues together rather than simply concentrating on the study of self-contained separate disciplines. It would need to be a curriculum that didn’t just honour our facts, but one which celebrated many different ways of thinking, including emotional intelligence and spiritual insights.

Secondly I went on to stress that schools needed to reconsider their basic assumptions about how learning takes place, and devise ways of working and studying that best reflect the internal structure of the brain. I urged them to get their entire school community – parents as well as teachers, pupils as well as members of the community, to explore the significance of Subsidiarity as the principle that should underpin the evolving relationship between adults and the young as they get older.

“Thirdly we need to ensure that our young people really do know what it is that makes us humans tick,” I said. “We are indeed a wondrously ingenious species, but the confusion about our moral values also makes us extraordinarily dangerous. So ingenious are we that our generation is the first to have the knowledge to blast our part of the universe to pieces. We have become so enamoured with immediate gratification and the so-called rights of the individual that we are forever marginalising the most vulnerable group in society – the children.”

It would be possible to do all these things, I went on to tell them, cumulatively over a number of schools and by mobilising the numerous networks
of parents these ideas would quickly permeate into just about every facet of life. Over little more than a generation, these ideas would start to change everything. “Remember that wonderful comment of the dhow builder, ‘we are all brothers beneath the skin’. You in the international schools really could make this an international rallying cry.

John Scarth, headmaster of the British School in Muscat, got up to close the conference. “I’m a pretty conservative kind of person, otherwise I wouldn’t be a headteacher”, he said, “I like my comfort zone. Since coming to the Oman I realise that you don’t have to go into the dark, but if you want to see the stars in all their glory you have to dare to go deep into the desert, away from the light pollution of civilisation. Only then, when your eyes become acclimatised to real darkness, can you begin to appreciate the sheer brilliance of the stars. Then, and only then, will you see which way to go.

“John, that’s exactly what these four days have done for us. It’s shown us the reality of the situation, and that is difficult. But you have shown us the brightness of the vision as well. None of us can say we don’t know which way we ought to go. As English people working in an international arena what you’ve said, and the words of that chief of the dhow builders, ‘we are all brothers beneath the skin’, give us a lifetime’s - and life-changing - agenda to run with.”

* * *

In the summer of 2003 OECD produced a report on literacy skills in forty-two advanced countries. It reported that Finland, with a population of only six million, had a literacy rate of over ninety-nine per cent. Finnish children had the best reading scores of all the countries and the highest maths scores in Europe. The socio-economic make-up of Finnish schools apparently has less impact on children’s achievements than anywhere apart from Israel and Norway. The Guardian called Finland, “An educationalist’s nirvana,” 3 a country of sophisticated English speakers where teachers are highly respected, where schools have an unusually high degree of autonomy, where there is no streaming, a relatively light testing regime schooling does not start until the age of seven. A country with some of the highest levels of newspaper readership and of new book publications. A country it seems of many happy, purposeful children.

I have long been fascinated by Finland. On a visit to Moscow in the early 1960s, it was explained to me by the Intourist guide that several of the largest hotels had been built by Finnish forced labour. I was confused. “The Finns are paying reparations to the Soviet Union for their rebellion,” she said curtly. Later I learned that Finland, having fought off a Russian invasion in 1940, had the audacity to try to reclaim its occupied territory in 1941 when the Russian army was preoccupied with the defence of Stalingrad. Having eventually defeated the Germans, the Russians returned to a ferocious struggle with the Finns, who lost. Part of the reparations involved large numbers of Finnish young people, on reaching the age of eighteen, being sent to Russia to work in forced labour camps for several years.

It was to be a further twenty years before I personally visited Finland and discovered for myself the beauties of this northern land, two thirds of which lies within the Arctic Circle and whose open landscape of low woodland hills is interspersed with nearly two hundred thousand lakes. The conference I was addressing in 1987 was in a post-war satellite town outside Helsinki. There was none of the bureaucrats’ bland architecture and deserted concrete plazas of an English new town; here was an unpretentious, human-scale community of small houses of many different shapes and sizes, with healthy people riding bikes and carrying their shopping in backpacks. The schools that I visited were pupil orientated, with colourful classrooms, motivated children and delightful teachers. There was an air of optimism and open enthusiasm that contrasted markedly with that other Baltic country, Sweden, where a heaviness and melancholy seem to hang in the air, falling like raindrops from the ubiquitous pine trees.

