

'unique creation'

Possible futures

Four scenarios for 21st century schooling

Riel Miller, OECD
Tom Bentley, Demos

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Chaired by Tony McKay, Director of the Centre for Strategic Educational Thinking in Australia, the think tank brought together leading practitioners, academics and members of NCSL's governing council and leadership team. The group's remit was to examine current thinking on leadership for transformation and discuss how this may influence the College's future work.

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It is self-evident that the future matters to us. Our species is fairly adept, albeit usually with considerable effort, at ensuring that immediate future needs like food and shelter are likely to be met. We are perhaps less effective in our efforts to set out and act upon long-term objectives. In part, this is because it is hard to envisage how life could be in 20 or 30 years. In part, it is because near-term concerns are more pressing.

Recourse to a clockwork version of the future works for a clock. But plainly the evolution of whole societies cannot be successfully planned by the designer's blueprint. In fact, it cannot be planned at all. Societal evolution is an unfolding of millions of interactions, opportunities taken and opportunities lost. There is no grand design. But that does not mean that there can be no long-term or collective goals. While the future cannot be controlled, it is more than just the blind outcome of an 'invisible hand' bringing people's diverse interests together into a functional way of recreating daily life. We do make collective choices that make a difference, but they are overwhelmingly vague and laden with values that, more often than not, are left implicit. We make choices without specifying either a particular structure to daily life or a precise way of being. This lack of precision is often a good thing, given that freedom to shape one's life is one of our primary values.

However, this does not mean that it is pointless or impossible to think about the long-run future. In fact, because the future is open, thinking clearly and rigorously about it is essential if we want to realise our values and commitments and to understand the choices that we might make, individually and together.

This kind of futures thinking should be very clearly distinguished from planning, blueprints and targets. Instead, long-term thinking must be understood as an exercise in imagining what today might become, what we want tomorrow to be like and how to assess the actions that might make a desired future more likely to occur.

Schools and the future

Schools were in a pivotal position during the 19th and 20th centuries. Schools did a spectacularly efficient job of: safeguarding children while their parents were at work; ensuring that every young person was able to arrive on time and behave appropriately in a classroom; making sure that the majority of students would be able to function later on in a workplace and as citizens. School systems also stand out as one of a handful of pre-eminent institutional complexes, such as the modern state bureaucracy and the multinational corporation, that have served as organisational models for society as a whole.

However, as we argue in this publication, there is good reason to think that the first part of the 21st century could see radical changes in the socio-economic landscape. If this is the case, can schools retain such a central, durable, institutional role? Should they? Under what conditions could today's schools play the same roles as in the past? Can the school evolve along with the changing socio-economic context, and if so, how? Would schools act as a brake or an accelerator of desired changes?

In this publication, we address these questions and set out a number of possible futures for schools and schooling systems. Our goal is not to generate a single 'preferred future', or to offer any kind of prediction, but to contribute to the ongoing debate about future schools by helping to extend the time horizons within which that debate occurs, and by identifying the possible implications of strategic choices that school leaders, policy-makers and others could make in the coming decade.

1 Future Studies is now a fairly well-established, if not widely known, field of academic research. For a recent review of the history and current status of the field see: Dator, James Allen, editor, *Advancing futures: futures studies in higher education*, Praeger Publishers, 2002.

2 For more on this see Part 1, section 5 on the contingency of transition scale change. This topic is also discussed in the four books of the 21st Century Transition Series: *21st Century Technologies*, *The Future of the Global Economy*, *The Creative Society of the 21st Century*, and *Governance in the 21st Century*, OECD.

The answers to these questions matter to school leaders in particular because the responses will help to shape their long-term goals and the ways in which they measure progress towards them. They matter to governments and other public institutions because they help to clarify some of the political choices that may need to be made in the long run, and some of the capacities that educational policy-making and administration might need in order to contribute successfully to long-term transition.

The difficulty is that the future is unknowable. How can we develop new objectives along with the appropriate metrics and benchmarks for a world that does not exist? This is where Future Studies (FS) as a discipline for analysing plausible change comes in.¹ For instance, the ‘creative society’ of the 21st century, analysed in some detail in Part 1 below, lays out a new set of possibilities for the context in which schooling takes place. So, for instance, if in the ‘learning society’ the principal source of wealth creation is radically different from today, on a scale of change similar to the shift from agricultural to industrial society, then most aspects of everyday life also stand a good chance of being transformed. Under these new circumstances schools could play a wide range of possible roles and operate in many different ways. As we argue, they might dispense with their custodial function, or with the responsibility for screening and sorting students into vocational categories, as these roles are taken on by other institutions or organisational systems. They might give up their assumed monopoly on organising formal learning activity, and instead play a role in sustaining and validating much wider networks of learning and knowledge transfer.

The set of 21st century transitions that we explore below do not presuppose a particular role or form for schools. In fact, one reason this debate is so important is that education plays a *reflexive* role in the process of transition; while the possibilities for schools are shaped by the contours of the society around them, the knowledge, understanding, abilities and values of learners are also a crucial influence on the types of institution that could emerge from transition.

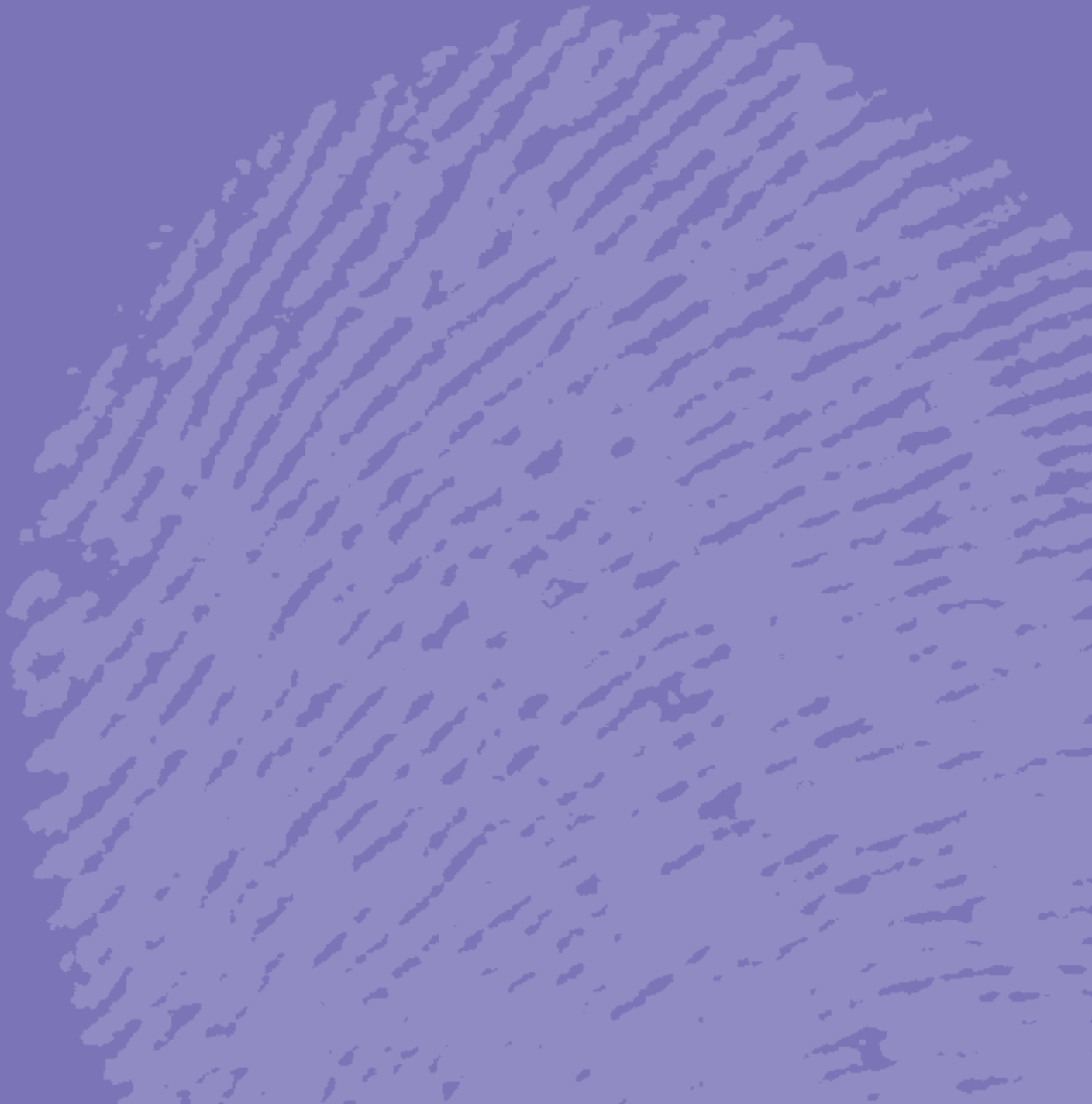
Like other institutions that faded from the centre to the periphery of people’s everyday preoccupations, such as the family farm or certain religious and military organisations, schools might also move off centre stage.

Within the set of institutions and practices needed to provide the basic conditions for daily life, any number of radical changes are imaginable, although of course not all will take shape. Change on a transitional scale is highly contingent on a complex set of interdependent forces working together.² And the goals that are chosen, the ones that inspire imagination and innovation, are likely to be decisive in transforming what is possible into a desired reality.

Part 1 of this publication explores the uses of futures thinking and the prospects of ‘transition scale change’ in four key areas of society: technology, economy, social identity and governance. Part 2 then examines the role of schooling in such processes of change, the dominant trends currently impacting on education systems, and identifies four ‘possibility space’ scenarios for the future of schooling. These sections also present short, illustrative stories designed to aid the imagination in thinking about the possible implications of these scenarios. In Part 3, we examine the challenges for leadership that arise from the long-term possibilities discussed earlier on.

Part 1

History of the future and
possibility spaces: the example
of 21st century transitions



3 To use a term from economics, FS embraces the non-ergodic while the predictive traditions rely very heavily on the world being ergodic or predictably constant. Also note that this has powerful implications for methodology and the viability of 'controlled experiments' where the results of one researcher's experiment can be repeated by another for verification. In a non-ergodic world the underlying conditions are expected to change in such a way that there is no basis for repeating the same experiment. See: North, Douglass C, 'Dealing with the non-ergodic world: Institutional economics, property rights and the global environment,' *Duke Environmental Law and Policy Forum*, Fall 1999, vol X, no 1, pp 1–12.

4 Unfortunately for the historian the existence of artefacts and historical records does not offer any definitive theory of why or how these traces of the past got there or fit together in a particular way. The historical record can, however, be effective at limiting the number of reasonable hypotheses. But the same is true for the future, which is limited in a variety of ways by the past. That said, in many cases the sources for limiting the degrees of freedom will differ. Historians look further back and depending on the period may have access to more verifiable detail, while futurists are more preoccupied with the seeds of tomorrow scattered in the overwhelming detail of the present. However, the theoretical challenge of speculating about how daily life was or will be reproduced remains the same.

One way to start thinking about future possibilities is to pose a question which subverts the assumption that our current reality is permanent. Imagine this simple story:

You are dreaming. It is early morning. Your alarm clock rings. You give it a whack and it stops. Then gradually, as the sound of the alarm fades, you become aware of a disturbing din out in the street. You immediately go to the window to see what is going on. Outside everyone is in a frenzy. Car horns are blaring, people are yelling. They all seem to be in a panic. You quickly get dressed and go out. After a little while you manage to stop a passer-by and ask them what is going on. They tell you that they are searching for instructions, orders or word-from-on-high regarding what they are supposed to do. It turns out that a general amnesia has struck overnight and now no one knows what to do – or more exactly they do not know what to do to recreate daily life. Now your anxiety level starts to climb because you know that you do not hold the magic key that will unlock everyone's memory nor some fast spreading new instruction set – a 'meme' that could do a 'reset' on daily life.