“I was one of those forced labourers you might have seen in Moscow,” a Finn of my own age told me. “I was there for three years. It toughened me but I was old enough to know of the beauty and the freedom of my homeland - in the months before we went to Russia our parents, our schools and our churches strove to give us the mental stamina to deal with the indignity of forced labour in an alien land. When we eventually returned home we came with a sense of great peace, and a determination to build a country fit for all our people. We relish freedom and responsibility in a way that someone who has never been a slave could ever do.”

The Finns have done it, I thought to myself, reading that report a few weeks after returning from Dubai, because they simply leap-frogged England, America and the other advanced countries by devising a system of learning that goes with the grain of the brain. I wondered why the newspaper had not been more perceptive in its analysis of Finland. True, its industrial output is comparable...
to the most advanced countries; its GDP is equivalent to twenty six thousand dollars per person, and it spends seven per cent of its GNP on education, the difference between the richest and poorest people is small, and there are few private schools. But Finland’s real secret lies in the source of its energy - it’s in its social capital, something difficult to calculate, but nevertheless very real. Its older citizens remember the indignity of the 1940’s and 1950’s, and they value their children as heirs to a mighty struggle in the past. Listen to Sibelius’ Karelia Overture to feel the pulse of Finland.

Maybe I’ve written this book the way I have because I have such an affinity with the set of experiences that helped to define the Finns. I am just old enough to remember schooling in the post war months when there was no proper school for me to go to. When we first moved to Portsmouth I, and three or four others, went every day to the home of the wife of a retired missionary to China. In her basement room, around a baize-covered table, we practised our times tables and our writing - including, for fun, some Mandarin Chinese script. We drew little maps and learned to sketch. I never remember having to actually learn to read for she read so much to us, as indeed my mother had, that reading came as naturally as understanding what people said. She talked a lot too and I learned a great deal about the world of Portsmouth before the bombs blasted so much of it apart. She taught us to imagine a brighter future, a future we would have to create. I was never bored, and I don’t think I was ever spoilt. Every day I walked home past endless bombsites where masses of rosebay willow herb seemed to colonise every pile of rubble. Intrigued, I watched the first shop being built - I saw it all from the clearing of the rubble, the laying of the foundations, the topping-out ceremony, and the incredible excitement of going into the newly built shop the moment it was finished. An old set of pram wheels and a tea chest were the best toys I ever had. Mine was a joined-up world where cause and effect were always obvious. One day a well-meaning relative gave me a ‘painting by numbers’ kit. I opened it with excitement but after an hour or so I gave it up. It was boring; it was someone else’s design, and had nothing to do with me.

I moved slowly through public school, spending five terms in the bottom class. It never worried me one jot. Life was continuously fascinating and that was all that mattered. If it was being a forced labourer that made the Finns of my age the men who could create the educationalist’s nirvana of 2003, it was the sudden and unexpected death of my father that toughened me. It happened at just the right time - for me, that is. Everything that had happened before then had been like the laying of good foundations and then, with about three days’ warning, I was on my own at the age of twenty, and head of the family as well. The future was mine to create, not simply to follow. At university I flourished, and started to do the unexpected, and the rest you know.

Like the Finns, I just got on with my job as a teacher for the next twenty years. I loved being a teacher and had little interest in educational politics. Being a headteacher was endlessly fascinating. Money, and the desire for material goods never really troubled me. A quiet cottage by the side of a lake - in my case in the west of Ireland - was my dream retreat. Yet at time passed that little farming community became far more than just a retreat for, in its simplicity, it gave me a perspective on the world of education to which those of my colleagues too closely involved in following the minutiae of political manoeuvrings, just never had. In time this lack of real vision amongst those who should have known better drove me to leave the security of my school and set to work on Education 2000. I now know, however, that I started perhaps three or four years too late as far as national politics were concerned, for the agenda was already partly forged before I realised that I had to be involved.

Looking back I know now that, in the years that followed, new generations of teachers who had never known the excitement of running a good comprehensive school, of teaching in a good grammar school or a challenging secondary modern - or who knew how to take twenty adolescents off for three weeks into the wilderness - would see in the very recent research about the brain ways whereby this could ‘buttress up’ the conventional classroom. In the case of Effective School Management, the very research that showed why children need so much more than the simulation of real life through classroom based exercises, a whole literature was to emerge on “creating a learning to learn school”. So many of the people who have played such an important role in shaping English schools in the last twenty years have either never had - or have had only a limited experience of - the massive significance of out-of-school learning. In my terms they are institutional people, and behind their open smiles they represent a potential danger. Rather than wanting to turn the tide of a tendency in modern society to abrogate its responsibility for children and pass it all to the schools, these people are actually running with that tide as if it’s inevitable that schools will replace families as the child’s emotional home. Schools get larger, the
wants around them get higher and, in case pupils
don’t know who is in charge, large colour photos
of the headteacher dominate the school entrance
hall. Teachers are better paid, and those on the
lunchtime duties carry their mobile phones and
can, if trouble comes their way, request immediate
support from the school business manager.

Why is it, therefore, that even by the standards
that OECD measures things, Finland – which
does none of these things - is such an educational
nirvana? I think there are two reasons; first the
terrible sufferings experienced in the 1940’s meant
that Finland emerged from the war tough enough
to rebuild their way of life from scratch. Second,
the people had an inclusive and equitable vision of
what Finland could be for all Finnish people. Over
a period of time the Finns have blended a socialist
with a market-focused economy. They believe in,
and trust, each other. They believe in learning - not
simply in the mechanics of developing re-program-
mable labour, but in the sense that learning helps
every individual to fulfil their potential. Theirs is
not a materialistic culture, and they have a deep
sensitivity to the affairs of the spirit. They have, I’d
suggest, got their four ‘drives’ working pretty well
together. Neither Finland, nor any individual, can
ever assume that they will maintain such equilib-
rium without a struggle. Remember the question
I was asked by members of the Young President’s
Organisation in Venice the year before: “What is
an appropriate education for the children of the
successful?”

Life everywhere is essentially dynamic. It’s about
ups and downs. It’s often cyclical. The condi-
tions that create success can often be followed by
conditions that create stagnation. Estonia will not
become as successful as Finland by slavishly trying
to emulate the way it achieved its present position.
Their histories are different, and so are their peo-
ple. So too is England different in its history. Yet all
three nationalities are driven by the same human
predispositions - it is our culture that may make us
seem different, not our natures. The problem with
England, I would argue, is that it’s still not being
honest with itself. We have too many hidden agen-
das and are far more materialistic than we realise,
and indeed have been for longer than we know.

Adam Smith would, I believe, be appalled at
how we have managed to make the free market
the measure of everything including education.
Personally I have two major reservations about pri-
ivate education; it’s not its quality, which in many
instances is very high, it’s the way it deflects the
nation’s attention away from the need for quality
education for everyone. Secondly it’s the way its
pupils can too often grow up in splendid isola-
tion from the less privileged children of their own
age. The Victorian manipulation of the Endowed
Schools Act in favour of private education, casts a
long shadow right into the present day. The Victor-
ians left us with a legacy of class-consciousness
that makes any feeling of national identity hard to
define. I’d suggest, too, that independent schools
have lost something of the essence of their inde-
pendence - instead of showing what a different
form of education could be all about, they are sim-
ply using their greater wealth to run faster down
the same tracks that the government is prescribing
for state schools.