Approached more analytically, this dream, some would call it a nightmare, poses the question: how is it that each morning when we wake up the world around us restarts, functioning – at least most of the time – much as it did the day before? And, how is it that as we recreate life each day we also change it in ways that can lead to a radically different future?

This approach to thinking about the future is in striking contrast to more familiar methods like mystical prophecy, ideologically inspired utopias, or mechanistic, linear prediction. In the last decade it has become more common for people to assume that change is accelerating, that very little will remain the same. Because we are more familiar with the idea that some things in daily life, often those associated with new technology, are changing constantly, it can actually become more difficult to understand how other things in the environment around us remain fixed, including our assumptions about institutions like schools, the underlying basis of economic and working life, and the ways in which our identities and values are shaped and expressed.

Rather than looking for a deterministic predictive sign, or to extrapolate from existing trends, Future Studies (FS) aims to evoke a much wider and deeper set of possible futures.³ One area of FS is interested in short-term prediction, usually based on empirical modelling. These studies focus on situations where the constraints of the immediate past help to restrict the degree of possible change, and therefore make accurate short-term prediction possible. But these methods, used for everything from economic growth to the weather, are notoriously unreliable beyond a few months ahead. This kind of work is useful for longer-term futures thinking because it helps to clarify some of the specific variables that reproduce daily life, and the ways in which they interact to produce different kinds of outcome. Beyond the limits of forecasting's effective range, however, efforts at prediction must give way to an exploration of what might be possible.

Future Studies, then, is primarily about assessing the plausibility and/or the probability of different configurations for the reproduction of daily life in the future. In many respects, this task is closer to that of a historian than to the various branches of forecasting. Both futurists and historians seek clues in the present and the past in order to substantiate their analyses of why and how life did or might unfold. Both, in their different ways, are map makers.⁴

All analysts of how daily life is reproduced – past, present and future – must use theories and methods that take into account multiple layers of complex interaction and causality. Like history, FS is a polyvalent and neutral 'social science' – not in the sense of pretending that an analysis can be value free or entirely objective, but as a collection of methods, theories and findings that provide

5 Centre for Educational Research and Innovation, OECD, 2001.

6 Much work is under way in this field of academic research. The crucial point being made here is that all areas of the economy, from car manufacturing to restaurants, are now adding more conceptual value to the production process. The shift away from uniform products forces the addition, at different points in the production process and drawing on different inputs, of new knowledge. The key here is the 'inventiveness' that is required. Certainly manual labour requires knowledge, often highly developed understanding of seasons or materials. What is different about the 'learning economy' is that in addition to acquired stocks of knowledge that need to be used for production, there is also an additional need for differentiation or customisation that creates a flow of new knowledge. References: Leadbeater, C, *Surfing the long wave; knowledge entrepreneurship in Britain*, Demos 2001; Leadbeater, C, *Living on thin air: the new economy*, Viking, London, 1999; Castells, M, *The Rise of the Network Society*, Oxford, 1996.

7 Some condemn these luxury or entertainment economies. They make a value judgement about what is good or bad production and consumption. But markets, composed of investors and buyers, seem rather unconcerned. In this sense the market, purely as an exchange mechanism, has no values or goals. For its supporters that is one of its great virtues. For its critics that is one of its great failings. But both sides of the debate do agree that producers and consumers interact, more often than not with the investor trying to tempt the consumer into the market. And, quite often, the big bets by producers are on the losing side of consumers' desires. So the investor, or another one, tries again. It is not that the consumer is sovereign in the active sense of deciding what is on offer. But they can exercise the more passive power of a veto and the mysterious power of hidden wants and desires.

insights, for people who may hold different beliefs and goals, about possible futures. There are, of course, many different schools of thought within each discipline. None has a monopoly on the truth and all benefit from the competition of ideas. In line with our aim of broadening and deepening the landscape of possible futures, the specific method and findings we use in this publication are part of a relatively recent development in FS called 'possibility mapping'.

This approach aims to clarify what might be possible, rather than to assess probability. The dimensions of different 'possibility space' maps are determined by key dimensions of change that could make particular outcomes possible. Which indicators make sense depends entirely on the nature of the possibility (the change) that is being mapped. Some indicators in the areas of technology, economy, society and governance that might signal 'transition scale' change are explored in the section below. School-specific possibility spaces are mapped in Part 2.

This approach to generating scenarios is one of many. Another, more familiar, method is to take a set of currently powerful trends and combine them in various ways to generate a set of alternative futures that are internally coherent and consistent with the current direction of travel. An excellent example of this approach can be found in *What Schools for the Future?*⁵ which provides a series of scenarios for schools in OECD countries, based on a careful assessment of current trends. We draw on that analysis in what follows, but we are not trying to produce an alternative version of the same trend-based scenarios. Instead, the range of possibilities that we generate as scenarios for schooling focuses on a series of conceptual 'ideal types', clarifying the choices about what the roles and expectations of schooling might be. In that sense, we are not trying to work through in detail the ways in which current trends might play out; that is a possible focus for further work. Instead, we are aiming to produce a clearer sense of the end points that schooling systems might reach as they are intertwined with much broader processes of societal change.

Exploring possibility spaces: five dimensions of transition scale change

Making the case, at the outset of the industrial revolution, that agriculture would become a marginal activity was probably impossible. Even at the beginning of the 21st century our agrarian past still lies heavily on our thinking, through school timetables, nursery rhymes and political maps. It is therefore not surprising that it is difficult to get our institutions and imaginations beyond the much more recent memories of an economy and society dominated by mass production and mass consumption. The 'post-industrial era', a term coined over 30 years ago by Daniel Bell, has in many ways been very slow in coming. In part, this is because the most prominent elements of the service economy, finance, health care, education and even retailing, have largely operated using factory methods. In part, it is also because at the outset much of the service sector was linked quite tightly into heavy industry and the manufacturing parts of the economy.

Today that is no longer the case. Despite difficulties in adapting industrial era statistics to capture the changing nature of economic activity, it is clear that both the flow of value-added and the stocks of wealth depend on the continuous generation and application of knowledge.⁶ For illustrations, just think of the stock market valuations of companies like Microsoft that deal primarily in 'intangible' products and assets, or the inventiveness and variety of outputs produced by today's car companies or restaurants. The most dynamic sources of wealth and value creation in OECD countries arise from knowledge-based processes. People can live well and become better off even when most of them spend their time and work effort on the 'ephemera' of ideas.⁷

Of course this begs the question of what forces might be held responsible for driving agriculture and subsequently industry off centre stage? It was not consumers deciding to stop eating or to punish farmers, steelworkers and secretaries, though consumers did, in a largely personal and unreflective way,

8 Reference: 21st Century Transitions Series, as above, OECD.

9 'Long-run Prospects: Policy Challenges for a World in Transition', OECD Policy Brief by Riel Miller, OECD, Paris, 2001.

<http://www.oecd.org/pdf/M00004000/M00004774.pdf>

decide to buy cheaper food or better consumer goods and services when they could. Equally, people will try to find better jobs when they have a choice, or any job at all when they did not have much choice. Investors and producers also found new ways of making a profit by developing more productive farming and manufacturing methods, by inventing entirely new products or by discovering new, cheaper sources of supply.

All of these decisions, taken together, end up gradually reallocating resources from one part of the economy to another, from one type of activity to another. Certainly, major events, like wars and depressions, along with collective choices like respect for property and the right to vote, have always been crucial elements contributing to the opening up of new options and the closing of old ones. But at the level of everyday life, change is made up of incremental choices that can, over the span of a few generations, lead to radical transformations in the way that it is lived. We have seen this scale of transition in the move from agriculture to industry, from factory to office tower, and from today's fragmenting markets to tomorrow's... what?

Working within a 30-year time frame has the virtue of opening up many assumptions without losing all contact with the inertia of today. Over the span of three decades a society can undergo a complex series of inter-related changes, sufficient to generate a radical difference between the starting and end points. But, as even the most resolute efforts to 'revolutionise' society have demonstrated, there is still a good chance of strong continuity in many of the key parameters that shape daily life. For instance, the 21st Century Transitions Series identified a number of elements that currently frame everyday life in countries like the UK and seem likely to still be in place 30 years from now.⁸ Certain 'timeless' values, like those articulated in the middle of the last century by the Universal Declaration of Human Rights, are likely still to frame people's aspirations in 2030. Similarly, after almost a century of struggle between mixed economies, based on representative democracy, rule of law and freedom of expression, and planned economies, based on collective social goals imposed through state planning, the verdict seems sufficiently definitive in favour of the mixed market model to foreclose the prospect of a radically different alternative moving to prominence within the next three decades.

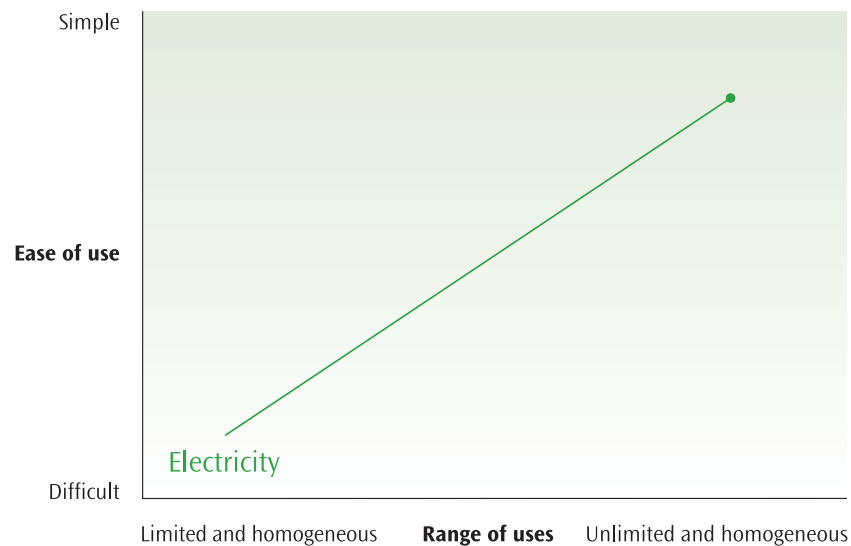
The next four sub-sections offer very brief overviews of an extended possibility space analysis that was undertaken by the OECD International Futures Programme from 1997 to 2001 to assess the plausibility of 21st century transitions.⁹ The dimensions of different 'possibility spaces' are determined by the dimensions of change that could make particular outcomes possible. Which dimensions matter depends entirely on the nature of the possibility. For this project the key metrics or indicators of change were attributes of everyday life, for instance: what types of economic activity account for the preponderant share of wealth creation (farms, factories, services, knowledge); which social patterns and values predominate; where and in what conditions do most people live; and so on. The task focused on the extent to which technological, economic, social or governance changes might contribute (or not) to transitional scale change in the initial decades of the 21st century.

1. Transition scale technological change

Transition scale change has always involved the diffusion of pervasive technologies, meaning tools that become part of everyday life such as printing and electricity. Equally clear from the historical record is that the timing and nature of the diffusion of these tools and techniques is largely shaped by non-technological factors. Contrary to the sentiment, particularly rampant around the time this IFP Forum for the Future conference was held in December 1997, ‘technology is not destiny’. That said, this Forum on 21st Century Technologies concluded that a range of new technologies could become pervasive. For example, contingent on a set of other significant physical and economic changes, computing might become ubiquitous and biotechnology might allow us to design our bodies, food and environment. Other tools, such as software that flawlessly and instantaneously translates from one language to another using micro-scale – maybe even nano-scale – hardware, could also become an integral part of everyday life. However, the critical element from the perspective of transition scale change turns on how widely a technology is diffused throughout society – as an input and output – in many different sectors and areas of activity.

Diagram 1 below offers a possibility space perspective on the pervasiveness of a specific technology: electricity. The vertical axis tracks the ease of use while the horizontal axis measures the range of uses. Initially electricity was a difficult-to-use technology with relatively limited applications. Today it is relatively simple to use, although not always to produce, and is applied in a vast range of ways and circumstances. The path towards pervasiveness, from lower left to upper right, was a long one, marked by many different types of milestone, including state-run or regulated electrification.

Diagram 1
Technology possibility space: electricity



No specific technology has an assured path to pervasiveness. The history of invention is littered with examples of exciting ideas and discoveries that either went nowhere or were only narrowly diffused. One of the attributes of the industrial era's attachment to 'modernism' is a strong tendency to overplay the importance and inevitability of each technological breakthrough. Most recently, the dot.com boom played and preyed on such expectations. However, the question remains: are there currently technologies in the early stages of development that might become pervasive and thereby make an important enabling contribution to transition scale change?

Recent developments like the internet, sequencing genomes and nano-scale construction have generated a long list of potentially pervasive new technologies. One example, for illustrative purposes, is 'solid MP3' or three-dimensional printing. MP3 is a software standard that allows music to be recorded and played back in digital form. It caught on significantly enough in the late 1990s to provoke a pitched battle between music distribution companies and music file traders, precisely because the transactions it made possible threatened the markets, copying standards and distribution channels on which much of the recorded music business rests. Ownership rights, payment methods and the treatment of intellectual property in general have been called into question by the sharing of MP3 music files over the internet. The 'solid' element only exists in highly limited forms today. Solid objects are currently 'printed' by so-called prototype machines. Using computer-aided design/computer-aided manufacturing (more commonly known as CAD/CAM) these printers create one-off models in three dimensions of the objects engineers are working on. These printers use plastic or graphite to build up a solid object, layer upon layer, according to the designer's specifications. Although the experts cannot be definitive, it seems a fairly good bet that in much the same way that regular paper document printers evolved from slow and messy monochrome dot matrix technology to today's fast and highly detailed colour laser printers, so too might 3D printers evolve from expensive prototypes to inexpensive all-purpose fabricators of solid objects.

Thirty years from now it is plausible that 'solid MP3' printers could be pervasive. If so, many people would be printing out physical objects, often customised to their specifications, on site. Home versions of these printers might spit out coffee mugs, utensils, small electronic gadgets and who knows what else if composite materials and chip technology continue to advance. Bigger, white goods type items, from refrigerators to motor scooters (hydrogen powered-electric) could be printed out at the local copy-shop. Really big items involving particularly complex materials or special multi-stage assembly, such as cars, might only be available from the local shopping mall.

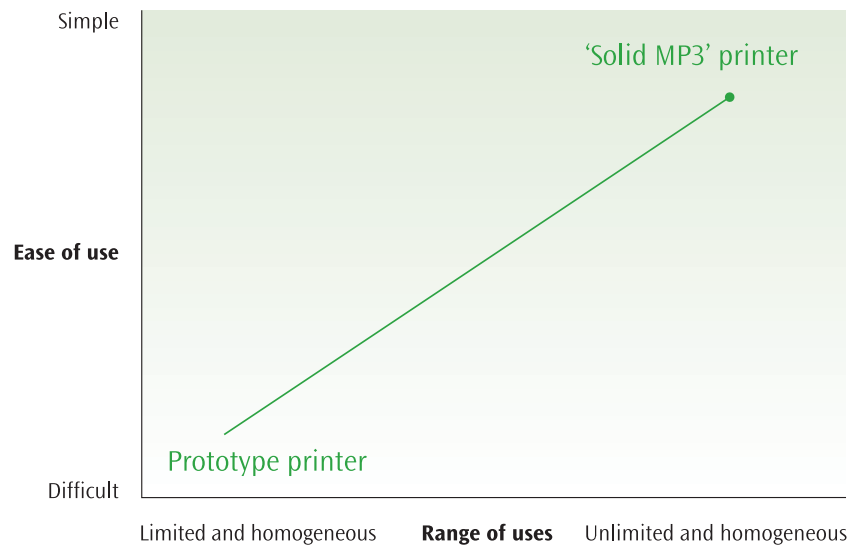
This discussion is not meant to sound like Star Trek's transporter, materialising people and objects out of nowhere. But even if 'solid MP3' printers diffuse only modestly they could still have profound implications for trade patterns, supply networks, delivery services, shopping habits and the range of options for customising physical items to personal tastes. For educators, it is not difficult to imagine the range of applications that such technology could have in supporting learning. From a purely technological perspective this trajectory only demands modest advances in engineering and materials science. But to diffuse widely across society it is likely to require major leaps in the treatment of intellectual property, design specifications, payment and trust on the internet. The MP3 experience showed how difficult it is to find a functional solution for what the major record labels call 'digital piracy'. Imagine if the problem expanded to include companies that produce physical objects like General Motors, Nokia, Siemens and Whirlpool.

The development and diffusion of 'solid MP3' therefore shows us how transition scale technological change is contingent on a wide range of other changes. 'Solid MP3' could have a major impact on how people live their everyday lives, but its diffusion is contingent on various other legal, economic, social and cultural developments. New laws and enforcement systems (judicial, cultural, technological) will be essential if 'solid MP3' is to become profitable for producers and cost-effective for consumers.

Equally critical for this kind of technology to take off is the emergence of new desires and capabilities among those who might use the new tools. At the moment most consumers are both accustomed to and largely satisfied with the vast but passive selection of objects on offer from mass producers. They could feel put upon or inadequate when faced with the chance to really design their own products. As we know too well from the introduction of personal computers, a large part of the population finds IT hardware and software incomprehensible and/or frightening. Many people, when faced with the chance to design their own pen set, teacup, bicycle or dishwasher, might decline the opportunity to express what might be called 'everyday creativity'. This might be either because they cannot be bothered, or because they believe that the systems for addressing the copyright, payment, privacy and quality dimensions of the transaction are too time-consuming, difficult or uncertain.

The potential for technological transformation is clearly great, whether or not we can see exactly what form it might take. But what might drive the development and diffusion of these tools? This question brings us to examine what kinds of change in the structure and functioning of the economy might be plausible over a 30-year period.

Diagram 2
Technology possibility space: solid MP3



2. Transition scale changes in economic activity

Transition scale economic change can be imagined along a number of familiar dimensions:

- What is produced/consumed (eg food versus manufactured goods).
- How production and consumption take place (eg autonomously on the farm versus hierarchically in the factory/supermarket).
- Where production and consumption occur (eg country versus city).
- What the main attributes of resource allocation methods are (eg market versus planning, open versus closed).
- What the relationship of the economy (the how, what and where of production/consumption) to the environment is - the ecological footprint of economic activity (eg light versus heavy).

Evaluating change along these dimensions allows us to assess the scale of transition. Economic change reaches transition scale when it alters the basic composition of the economy – shifting the shares represented by different types of activity and ways of doing things. In the shift from agriculture to industry in OECD countries, every one of the variables mentioned above was altered in significant ways.

Diagram 3 gives an example of how possibility spaces can be used to assess the nature and scale of economic and social change. Along the vertical axis is the predictability of tasks, be it at work or at home, as a producer or a consumer. Along the horizontal axis is the extent of individual autonomy or authority to take initiative. The lower left quadrant of this possibility space describes situations, typical of the mass production/mass consumption post-World War Two era in OECD countries, where tasks at work were predictable and largely imposed from above while consumption was largely constrained to the passive choice of what was on offer. Moving towards the upper right-hand corner, predictability decreases and autonomy increases, reaching at its maximum the entirely unpredictable and autonomous situation of the artist; an economic agent producing entirely according to their own, self-generated expression of identity and active choice. The slightly less ‘free’ cyber-producer/consumer also takes on one of the fundamental attributes of the artist, the attribute with perhaps the most important implications for transition scale economic change. That is, the self-producer collapses one of the essential dichotomies of the industrial and mass eras, the separation of the supply and demand sides of the economy.

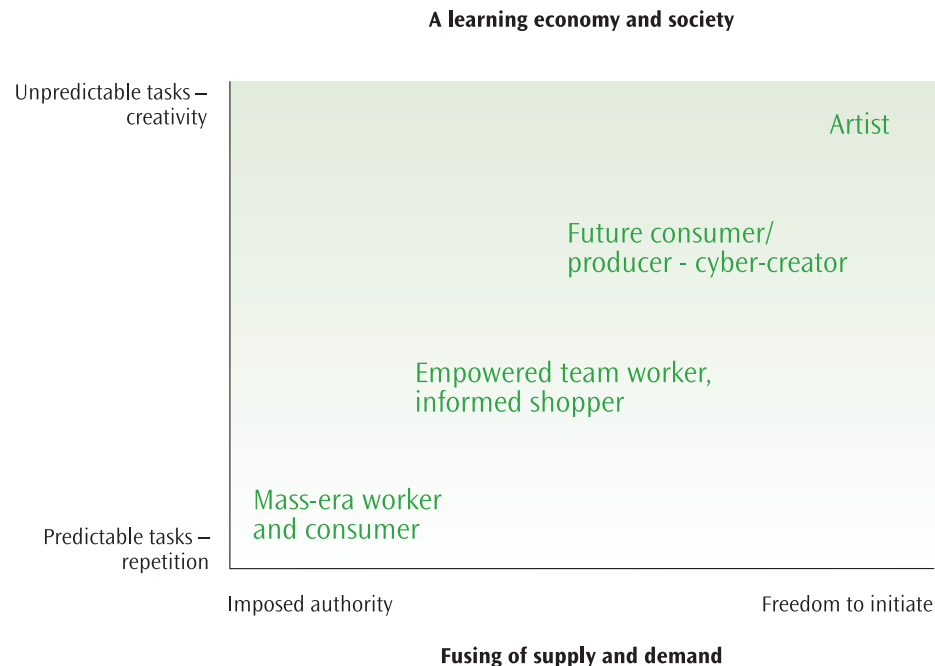
This radical fusion, dubbed ‘unique creation’, arises out of a concrete problem for producers trying to customise their output and consumers trying to satisfy their desires. One long-standing characteristic of the industrial era is that the dominant relationship between conception and execution strips away the thinking role for both front-line assembly workers and passive shoppers. This ‘alienation’ or disempowerment is not inherent to the logic of the market as an exchange system, but is central to the efficiency of industrial production and mass era practices. Unique creation poses a fundamental challenge to this dichotomy. A product tailored exactly to the consumer’s criteria depends, unless someone learns how to read minds, on the conscious addition of design ingredients from what was formerly the ‘demand side’; that is, the needs and preferences of the consumer. There are some signs that consumers are no longer satisfied with letting the engineer, designer or marketing guru specify what they want, though there are strong forces in today’s economy geared towards influencing the evolution of consumer demand.

10 For example, see Seltzer, K and Bentley, T, *The Creative Age: knowledge and skills for the new economy*, Demos, London, 1999.

As freedom of choice and self-expression become more important, the cyber-producer/creator becomes an important part of the act of exchange. Such activism necessarily alters the workplace hierarchy because the final product cannot be specified in advance. There has to be a joint effort that combines the know-how and imagination of the front-line worker and the actual consumer. The old divide, between the boss who conceives and the worker who executes, between the designer who imagines and the consumer who only chooses, begins to break down. This changing relationship is partly reflected in discussion of newly active consumer movements, and in the idea that some key public goods may be 'co-produced' by the combination of citizen and service supplier, whose behaviour combines to generate better health, more liveable neighbourhoods, or higher levels of learning.