Right now England needs to look more closely
not simply at schools but at what its like to be
a child in a society that is fast losing its social
cohesion – both at the family and the community
level. We should ask what its like to be a child sur-
rounded by adults too busy to answer its questions;
in towns so dominated by traffic that it can’t play
outside its own home, or cycle to meet its friends,
and where the media constantly bombard it with
messages that imply it can’t be happy without
constantly buying more and more ‘things’. It’s
childhood that is at risk and we deceive ourselves
– and trivialise teachers – if we suggest that more
and more schooling is the answer. “We English
are too proud to do this”, you may think you hear
people say, but I disagree profoundly. I’ve met
about fifty thousand people at the many lectures
I’ve given over the past six or seven years. Many of
them can see far enough back to have a sense of
direction and have the determination to look for-
ward with greater realism and imagination. They
are finally turning, and will not be pushed around
any more by simplistic political hyperbole. These
are good times to be around. If we’re honest with
ourselves, we have to go right back to the drawing
board. Not, I must stress again, because we have
simply to redesign our schools. That is only part of
the problem. We have to rethink who we are as a
people. We have to get our national drives into bet-
ter balance; we have to realise that the strength of
a chain is the strength not of its strongest but of its
weakest link. Above all else, as a nation, we have to
be much more honest with ourselves and discover
a way of conducting national business that is more
thoughtful and effective than the current confronta-
tional nature of party politics.

After many years of working with these ideas
I sense that the English people, as with people in
other lands, have it within their power to educate
all their young people in ways which would give
them pride in themselves, and the confidence to
use their skills and talents in productive ways. They would be young people unafraid to be excited about the future, and better equipped than previous generations to solve the problems they will inevitably encounter. In short, as I have so often said at numerous conferences in recent months, youngsters to whom we could entrust the future with confidence, as we know they are going to do better than we have. People who we would be proud to know, and who we would enjoy working with.

That is a tantalising possibility that can now be turned into a probability.

England will not succeed in doing this unless collectively and individually we learn to better understand our past, and become more critical of the sectional and short-term interests that threaten our social cohesion. We need to be humble enough to recognise, as the native Americans did, that we have not inherited this world – with all its challenges and opportunities - from our parents, we have simply been loaned it for a short time by our children. We are each part of something much bigger than ourselves. To handle such challenges adults and young people alike have to think and behave with the responsible interdependence of masters and apprentices. We learn from each other as we work, and we know that the most important things that are passed from generation to generation are wisdom, intuition, and a sense of wonder, moral responsibility and a belief in the natural rhythm of intergenerational learning.
Postscript

July 2004

No book of this kind is ever easily written, for its canvas is broad. I have struggled to bring context and coherence to both my own thinking and experience, and to the ideas of the many wise and thoughtful people whose work I value. My intention throughout has been to orchestrate a message that might just influence the multitudes, inspired by Boris Pasternak’s belief that “No real book has a first page. Like the rustling in the woods it is borne heaven knows where, grows and rolls on, waking hidden thickets in its path, and suddenly at the darkest, overwhelming, panic-stricken moment it speaks out from all the treetops at once, having reached its goal.”

Yet even the most significant message from the treetops can be lost if the wind is blowing in the wrong direction. I’m all too aware that the storm winds that beat across the English educational landscape (and those other countries that seem to be following so closely in our wake) could leave this book stranded, unread on the dusty shelves of distant libraries.

In the three years that it has taken to write all this I’ve not had the luxury of dwelling in an ivory tower. The constant need to fund the Initiative has meant sandwiching the writing between extensive periods of lecturing, and running training programmes. The upshot of this dual existence has been immensely positive because large numbers of the people I’ve addressed have added powerful insights of their own to this story. In that sense this book has been a composite work, knitted together from yarn spun in many places.

“We are becoming a sad and cheerless race”, a Scotswoman teaching in an international school wrote to me, “Nowadays childhood is so confined. There are no risks any more. Smothering safety-consciousness is killing the spirit of childhood and especially adolescence. The virtual world, of which children and most teenagers are wise, but not practically street-wise, creates artificial realities based on fictions, not experienced fact. Young people have no basis from which to make informed or intelligent decisions about how to react or behave in the ‘physical world’.” A Nigerian questioned whether it is “simply stupidity, or is it inertia that prevents people from seeing the whole picture?” While an Australian asked if I thought education hadn’t become so ground down by routine that teachers were simply just going with the crowd, and had lost the art of ‘bucking the system’.