Similarly, the beginnings of this shift have been reflected in educational debate in the discussion about how education should prepare people for a world of work where self-directed autonomy and creativity are increasingly important.¹⁰ But so far there has been relatively little thinking about the implications for actual provision of educational services, and the relationship between producers and consumers of knowledge and learning. In the world of adult skills and lifelong learning, policies have leaned towards the idea of 'demand-led' systems, in which individuals can access provision that is tailor-made to their specific needs and circumstances. Much of the provision, however, is still mass-produced, even where it is made available in flexible ways. And, crucially, the consumer or demand side does not yet have sufficient capacity to refine or articulate their needs in ways that make joint activity practical.

Diagram 3
Economic possibility space: fusion of supply and demand in unique creation



11 For more detail see: 'Anatomy of a long-boom', Miller, Riel, et al, in *The Future of the Global Economy: Towards a Long-boom?*, OECD, Paris, 1999.

However, moving to a 'creative economy', one dominated by 'unique creation', is not something that happens overnight. Change is slowed by efforts to maintain the old methods of organising production and consumption. Thus the 'knowledge management' (KM) movement of the last decade has been largely about finding ways to bring worker and consumer creativity back 'under control'. Much of KM focuses on ways of getting workers and consumers to follow motivations that correspond with the desire to maintain hierarchical control. Recruiting and managing talent, and aligning 'free workers' with company productivity, has become the major focus of much business and management literature.

Despite the difficulty of this task, considerable progress has been made in adapting industrial era practices to fit productively into a more intangible economy. Again, this development has direct relevance for education, where growing attention and energy is devoted to management and professional development strategies which do not alter the basic institutional structures or career paths of schools and teachers, but nonetheless focus on making their work more customised, knowledge-intensive and evidence-based.

Other significant obstacles can also be expected to slow or block movement towards the upper right of the possibility space sketched in Diagram 3. Without providing an exhaustive review here,¹¹ one constraint and two 'false constraints' are worth noting. One serious obstacle is the difficulty of establishing the transparency and trust demanded by very high levels of creative activity and interdependency. All systems of economic organisation rely on security of contract and the reliability of exchange methods. The fusion of demand and supply can only be efficient, a viable alternative to mass methods, if the ability to undertake joint-production activities is easy and low cost. As we saw with technology diffusion, and as we discuss in the next section, many pieces will have to be put in place in order to build a foundation for this degree of seamlessness. Once again, the extent to which new practices and forms of organisation develop depends in part on developments in the wider cultural and institutional environment.

Two other 'obstacles' that are often cited in this context are that the fusion of demand and supply is incompatible with market exchange, and that such high levels of everyday creativity are beyond most people – that they do not have the skills or ability to operate successfully in such a knowledge-intensive environment.

Both of these are false obstacles. Markets are not only compatible with the integration of demand and supply, conception and execution, but are probably essential to achieving the requisite efficiency. Imagine that economic activity takes place through an interconnected web of integrated supply networks, partly rooted in localities, but also focused around various forms of specialist knowledge, demand and expertise. Market-based competition is an important driver of efficiency, specialisation and the exchange of ideas. Its context, however, is quite different, in the sense that it is rooted in dense networks of collaboration and interdependence, which help to sustain both the norms and the transparency needed for exchange to flourish. In such a system, where knowledge, information and specialist capabilities are very widely distributed, not everyone will need to be a rocket scientist. In fact, the opposite seems likely; not every personalised teacup, individual garden design or customised home energy system will be an artistic or scientific breakthrough. Learning about one's tastes, one's potential collaborators and others' ideas that are inspiring does not take excessive amounts of university level training nor exceptional artistic genius. Instead 'everyday creativity' is likely to dominate.

Most of the creative effort that adds value will be reflected in millions of variations on similar themes and simply express the gradual maturation or what the French call 'refinement' of taste. However, if 'everyday creativity' is to become the dominant type of economic activity then a whole range of other changes would have to take place in order to move everyday life far away from the behaviour, expectations and organisation typical of mass production/consumption. One of the main sources of these related changes – pushed by what people want to do and pulled by what happens around us – could be movement through social possibility space.

¹² See Amartya Sen, *Development as Freedom*, Anchor Books, 1999.

3. Transition scale changes in social affiliation and identity

In the past, changes in the way people identify themselves – their perceptions of self, their official status and the way they view their relationship to the society around them – have been good indicators of transition scale change. This is because transitions foster the development of new identities, such as those of citizen, worker or member of an emerging social group. While a transition is under way such change is often only seen by looking across generations, as the elderly cling to identities that no longer correspond to the world around them and the young detect the traces of identities yet to come. Signs of this type of change can be revealed by posing questions like: what labels do you apply to yourself? What do you say if asked: what is different about you? Do you conform to social norms – consciously, unconsciously – out of convenience or fear or ignorance? Are you given choices and if so how diverse and life-changing are your choices? Do you have the right to change career, community, status? Do you have the desire, skills and experience to make such choices? On a comparative basis is it worth assessing the extent to which differences in identity are related to efforts to manage the risks of everyday life – both the perception and reality? The answers to these questions, as well as the questions that are asked, are usually altered in fairly dramatic fashion by transition scale change.

One way of imagining this type of change is by using a possibility map as depicted in Diagram 4. Along the vertical axis is the scale of social affiliation/identity, designed to pick up on the extent to which identity in a particular society is rooted in large and homogeneous or small, heterogeneous groupings. Obviously, everyone is affiliated across a range of social reference points or markers. The aim here is to assess the composition of the mixture of subjective internal and observable external links that define identity. The horizontal axis tracks the degree to which people are actively engaged in making choices, of all sorts, including those that play a key role in establishing identity both internally and externally. Again a vast range of choices confront people all the time, but not all of them are constitutive of identity. Nor do all societies allow or enable choice, two distinct aspects of freedom (permission and capacity).¹²

Typically, over the past century in OECD countries, the mass era ranges of affiliation and choice have predominated. On the vertical axis the main reference points have been homogeneous and large scale: nation, job (where you work – mine, home, etc), trade (skill or profession), income and religion. Looked at closely, there were usually important differences across groups and regions, but nevertheless most people tended to express and feel a commitment to certain widely held and homogeneous identities that were championed and sustained by big and powerful institutions.

On the horizontal axis permissions and the capacity to exercise them increased from the 19th to the 20th century, but in practice many of the major choices that shaped one's identity were not particularly open. Job, spouse, religion or values more generally were all considered fairly fixed and there were high penalties to pay for breaking out of the expected paths. In contrast, in the learning society the availability of conscious choices about who to be is far more pervasive. As a result, there are many more fixed points of affiliation, whole galaxies rather than single constellations, partly as a result of the growth of interconnection between people, communities and societies. This does not imply that just because a person's identity is, for instance, rooted in a powerless minority, they necessarily have a lot of choice over the affiliations that play a major part in shaping their identity. As Diagram 4 indicates, the upper left quadrant of the possibility space applies to situations where a person faces few identity-forming choices yet is affiliated to a range of heterogeneous and small social bases.

13 Robert Putnam, *Bowling Alone: the Collapse and Revival of American Community*, Simon Schuster, New York.

14 Imagining transition scale change is not easy. But one way to keep in mind both how radical and how plausible such changes can be is to think about the upheavals taking place in people's sense of identity and social status in the developing world or as experienced by immigrants from the developing to the developed world. Transition scale social change is their everyday experience. OECD countries may go through this scale of change with slightly lower absolute costs (in terms of violence, civil war, etc) but in relative terms there are probably strong equivalencies. A similar equivalency may hold in terms of the pace of change – which when it comes to transition scale movement is likely to be constrained by the fundamentally generational nature of this type of transformation. Bluntly, it takes the dying out of the old identities to open the field fully for the new ones.

Diagram 4
Social possibility space: changing conditions for identity

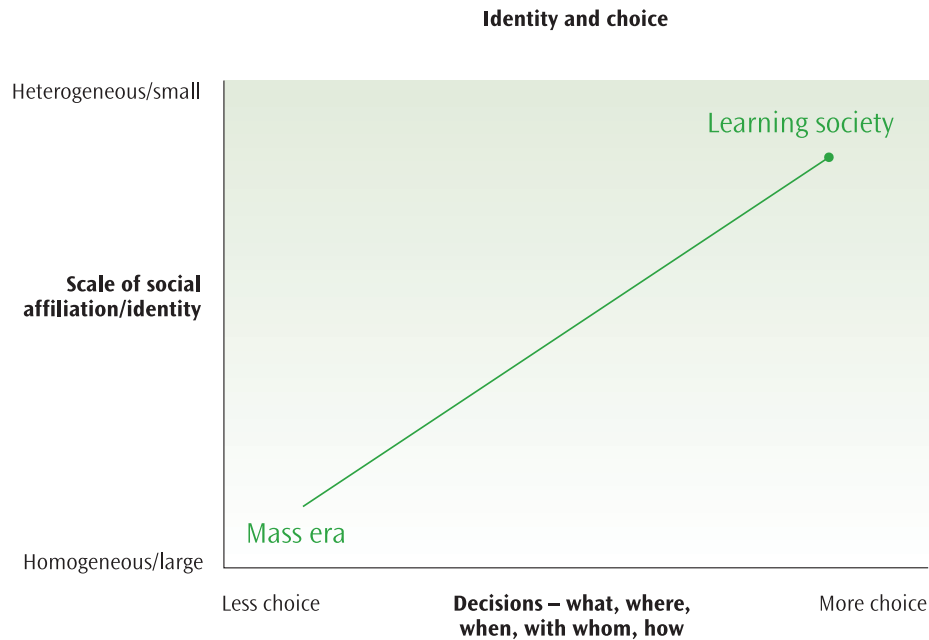


Diagram 4 allows us to imagine a range of possible social changes, such as the diagonal movement through the possibility space, from the identities of the mass era in the lower left quadrant to those of the learning society in the upper right. The contrast between these two end points could be quite dramatic. In the mass era it was normal to feel and express a strong affiliation to widely shared identities like country, class or company, ethnicity and/or religion. Usually a large and powerful institution – the state, trade union, political party, organised religion – sustained and reinforced these identities. Life experience also established and regularly confirmed both the meaning and symbols attached to these identities. Nationality was reformed through full-scale wars, hot and cold. Class, political position and religion were handed on from one generation to the next. Life, as always, was full of choices, but breaking out of the general patterns was difficult, relatively rare and carried heavy sanctions. Even the exercise of power, who had it and how they wielded it, ran in a predictable and generally top-down fashion – in the family, in the firm and in the state. Now, for most OECD countries, this era is coming to an end. This is not simply because we are ‘bowling alone’,¹³ in Robert Putnam’s famous phrase, losing our traditional voluntary and civic associations as sources of social identity and group affiliation, but because other possibilities are beginning to appear.

Imagining the social maps for locating tomorrow’s identities is not an easy task. Think of asking a 19th century farmer what it would be like to be a factory worker in the 20th century.¹⁴ Here, once again, is where possibility spaces can help, first in terms of the potential evoked by Diagram 4 and second, by considering what might be possible if there is synergy across different aspects of transition scale change – like an economy dominated by unique creation. Starting with the learning society in the upper-right quadrant of Diagram 4, sources of affiliation are heterogeneous and specific while people have an immense freedom/capacity to make choices about most aspects of daily life. Such a situation begs many questions, from how conflict amongst splintered groups is managed to the role of loyalty when there is so much freedom.

15 For a powerful theory of the 'social science of conventions' see: Michael Storper, *Worlds of Production: The Action Frameworks of the Economy*, Harvard University Press, 1997.

Clearly different 'learning societies' could address these crucial issues in different ways. What these societies are likely to have in common is a change in the process of defining and sustaining identity. Initially, rooted as we are in industrial era ways of thinking, this looks like a change in the direction of the identity creation process from top-down to individual-up. But thinking through the everyday life aspects of this possibility space suggests another view, that as the individual seeks their identity they are immediately forced to discern its collective dimensions. Top-down and bottom-up identity creation are not symmetrical. When identity is imposed the collective is necessarily 'the other', hence the familiar dualism of individual versus society. By contrast, when the individual seeks their own identity, an unavoidable aspect of being human, they immediately search for and try to establish the collective references which make their identity meaningful. This is why a society characterised by growing heterogeneity does not necessarily mean one which is 'individualised' in the sense of growing atomisation or isolation. More diverse societies are nonetheless intensely social and sociable, although they might express this instinct in non-traditional ways. The real question, which we cannot answer fully now, is what these new forms of collective orientation and affiliation might actually look like. Clearly, the way identity is anchored in and sustained by various institutions is crucial, an issue that could be central for future schooling systems.

In the upper-right reaches of Diagram 4 identity emerges from people's everyday choices (not necessarily thinking explicitly about their identity but more about how they want to live and be perceived). Such a possibility may seem improbably far removed from today's 'couch potato' passivity, where few people vote, few volunteer, and an ever-growing share cannot even find the motivation to get out of the house to go shopping, ordering instead over the internet. But, without making any judgements about the probability of this transition scale change, it is worth noting the potential synergy between the social and economic dimensions. Unique creation, combined with the implied potential to shift from life organised for work to work organised for life, could build up through practice (desire/necessity, conventions/institutions) a context where decision-making capacity is adequate to the perpetual task of self-generated identity creation. Of course, making such a way of living possible or sustainable would not be easy. Lack of common languages, failures of trust, excessive stress could all render this type of life too costly and difficult. Here, transition scale change is highly contingent on the strong internalisation of a minimum core of shared basic values and a daunting range of breakthroughs that will be needed to create adequate trust and transparency across vast, seamless networks.

However, one way to put this hurdle in perspective is to recall that industrial era capacities that we now take for granted, skills like reading and writing as well as behaviours like showing up at the factory gate on time and obeying the foreman, were instilled through practice: getting to school on time, following the teachers' instructions and repeating lessons. We are not born knowing how to function in an industrial society, nor how to survive in a city. We learn and hone these skills in the conduct of everyday life because we have built up, often through painful trial and error, the institutions, codes, manners, culture, expectations, rewards and sanctions of the society that we are part of.¹⁵ Future transition scale change will also be the outcome of hard-won synergies and incremental radicalism over a long period of time. The old does not cede easily to the new. Nor does it work to try selecting the winners from amongst current innovations. This is why governance capacity, meaning how decisions are made and implemented in all parts of society, is one of the critical determining factors of the scale of change.

16 In case there is a mistaken impression that this kind of transition is now in the past, it is worth noting that in Rwanda women only gained the right to open a bank account without their husband's consent in 1998 (see: <http://www.law.emory.edu/WAL/WAL-studies/rwanda.htm>).

17 There is an important distinction between information and knowledge that needs to be kept in mind. Much of what people know is tacit, meaning it is difficult to put in forms that can be used as information for other people. This means that improving the quality of information needs to be understood within the limits of codification. Not that the range of what can be codified is static. Transition scale change is, in large part, about shifts in what can be rendered explicit – the creation of new codes, cultures, institutions, standards, etc. However, there is an additional attribute of the learning society that may alter the nature of this shift. In many ways the networked learning society develops knowledge on the spot or just in time – by doing, by creating, by learning. Information, understood as knowledge that is rendered explicit in advance of doing something might become less important. Indeed, this is why decision-making capacity, which is composed of both information and the skill at making choices, becomes more central. Certainly in a learning society the economic, social and decision-making processes generate knowledge, but maybe they will give rise to less information. If so, then individual learning by doing and the capacity to transform experience into knowledge will become more important.

18 With productivity defined in conventional terms as the ratio of the output to the input.

4. Transition scale changes in governance: the capacity to make and implement decisions throughout society

Previous transition scale changes have all been marked by society-wide transformations in governance. For instance new constitutions and human rights born out of political revolutions were usually accompanied by less renowned but equally crucial breakthroughs in who and how decisions were made in the realms of wealth creation and the household. To cite only a few examples, power was reallocated and managed differently after citizens gained the right to vote, workers won the right to strike, and women at long last claimed the right to open a bank account on their own authority.¹⁶ Such society-wide changes in the capacity to make and implement decisions were both cause and consequence of other fundamental economic and social shifts. Indeed, governance capacity can be considered the catalyst for transition scale change. The challenges – of using new tools (or old ones in new ways), of producing and/or consuming new outputs in new ways, of coping with changing social reality – all tend to contribute to as well as depend on improvements in average governance capacity.

This capacity to make and implement decisions, assuming that the burden of responsibility is actually posed, has both quantitative (more/less and slower/faster) and qualitative (better/worse) dimensions. There are plenty of potential conflicts between these different dimensions: sometimes quick decisions lead to better outcomes, sometimes to worse ones.

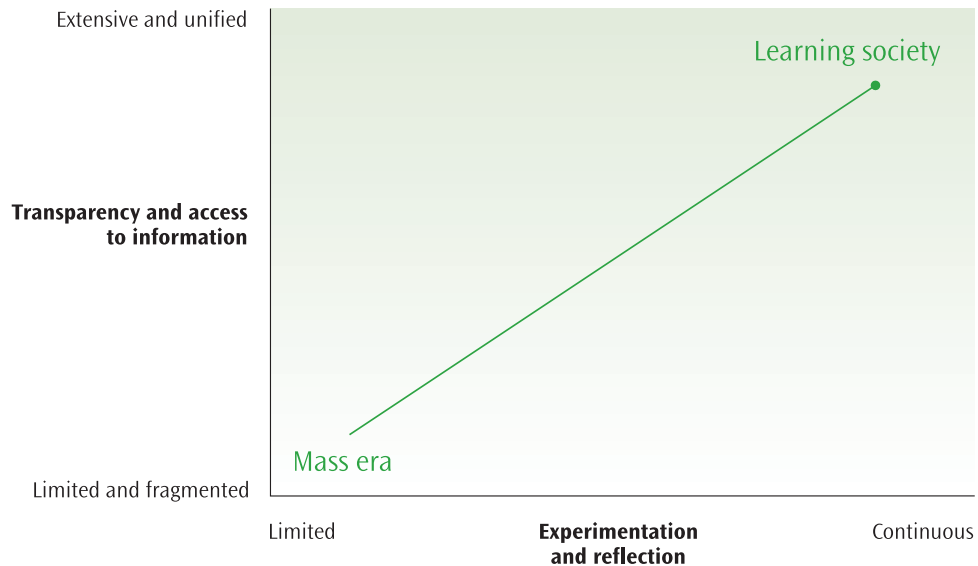
The real question is how well or appropriately decisions are 'processed' – how the combination of rules, shared commitments, participation, institutional expertise and so on generates the best decision in the most efficient way possible. Exactly what constitutes the best decision, and whether or not it could have been reached differently, are both impossible to test or measure, because virtually all governance decisions happen in real time with millions of different variables. That is why we so often put our faith in structural arrangements or particular processes to try to provide good governance. For example, the 'separation of powers' is a widely recognised principle of good governance in most systems (though not, perhaps, in Britain's), although it is also recognised to slow down decision-making and limit the possibility of radical change. Equally, governance often rests on the legitimacy of certain kinds of expert or representative, such as an MP or a committee chair, being mandated to act on behalf of a wider group. How, given the complexity of the variables, could we assess changes in decision-making capacity over time?

One rule of thumb that might be useful is this: in general (there are certainly exceptions), the better the information available¹⁷ and the more experienced the decision-maker, then the stronger the likelihood that decision-making productivity or capacity will improve.¹⁸ Although this type of common-sense rule is probably difficult to test empirically, for the reasons mentioned above, it can serve as an approach to assessing the scale of changes in society-wide decision-making capacity over time. Diagram 5 offers one way of capturing the governance possibility space suggested by our rule. In Diagram 5 two determinants of the productivity of decision-making are traced along the vertical and horizontal axes: on the vertical axis is the extent to which information is transparent (understandable, useable) and accessible; on the horizontal axis is the degree to which people engage in decision-making experimentation and reflect on their experiences. Movement diagonally, from bottom left to top right, involves improvement in two of the critical inputs to a decision-making process: information and skill. Thus the transition from mass era to learning society involves a general advance in governance capacity. Overall, if the systems of decision-making employed draw on better information and on broader, deeper experience of making decisions, over time, they are more likely to serve the various and complex needs of a particular society better over time.

19 See Tom Bentley, et al, *The Moral Universe*, Demos, London, 2001.

20 From a moral perspective this type of neutrality does not distinguish between governance of a prison yard through terror or through democratic participation. Obviously moral judgements are required to discriminate amongst these equally workable but ethically very different outcomes.

Diagram 5
Governance possibility space: changes in the capacity to make and implement decisions



It is vital to restate that this does not necessarily imply that one era is better than another or that more productive decision-making guarantees happier or more desirable outcomes. For example, there is little doubt that elections and parliaments can be considered, for many reasons, a form of governance with generally superior outcomes to those of dictatorships. Yet, as we know too well, that does not mean that representative democracy guarantees the ‘good society’.¹⁹ Rather than simply trying to solve this problem at the level of high principle or theory, the task of imagining transition scale change can be addressed through a more practical test for changes in governance capacity: as the society is transformed, do people and organisations have the decision-making skills and resources to make it through the day? This is, after all, the challenge of transition scale change, which casts past governance methods, rules and institutions – like old family patriarchs and absolute monarchs – into the dustbin of history. In this sense the issue is not ‘improvements’ in governance capacity from the point of view of ensuring a better outcome, but simply the congruence of the decision-making capacity that is diffused through a society with the necessity of recreating everyday life as it continues to change.²⁰ Again, this point reinforces the importance of understanding the reflexive relationship between people’s changing patterns of behaviour, learning and aspiration, and the wider sets of rules, norms, social supports and institutional structures that surround them. As we change, so the environment that facilitates what we can do also needs to adapt, in ways that will also continue to affect what it is possible for us to do, both individually and collectively.

Taking this more operational view of governance capacity puts the focus on changes in the inputs, like information and skill, that influence how well and quickly decisions are made. Getting to the transparency and access to information of the learning society, at the top of the vertical axis, will require difficult changes in, for instance, the effectiveness of the internet in serving as a source of very low cost and very high quality information. Imagine that the internet actually becomes a comprehensive, trustworthy and easy-to-use source of exactly the information you need. This is almost as far-fetched as imagining, in the 19th century, that one day the majority of the population in OECD countries would be able to read and write. A leap of equivalent scale will need to occur so that the decision makers of the learning society will be able to use all the meaningful information available for making choices. Institutions, rules, tools, habits and expectations will have to be transformed.