“It’s a true Faustian bargain”, said a former headteacher, “for education has allowed itself to become a preparation for a way of life that teachers themselves simply don’t believe in. Government is expecting teachers to impose on pupils a uniform model of success. It just doesn’t happen like that; that’s not the way kids learn. But I must ask you, is what you’re arguing for just too far out for the politicians to handle? Is it that you’re seeing an impossible agenda for education?”

I’ve been stimulated by the many ideas and opinions I’ve heard in response to my argument, but have I really been arguing for an impossible agenda? If so, by whose standards is it impossible? Is it impossible by the political assumptions of today, or the possible social and political realities of the near future? The political dogma of the past twenty-five years, initially in Britain but now increasingly across the industrialised world – basically neo-classical economics – has seen unimpeded economic growth, free markets and globalisation as the key components of a dynamic society. All other considerations are seen to get in the way. The more economically successful a nation, the more disposable income it is thought individuals will have and, so the argument has gone, the happier everyone will be. Schools have rushed to create curricula that prepare youngsters for the market place. It’s going to be tough, we’ve been encouraged to tell our children; this is a competitive world where the rewards for the successful will be enormous, but few tears will be shed for the losers. Many adults have come to accept this message – and as a result they too have started to run ever faster.

Teachers (if it’s meaningful to treat such a diverse range of people as a single group) are more predisposed than most to challenge this kind of orthodoxy. They tend to be more resistant to the seductive claims of the media, and less inclined to give up their free time to enhance their earning capacity. Most teachers have a greater interest in young people as individuals than they do in policies. If the dominant code in a society deems that you are paid your market value, then teachers’ self-esteem will inevitably not be very high. If what you are increasingly expected to do as a teacher appears to drive out what you believe children desperately need – in the name of continuous improved efficiency – it probably follows that you would doubt
the very basis of how such efficiency is measured. “Having explained our predicament so clearly”, exclaimed an exasperated and deeply concerned teacher at a conference some time ago, “what would be your first set of actions if you were appointed minister of education?”

I responded immediately by saying that I would resign unless I could also become prime minister. My audience was stunned for a second until they realised I’d reached the core of what all this debate was really all about. It’s not the schools that are the problem - and it certainly isn’t the pupils - it’s the overall direction of our society which, in exchange for all the trappings of an apparently highly successful materialistic society denies the individual the space, the time and the experience to take real control of his or her own lives.

Profound disillusionment with the way in which market efficiency has become the determining factor in so many aspects of social policy is, of course, the reason why I argue that change has to come – in such a highly centralised system – from the Prime Minister, or Parliament itself. It cannot be achieved by educationalists alone. And the need for change is urgent. Jackie Ashley, writing in The Guardian in May 2004, found herself, an atheist who throughout her life had looked to politics for idealism, commending two bishops for being concerned with “the yearning for happiness and fulfilment... and for an ethic of human flourishing, which is rooted in human nature.” She went on to observe that, “It has become almost unthinkable to go to politicians for this kind of language or ambition. [If they told us] that their main intention in public life was to make us happier, or to challenge us to rethink our values, we’d laugh in their faces. The political arena has shrivelled drastically, back to a technocratic promise to use our taxes to provide services a bit more efficiently than the other lot.”

Efficiency is a concept dating to the Greeks. However the Greek philosophers used the term efficiency in a significantly different way to the meaning ascribed to the term by the late twentieth century advocates of open markets. To the Greeks, efficiency was a means towards achieving Virtue, both for the individual and for the state. The platonic division of labour was not about individuals engaging in efficient exchange of money, but rather about the best combination and utilisation of human resources to achieve the ideal state. Clive Hamilton, the Australian author of the groundbreaking book ‘Growth Fetish’ (2003), argues that political thinking evolves very slowly. “Today,” he explains, “the compulsion to particip-