Similarly, considering the horizontal axis, today's world of hierarchical authority and passive consumption is a long way from the learning society's continuous experimentation and reflection. Again, making a comparison with the past, it was not so long ago that it would have seemed ridiculous to suggest that parents would not select their children's spouse and field of work. But in OECD countries this is now the norm. However, the transformations of the past also indicate that these changes take time and are difficult. Demystifying and diffusing decision-making is a protracted, generational process because it is about reallocating power and altering practices. In particular, we find it very difficult to imagine the forms and contours of institutions that would genuinely support the wide spread of new kinds of practice, and the collective disciplines that would enable far higher levels of autonomy to produce positive, sustainable, system-wide effects. This difficulty is familiar to anyone close to the education debate.

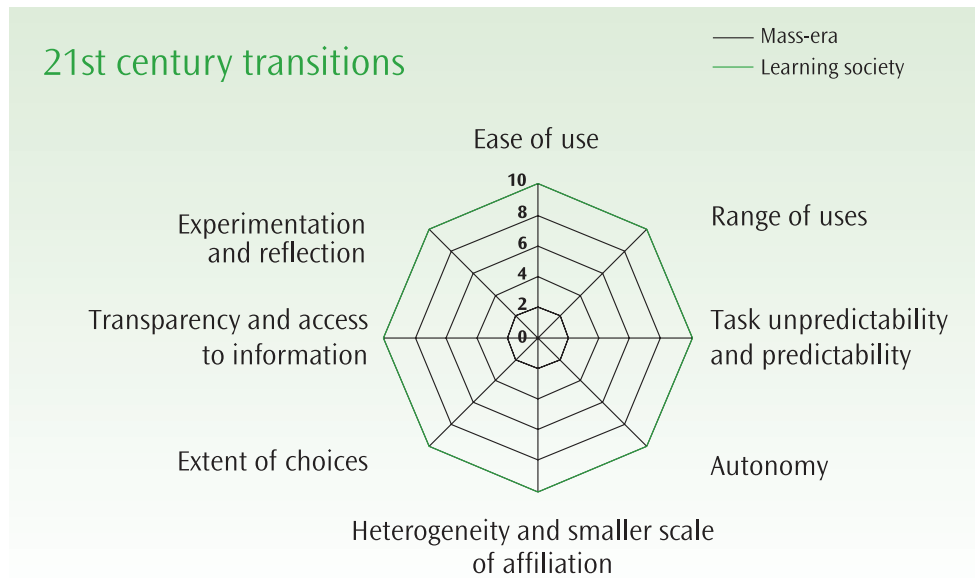
5. The contingent nature of transition scale change: why strategic leadership matters

What then could generate changes in governance capacity adequate to its supportive role in the kind of 21st century transitions we have been exploring? The answer, in a word, is synergy. When it comes to powering the breakthroughs entailed by transition scale change, the interaction between different kinds of change occurring simultaneously, creating and drawing on interdependency, is pre-eminent. What this means in practice is that different kinds of innovation, learning and development in different spheres of society come to support each other in sustaining transition. This does not mean some kind of spontaneous harmony. Societal change is an evolutionary process based partly on conflict. But when synergy occurs, the whole ends up greater than the sum of its parts.

It is this potential for synergy that makes 21st century transitions simultaneously plausible and improbable. They are plausible because, as Diagram 6 illustrates, the different possibility space variables might complement each other strongly. Working together, these changes might be sufficient to alter the basic contours of everyday life within one or two generations. For example, breaking through to much higher decision-making capacity will hinge on the growth of direct experience in making choices through intense 'learning by doing'. But it will also depend on the shift to an economy characterised by unique creation, where people's vocational status, available time and economic participation enable them to take up creative, responsible and productive roles in wider social and public decision-making, and help them gain the skills to participate in much more distributed systems of governance. This in turn would probably have to reflect a social order that thrives on self-generated identities and shared responsibility. Transparency, experimentation, ease of use and autonomy, to take only four of the axes of Diagram 6, point to the wide range of positive interactions between dimensions of change that make 21st century transitions a plausible proposition.

At the same time, however, the fact that 'transition scale' change will not occur without synergy between different aspects of society and societal change makes it improbable. The degree of contingency of one type of change on another is very high. For example, technology diffusion, like ubiquitous computing, is highly dependent on the kinds of innovations associated with the shift to a creative economy, to push it through the growth of new production-based applications and methods, and to pull it through the growth of consumer demand that increasingly merges with basic methods of production.

Diagram 6
Synergy conditions for the transition from the mass era to the learning society



Whether or not most people can really be bothered to sustain the motivation to exercise ‘everyday creativity’ depends heavily on the extent to which they are driven to generate and shape their own identities, or to inhabit social categories and self-definitions that are provided for them, whether by tradition, commerce, or anything else. Whether or not they are prepared to participate continuously in distributed, interactive public decision-making processes depends partly on the extent to which such processes work without interruption or failure, and contribute to a shared sense of reward, satisfaction or responsibility. Whether or not people could learn to trust the new rules and routines of transaction and transparency in such societies depends in part on the sets of habits and expectations that are instilled in them as they grow towards adulthood.

Obstacles to all of these specific changes, and particularly to their working together to generate a self-sustaining impact, are many and powerful. Powerful and durable institutions also generate powerful interests against change, as well as cherished traditions and practices that can carry great social value and wisdom. Because there is no master plan, no pre-established direction for change overall, it is often highly unlikely that different circumstances will converge to make longer-term transition genuinely possible. Vested interests, fear and disagreement over the value of different directions are all powerful inhibitors, for different reasons. Lack of experience and of capacity for doing things differently will often reinforce the status quo. Some responses to growing complexity or uncertainty involve tightening lines of control or trying to impose simplified priorities on different sectors and situations. All of these things, as well as the basic, constant likelihood of fragmentation, militate against the possibilities of transition scale change. Overall, they make it improbable that such changes will occur, or that the overall processes of societal change will bring out and fulfil the full potential of its members.

That is why bridging the gap between plausibility and probability depends in large part on leadership. Social history shows that many of the systems, including universal schooling, on which we now rely are the product both of visionary leadership and of sustained disruption and sometimes crisis in wider society. Visionary political leadership and the formation of new governance institutions often arise from catastrophic periods of conflict, such as the emergence of the EU and UN out of the wreckage of World War Two. As we have argued, new systems are not created simply by economic demand or technological invention; they arise from particular combinations of change forced by external forces, value commitments, inventiveness, and social or collective choices. Mass schooling itself represents such an innovation during the mid to late 19th century. Driven partly by the emerging needs and demands of an industrial economy, in which both the employment of parents and the future employability of children were dependent on new patterns of educational organisation, universal schooling itself was in part the product of far-sighted innovation by educational theorists and practitioners, and by broader processes of governmental reform that provided the administrative frameworks and financing methods to make it possible.

The eventual pattern and composition of societies going through long-term transition arises from the interaction of these kinds of forces, generating both competitive and collaborative outcomes. Leadership in this context operates on at least two levels. First, it means setting and clarifying ambitious long-term goals, and thinking about how they can become shared and legitimised more widely by others, combining aspiration and imagination without worrying prematurely about exactly how they will be achieved. Second, leadership also involves innovation through practice; the readiness to experiment with alternative methods of organisation and coordination, to incorporate new concepts and techniques into our existing routines, and to find ways of managing and learning from the conflict between well-worn rhythms and working assumptions that fit less and less well with the wider reality we experience, and partly formed concepts and practices that might eventually find a place in radically changed contexts. Both these forms of leadership are vitally important to the reshaping of our education and schooling systems. They both depend on the development of particular skills and dispositions: the capacity to imagine what might lie beyond our current grasp, and the readiness to drive towards it.

Imagining what the creative society might be like: a narrative vision

Predicting with accuracy the details of daily life at some post-transition coordinate where unique creation, openness and ecological harmony are the norm is impossible. However, it is possible to offer an imaginary generic type description of what the world might be like in 30 years if all of the trajectories in the possibility spaces push to the upper-right quadrant and all of the synergies (including those generated by conflict and dissonance) mesh to produce transition scale change. Such a scenario is a way of illustrating the meaning of the possible – how far change might go, how current assumptions limit thinking and what strategic options may be hidden in what look like, from today's perspective, peripheral developments.

Thirty years from now...

As I had hoped my life now runs at a comfortable pace. Not that I am doing or learning less today, 24 October, 2032, than I was 30 years ago. If anything I do even more of pretty much everything that I like, just with less stress and less wasted time. Of course the day has not got any longer. What is new is my ability to manage the allocation of my attention more effectively. I am better at prioritising and making decisions about my own life and the world around me. This is a skill that I

learned the so-called ‘hard way’, perhaps the only way, through experience and feedback. In other words what I know how to do now, what I call my current capacities, are simply a by-product of the way I live. And the way I live is very different from 30 years ago in at least four crucial ways.

The what, how and where of production and consumption

Starting with what everyone was forced to put first in the past, I earn my cash income from one source – intellectual property. No I did not patent a new cure for cancer or write a number one pop song. What I do is much less exotic and not at all exceptional; we call it ‘unique creation’. Part of the revenue I get is from an area that I specialise in, in my case it is helping people think about the future. Sometimes I’m hired as a consultant for a specific project. Sometimes I am paid for writing or speaking. Often I am paid to assist with learning processes. I play roles like mentor, coach, teacher and, most usefully for me, student. Another important part of my monetary revenue stream comes from little things that I have dreamt up along the way, like a design for a neat urban bicycle, a few great main course recipes, a virtual ballet and even some photos I have taken. I get royalties on this intellectual property, it flows automatically in small amounts when people download or purchase an item that contains my intellectual property. I also earn a few money credits from the surplus energy I generate and sell to other members of the community. These disparate and mostly small-scale monetary flows are congruent with an economy where old style firms and employment no longer play a major role. Instead there are vast swirling networks, more like giant clouds of co-operation and competition, buying and selling, that generate today’s money flows.

Intriguingly, schools are the lynchpin of much of this unique creation because they assure the transparency of what people know how to do. Schools have abandoned teaching in order to provide unbiased, detailed, accessible and, above all, trusted information about a person’s capabilities. This is a fundamental role in the learning economy for three reasons. First, when I want to collaborate with someone to create something I need to know that they possess the required competencies. Second, the expertise developed by schools in ‘banking’ human capital means that I don’t have to specify any profession, trade or diploma in advance. All I need to do, like when I search for that needle of information in the internet haystack, is to provide a few well-chosen keywords. In a flash the global school network provides me with a selection of people whose track record of achievement the competency bank can vouch for. Third, but not least, schools provide me with the in-depth, personally tailored advice that I need in order to learn more.

On the surface this might sound like what schools used to do, but it isn’t. Three things have changed. One is my learning needs, which have become much more complex since learning is the primary attribute of economic activity. The other is the assessment and matching of how each individual learns with a much greater selection of learning experiences. In fact, the human capital banking, I mean school sector, invests over 10 per cent of its revenues in fundamental R&D aimed at advancing assessment, matching and learning techniques. And lastly the incentives for learning how to do something, given the transparency of such acquired competencies, are sufficient enough that I am willing to pay schools to be effective advisers for my learning investments.

That said, I have to admit that my income level, measured in terms of money, is not what it used to be. Actually a good part of my quality of life is not purchased directly since it comes either from the collective/community services of the place where I live or the lively local market for in-kind and time-based transactions. Sure I still pay out about 20 per cent of my money income in taxes, but that is only half of my tax burden. The rest I pay by helping out around the community in a whole bunch of different ways, from story-telling and cooking to gardening and teaching seminars. I have to admit that

21 For a fuller discussion of the ecological dimension (possibility spaces) of transition scale changes to the functioning of the economy see Alain Lipietz, 'Working for World Ecological Sustainability: Towards a "New Great Transformation"', in *The Future of the Global Economy*, OECD, Paris, 1999.

I was initially very worried about the idea of community service as one of the obligations associated with living in a community. What changed my mind was the shift in the composition and location of 'my community'. I no longer organise my life for work but work in ways that enhance my life. Instead of my home serving as a base for going to work, living in the midst of anonymous commuters and residential support services, I now live with a community of people I know, in a location that reflects my preferences, not the arbitrary (from my point of view) location of a workplace.

Another outcome of the radical changes to what, how and where I produce and consume is that my ecological footprint has diminished drastically. Without going into the many factors that made this possible, the reality today is that going 'light' in terms of ecological sustainability is easy. Generating more electrical energy than I use, growing a one-third share of the food I eat and reducing unrecyclable waste streams to a very small proportion, are all natural, unremarkable parts of my everyday life. In part my sense of identity and creative expressions find an outlet in thinking about what is sustainable. And in part I am quite aware, as well as in a position to do something about it, of the fact that my quality of life is closely connected to the quality of my local environment.²¹ Still a large part of my lighter ecological footprint (for the much higher quality of life that I enjoy) is due to major shifts in two areas: a) why, when and how people travel and goods are transported (travel is mostly for pleasure and learning, transport within a community has almost been eliminated while inter-community and long-distance transport is only for highly specialised items); and b) the design criteria of goods and processes (ensuring much greater eco-efficiency – less toxicity, more recycling, clear lifecycle accounting).

A tangible example is the decentralisation of energy production. The hydrogen motor in my car can be plugged into my house to generate electricity for my use or if I visit another place with my car I can plug it in when I arrive. Then I get paid for the difference between the cost of the parking and the power sold. At home I regularly have excess power to sell because even my run-of-the-mill energy management software does a good job of keeping the various batteries charged by using the car's hydrogen electricity as well as the power from a few small solar, wind, and bio-reactor generators. It helps that I can also manage energy consumption and production without paying too much attention since, once again, there is standard software for managing the now highly networked home environment – including every appliance as well as the heating and cooling systems. There is no question that my attitudes towards energy use and willingness to invest in efficiency have changed since I now consider it a source of revenue.

The convergence of the virtual and physical worlds at a higher level of transparency

These changes to what and how I live and work would not be possible without a series of important changes to the world around me. Crucially, the virtual and physical worlds are now equivalent in so far as the severe institutional, legal and cultural obstacles to establishing trust, privacy, ownership and payment systems on the net have been overcome. Internet-based transactions are now seamless and unobtrusive. Property rights are tracked, including well-established 'fair use', and payments (as well as accounting, taxes, etc) are all done automatically. Security is handled by safety standards, similar to the kinds of rules combined with research that eventually made cars safer. For instance, like with seatbelts in a car, it is now mandatory to provide IT users with the capacity to encrypt, to a regularly revised standard, all the digital files they store or send. Liability for defects and mis-representation now applies to software in the same way that it does to other products. The public commons aspects of the net, freely accessible and non-discriminatory, are strongly entrenched and

²² See Laurence Lessig, *Code and Other Laws of Cyberspace*, Basic Books, 2000.

protected against balkanisation.²² Everyone has the right to ‘cyber-citizenship’, which includes an inalienable virtual identity that anchors everything from the ownership of privacy to protecting one’s medical profile. Methods for verifying producers’ claims and seeking redress are global and efficient. The net is now fully searchable and is truly a useable, equally accessible store of all available information.

As the economic, legal and social aspects of the virtual world came on to par with an even more transparent and seamless physical world it gave rise to strong incentives for the integration of information technology into all aspects of everyday life. Virtual presence, which allows people to be together in many of the important ways without actually being in the same place, is now taken for granted. In fact, I do not pay much attention to the technological side of my daily life because all of the information-, bio- and nano-tech that are what make a ubiquitous computing world work have disappeared from view, put behind the walls just like electricity in the 20th century.

Flows in the physical world are also much more seamless (the diffusion of ‘solid MP3’ printers helped a lot). Protectionism and subsidies, border controls and migration limits have vanished. Constraints today are chosen and enforced much more effectively because there is greater transparency of incentives and disincentives as well as the certainty of being held accountable. Better information, for example, about prices in other parts of the world, also means that people know how much protectionism costs in terms of lost opportunities for both consumers and developing country suppliers. People also have a better sense of how much it costs to migrate both in terms of what they lose and what they gain. Of course it makes a big difference that standards of living and quality of life, after a transition-induced increased divergence, are now gradually converging around the world. Institutional innovations have also helped, such as the transformation of schools into a universal system for validating people’s human capital.

This kind of system could certify what people know how to do, regardless of where they live in the world, just by typing a few keywords into a search engine. Barriers posed by the inaccessibility of contract law and language differences have also been dealt with through innovative institutional developments (children are obliged to learn about at least 40 different types of contract before they are allowed to shop or work) and powerful technology like the ‘babble fish’ translator makes cross-linguistic discussion instantaneous.

The pursuit of identity breeds diversity which feeds creativity

Seamlessness has encouraged much higher degrees of integration and interdependency. In the physical or virtual worlds people are in contact and deeply involved in joint endeavours of all kinds. This diversity plays, in turn, a key role in providing the inspiration that underpins everyday ‘banal creativity’. What powers up this seemingly relentless and inexhaustible creativity are two very basic drivers. One is the need to feel clear and at ease with our identity. The other is a desire to improve our quality of life – or once the quality seems satisfactory, sustain it. Fortunately, the easier proximity of people, physically, virtually and in terms of mutual understanding, makes it much easier to sustain our creativity because we are continuously confronted by our differences. The splintering of identities and the institutions that framed them, lamented by some as the ‘bowling alone syndrome’ at the turn of the century, was actually symptomatic of the emergence, not without growing pains, of a virtuous circle between people’s capacity to forge their personal/collective identities and the learning economy of ‘everyday creativity’.

No longer being forced to organise my life for work but making work fit into my life has allowed me to construct a community that gives meaning and motivation to my engagement. This engagement ranges from taking my turn in a guardian/mentor role in the multi-age learning groups that took over when schools stopped using classrooms, to devoting enough time to become a specialist in the debates over how to get a worldwide sustainability tax at an appropriate rate for our community.

The end of individualism, long live the individual: principles of governance

Power has not disappeared, but one of the old industrial society dualisms has. Paradoxically, now that individuals are more capable of forging their own identities there is less of a conflict with the limits and imperatives that are inevitably imposed by collective choices and aggregate outcomes. This is because when developing one's own identity it becomes clear quite quickly that you are not autonomous, unless you want to be a hermit in the forest. Collective and individual identity are forged together. As a result three of the key determinants of social sustainability/political legitimacy have been transformed – essentially by the sharing of a few strong common values. Values that are internalised through the experience of choice in the quest for identity. The three determinants are actually principles people strive to follow. First is equality of opportunity, which has been made much easier to maintain since the primary form of wealth is now human capital – an asset that is evaluated on the basis of what you know how to do – not who your parents are or which school you went to. Second, in order to sustain high levels of openness to change, there is a commitment to the principle that those who win from change will compensate those who lose. Third, decision-making is made in ways that are transparent and accountable in order to ensure integrity – the adherence to core values.

These principles would be very difficult to implement, in part because the practical realisation requires continuous operational adaptation, without the much higher capacity throughout society to make choices. This high level of ambient decision-making knowledge is available for governance activities because people have extensive direct experience with making choices about both their identity and what, how and where to produce and consume. This is like one of those super-glues that only harden into a solid binder when two separate chemicals come together – in this case principles and decision-making capacity. One without the other does not do much – as in the case of the Universal Declaration of Human Rights adopted in the middle of the 20th century. The principles were there but progress on implementation was painfully, tragically slow. Now those basic principles can be put into practice because the capacity to do so is in place. So-called 'human nature' has not changed but the generalisation of awareness, skill and clear incentives/disincentives effectively internalises the values that sustain social solidarity. It is a virtuous circle formed as practice builds capacity and capacity reinforces practice. However, it is also a circle that depends on a strict acceptance of a common set of values, without which learning would be impossible. In this sense the learning or creative society imposes a stricter public covenant, particularly since it is largely self-enforced. Relying on hierarchical authority in a world of no common values would not only be much more costly but also it would undermine the reinforcing cycle of capacity and practice.

Of course this 'creative society' may not be to everyone's liking. I dare say that people are as happy and unhappy as they have always been – we always live in the now. But I enjoy it and I think it offers more freedom for more people than at any time in the past.

Part 2

Thinking about the future
of schools: trends, strategic
choices and possibility space
scenarios



What could the extremely broad analysis we have set out so far mean for schools and schooling? Across most of the OECD countries, governments and educators are engaged in increasingly intensive efforts both to improve the performance of school systems and to adapt their function to changing demands and expectations. A debate about the ‘school of the future’ has been with us for at least a generation now, but it has rarely given rise to any radical change in the form, or function, of the typical school. The widespread introduction of information and communication technologies (ICTs) has equipped schools in many countries for the ‘information age’, without much changing the nature of the teaching and learning taking place. Participation in early years, tertiary and higher education is going up, and governments are searching for new ways to finance and regulate these sectors, but so far they have had little impact on the basic nature of provision during the core school years. New models of ‘extended’ schooling, using more flexible timetables and accessible facilities, are beginning to appear, partly in response to changing patterns of employment and working hours elsewhere. But once again, these new activities are usually built on the core structures and routines of the school that most of us are familiar with.

In what follows we use possibility spaces to generate four different scenarios for schooling systems, based on ‘ideal types’ that help us to imagine both the core educational roles that schools play, and the ways in which they interact with the institutions and wider society around them. The shape and implications of these four ideal types will help us to clarify the possible consequences for leadership and the strategic choices that might be made about how, and in what direction, schooling systems could be shaped in the medium term. The four scenarios are not just rooted in the long-term transitions we have already discussed, but also in the roles and forms that schools currently occupy, and the various pressures already acting on them.

In order to clarify these further, it is worth working through the dominant trends currently influencing the direction of schools and education policies. This discussion is based on the set of scenarios produced by the OECD’s Centre for Educational Research and Innovation in *What Schools for the Future?* Based on a review of key economic, social, demographic and technological trends, this study identified three pairs of scenarios which provide a guide to the possibilities currently embedded in national education strategies.

For our purposes, these dominant trends provide a very helpful way of clarifying what seems to be happening in schools today, and of understanding the ways in which various trends might combine or pull against each other to produce different trajectories of change. The major conclusion, however, is that whether or not schools could survive in their current form (they clearly could), there is a high likelihood that their changing context will produce significant changes in what is expected of and provided through public education systems. The current trends also provide some glimmers of possible new focus and organisational form for schools in the short to medium term.

Key trends: extrapolating the status quo

Robust bureaucratic school systems

In this set of trends bureaucratic school systems in their current forms find a way to survive, in part through strong pressure for centralised control and uniformity alongside some forms of decentralisation in management and coordination. More radical change is resisted by powerful vested interests within the system, and by relatively conservative expectations of schools among parents and the media. Governments do not find ways fully to address persistent concerns about some aspects of schooling,

but dissatisfaction does not reach the level where it precipitates real change. The responsibilities and expectations of schools continue to be added to incrementally, and schools find a variety of adjustments and coping strategies in order to handle the increased load. Resourcing levels remain roughly where they are, and school systems continue to reflect socio-economic inequalities across the societies that they serve.