Pate in a consumer society is no longer prompted by material needs (these have been largely solved) but rather by political coercion. It is prompted by the belief of the great mass of ordinary people, taking their cue from political leaders, that to find happiness a society, as with individuals, must be forever getting richer, regardless of how wealthy they already are. If ordinary people today are exploited”, argues Hamilton, “it is by common consent.” People, it seems, have swallowed the dream that more money must inevitably bring greater happiness. Intuitively people know better, yet nevertheless they are driven by society’s pressures. More often it seems that for most of us to travel hopefully is more rewarding than to arrive. Despite incomes having gone up two and a half to three times (in current day values) in America and much of the European Union in the past fifty years the recorded level of happiness, as noted by psychologists and other students of social affairs, has continued to fall during that period. At the same time levels of clinical depression have gone up ten fold and bipolar depression is increasing everywhere in the developed world. Money has never been the measure of happiness, and it seems never can be.

“The price of abundance has been the disintegration of community, and the disintegration of self”, continues Clive Hamilton. In short, now that the economic problem has been solved, we need a politics that encourages people to pursue a rich life, instead of a life of riches. “The defining struggle is no longer between proletarians and capitalists about how to divide the surplus of the production process; today it is about how to live a genuine life in a solid structure that manufactures ‘individuality’ and celebrates ‘superficiality.’”

In a post-growth society, suggests Hamilton, the primary function of government should be to encourage people so as “to protect, expand and enrich our social, cultural and natural capabilities” The pursuit of well-being would then “allow the emergence of authentic (rather than manufactured) individuality and the flowering of human capital.” In such a world this would give greater precedence to characters like old Mr McFadgen who taught me to carve, and employers would no longer feel that they couldn’t afford to take on youngsters for extended periods of work experience for fear this would inevitably lead to a decline in profits. There would be time for dialogue, and for community participation in politics. People would revert to working to enable themselves to live, rather than simply living to work in a structure over which they had no control.
The conventional arrangements for the family and procreation could soon find a new equilibrium; “It may not be children themselves who have changed and become more problematic but our (the adults) attitude towards them”, wrote Lawrie and Matthew Taylor in ‘What are Children For?’ in 2003. In our competitive, long hours, work culture parents are at a practical disadvantage, the Taylors noted, “What has changed so dramatically in the modern world is not the capacity or readiness of children to follow parental codes for living, but the difficulty (for parents) of not knowing any longer what those codes might be.”

Living in a world where even adults don’t feel in control of their own destiny parents find it almost impossible to construct “the master scripts” about how to live which were available to earlier generations. We need to recognise that a society that is increasingly unwilling to nurture children doesn’t simply have a demographic problem, it has a much deeper problem – it has allowed the cult of individualism to destroy our connection with the future. “Post God, post socialism, we still need something to connect us to each other and to the future course of human history. Children are (that) new eschatology”, (the story that gives meaning to our lives) “the necessary countervailing force to liberal modernity”, write the Taylors, probably little realising that that was exactly what our ancestors knew.

This explains why that ancient Native American proverb about our not having inherited this world from our parents, but have been loaned it by our children is so very powerful. There may not be much time left for us to rediscover the plot. Our technological wizardry has advanced more quickly than our ability to avoid political, economic and social turmoil. On that beautifully clear, sunny January day which heralded the new millennium, Sir Martin Reece, the Astronomer Royal, was asked what chance he gave the world of surviving into a fourth millennium. I’m not sure about surviving a millennium, he was recorded as saying, “but I think the odds are no better than fifty-fifty that our present civilisation on earth will survive to the end of the present century. What happens here on earth, in this century, could conceivably make the difference between a near eternity filled with ever more complex and subtle forms of life, and one filled with nothing but base matter.”

Writing this postscript my mind flashed back to that ancient cathedral on the Venetian island of Torcello. In my mind’s eye I saw again the tears on the mosaic cheek of the Teotoca Madonna – ‘The God Bearer’. In that hauntingly beautiful but terri-

bly sad young girl’s face is the reproach, transmitted over many centuries, to our own generation. Could we ever let our technological knowledge so exceed the wisdom with which we should see all things in context, that our children or our children’s children could face oblivion? No wonder that young women’s eyes seem to hold all of us responsible.