Elements of this scenario are immediately recognisable in many school systems, including England and Wales. One way of characterising the current position in the UK (and several other systems) is that reformers, school leaders and practitioners are currently engaged in an effort to move from improvement within the status quo to more ambitious, sustained and autonomous forms of improvement (see Schools as learning organisations, below). The question, however, is whether or not the forms of 'coping' and incremental improvement that this direction of change implies is either sustainable or optimal. While many governments have set their sights on continuous improvement in 'standards' of attainment, it can prove increasingly difficult to maintain such step-by-step change, using the metrics and measures of progress that are essentially static, in the face of various other destabilising pressures. In this context, shocks like the A-level crisis of summer 2002 and attempts to generate more radical innovation and enlist the teaching profession in a commitment to more ambitious structural reform are all part of an impetus towards more wholehearted reshaping of the school system. The question is, towards what?

Extending the market model

This set of trends points towards schooling systems that are characterised by competitive markets to provide a relatively standardised set of educational practices and outcomes. They reflect the growing pressure for consumer choice in accessing public goods and services, and some of the models of marketised provision that can be found in other sectors and industries. The assumption lying behind this kind of development is that widespread public dissatisfaction with the quality and availability of schooling leads to reshaping of their funding and accountability regimes. In England and Wales, the current government's drive towards greater diversity of provision is clearly motivated by the desire to prevent high levels of middle class exit from publicly provided education, as well as to achieve higher levels of social equity.

Market pressures include both the growth in alternative providers, some of them commercially driven, and the growing consumer expectation and sophistication of educational consumers.

As a result of such changes, a wide range of new entrants could appear, offering educational services that are differentiated by 'brand' and by various new kinds of currency, outcome indicator, or performance measure. This kind of trend represents an extrapolation of the status quo in part because there are currently high levels of interest in market-based reforms, but also because they would rely on current rules and definitions of choice, contract and competition for the broader framework through which competition was delivered. This might include funding parental choice through vouchers, introducing contestability of supply through government procurement, or simply watching the growth of alternative, non-state forms of educational supply in the form of private and voluntary sector competitors to basic state provision. At the moment, however, none of the market-based options seriously imply any real alternative to the current definition of what schooling should provide, an issue we discuss in more detail below.

Reschooling

The second set of key trends focuses on the potential for schools to be revitalised and to discover new levels of public satisfaction and respect by refocusing their core roles and being allowed to concentrate on them.

Schools as core social centres

Rather than focusing on the teaching and learning quality of what schools do, this trend concentrates on the potential for schools to emerge as one of the most important hubs of local community life, in particular providing both social development and opportunities for students, and the site of various other welfare and community-oriented services and facilities. In the face of social fragmentation and diversity, and the decline of various other traditional institutions playing a similar role, schools regroup around a cluster of functions and activities that help them to generate local 'social capital', and the growing personalisation of learning itself is tempered by a strong focus on citizenship, collective outcomes and wider public value. This trend is visible in the moves towards 'full service' and 'extended' schooling, and the idea currently being piloted by both the English and Scottish systems of schools as 'community hubs'. This approach is seen as being particularly important in disadvantaged areas, where it can provide a focus for extra resources and public investment, and provide a practical foundation for a range of other services, including health, family learning, childcare and employment assistance. One question arising from such change is whether or not the primary focus of schooling remains the cognitive and pedagogical tasks of knowledge transfer. Or would the recognised value of schools as institutions become primarily their ability to contribute to the wider 'upbringing' of children and young people amid conditions of social fragmentation and dislocation?

Schools as learning organisations

This set of trends focuses on the growing emphasis on schools becoming high performance, high accountability organisations capable of using modern methods to sustain improvements in their own performance and bring greater effectiveness to teaching and learning activities. Under this scenario, the idea of 'school improvement' begins to take on a new emphasis, and education undergoes a sustained 'reprofessionalisation', through which teachers recover wider public esteem, network widely across their professional communities, and exemplify the trend towards 'lifelong learning' by embracing a more knowledge-intensive, enquiry-focused definition of their career path and vocational identity. In short, teachers would become contemporary 'knowledge workers' in the most advanced learning organisations, and their effectiveness would be recognised in terms of their ability to generate high quality learning and knowledge outcomes for their students. Such a focus might imply a relaxation of the wider pressures currently placed on schools to help deliver citizenship and social inclusion simultaneously.

As a result of this kind of development, which occurs partly because some of the wider social and custodial roles of schools take on a lower priority, school systems become able to drive quality improvements without increasing reliance on external accountability frameworks and intervention. In a sense, schooling manages to re-legitimise itself partly through an explicit emphasis on its 'core business' of teaching and learning, but the basic institutional parameters through which this core business is conducted remain largely unchanged.

Deschooling

The final sets of trends focus on the growth of more chaotic, network-based approaches to the organisation of learning, and their potential to disrupt patterns of schooling more significantly.

Learning networks

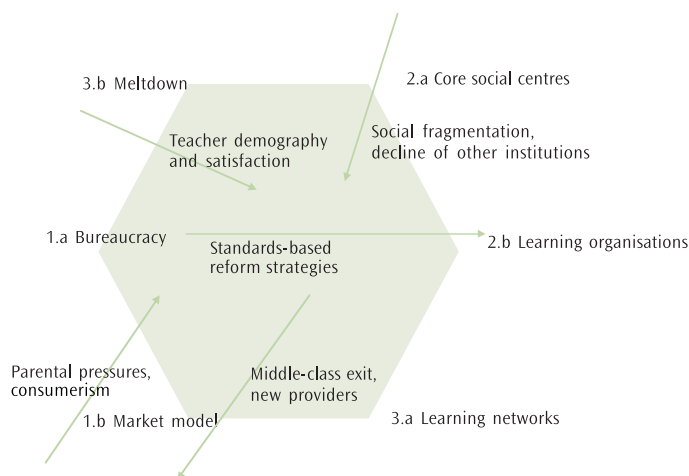
These trends focus on a combination of widespread dissatisfaction with current forms of provision and the rapid growth of alternative means of provision, through network-based supply and distribution models that at the moment are mainly to be found in non-formal educational settings. The growth of the internet and of 'virtual learning' opportunities that complement face-to-face educational methods and enable new forms of supply and coordination, combined with a political environment increasingly open to the search for alternatives that could achieve higher public satisfaction, mean that these forms of provision, which are currently seen as marginal additions to mainstream schooling, quickly become genuine alternatives.

Many fragments of this kind of system are visible in England and Wales, through the traditions of community-based learning and through the growth of 'lifelong learning' opportunities for adults, which are far more likely than schools to emphasise flexibility, individualisation and learning in a wide range of contexts. The real question facing this set of trends is whether, and how, it could ever be developed to the point where it was recognised as having the capacity to provide high quality learning opportunities on a society-wide scale.

Meltdown

The final set of trends draws on similar dynamics of change but visualises a fairly dramatic reorganisation of school systems in response to a crisis of sustainability. In particular, if the major problems of teacher recruitment and retention that are being experienced in many OECD countries is not reversed, teacher exodus from key areas could trigger more widespread collapse, both in the methods of organisation and in public confidence.

Mapping current dynamics
NCSL think tank



One possibility is that this kind of change triggers meltdown in major cities and leads to a real breakdown in the claim of public schooling systems to offer any basic consistency of entitlement or opportunity. It is also possible that such a trend could undermine professional solidarity and produce a fragmentation of teacher affiliations and representative institutions. In such a situation, we might expect a wide range of innovations and alternatives to emerge, but in the context of a fragmented and crisis-driven pattern of provision, and a lack of public or policymaking consensus about the basis of a genuinely desirable system. In this situation, system-wide patterns of schooling might begin to exhibit a far broader diversity, but without any pretence at system-wide coherence or equity. It is likely that competition for high status school opportunities between different socio-economic classes would intensify further, and that methods of selection and evaluation would become even more controversial as various interests struggled to establish their own priorities and criteria for success on a chaotic field.

Synthesising the key trends: current and future roles for schooling

This exploration of current trends also helps to bring out the question of what roles schools should actually play. Our argument has been that schools have become a pre-eminent institution of the 20th century precisely because they offered a stable, economical combination of different roles of wider value to society. The resilient, replicable organisational form of schooling in fact manages to combine simultaneously a set of roles that have become so familiar that they are almost indistinguishable.

They are, in no particular order:

- **Custody:** keeping pupils safe and secure for a fixed, regular period of the day and portion of the week, and allowing parents to go out to work safe in the knowledge that somebody else has a duty of care for their children.
- **Cognitive development:** the transfer and development of knowledge, skills and understanding, beginning with the basics of numeracy and literacy and extending to more specialised subjects and disciplines.
- **Behavioural rules:** teaching and drilling a set of behavioural rules and routines, both formal and informal, that include punctuality, obedience, occupying a place in organisational hierarchies, linear progression through tasks and challenges, performing in standard tests and assessments. Less formally, this behavioural role includes learning the rules of peer group and playground survival, rules of behaviour within school boundaries and out of them and so on.
- **Socialisation:** beyond the learning of a particular set of behavioural rules, the development and internalisation of specific values and dispositions. These might include values of fairness and equality of opportunity, of competition and collaboration, and the propensity to identify or associate with particular social or cultural groups, as well as particular attitudes towards citizenship and civic life.
- **Screening and sorting:** through a welter of information and institutional decisions, both formal and informal, schools play a central role in assessing students' economic potential, intellectual ability and vocational orientation. Formal assessment, qualifications and guidance towards particular routes such as higher or further education, as well as towards the labour market, are part of an infrastructure used by the rest of society to validate what students know and can do, and to make a wider set of decisions about where they fit into the socio-economic landscape. Schools' criteria for success, as is well known, help to filter, and therefore reproduce, socio-economic differences.

In practice, these roles are integrated and intertwined in the organisational life of schools as we know them; for example, a particular approach to cognitive development through classroom-based curricula and the national curriculum meshes with a set of behavioural rules based on respecting the institutional authority of the teacher and moving between lessons at regular intervals. And while social class no longer places the overt role in determining your vocational pathway that it once did, the performance information that schools generate nonetheless has a direct impact on students' life chances and occupational prospects. One challenge that we face in thinking about the longer-term future for schooling is to imagine how these different roles might operate under different scenarios, and whether or not they really do have to be integrated into a single package in the way that they have been for more than a century.

In our view, there are three key sets of issues that emerge from this treatment of the current trends. They are worth restating explicitly because they help to frame the underlying challenges facing current efforts at reform and renewal, and they set the context for our discussion of longer-term possibilities.

In each case, the focus of the challenge helps to show how short-term struggles to make schooling work in a particular direction are also connected to the longer-term roles that they might play in a future society. They are:

Reinforcing schools as 'guardian' institutions

This first cluster revolves around the effort to bring some of the traditional strengths of schools as hierarchical, knowledge-transmitting institutions into a modern setting. Thus all schools are expected to meet standards of performance that are measured through externalised, 'objective' benchmarks, and there is a growing focus on developing classroom management and teaching strategies that increase the productivity of teacher interventions and produce consistently better learning outcomes, again measured by universal, external metrics. In addressing this challenge, it becomes increasingly clear that the crisis of demography and morale affecting many teaching forces around the world must be directly addressed in order to equip schools as institutions with the professional expertise they need in order to sustain higher levels of performance. Strategies to attract new entrants to the teaching profession, to make better use of modern management methods, and to tap wider resources and alternative knowledge sources, for example, using ICTs, become increasingly important.

Investing in social network hubs

The second cluster of issues refers to the potential value of understanding schools as the focal point of wide-ranging social and civic relationships, during a period when many other such institutions are seen to have lost their way. In particular, primary schools are increasingly recognised as offering concentrations of trust and social interchange that make them a potential foundation for new kinds of collective action and public goods, as well as for investment in learning and learning capacity. Thus schools become increasingly enmeshed in efforts to encourage local democracy and participation, in neighbourhood regeneration, in provision of childcare and early years learning across wider networks, and in stimulating other forms of adult learning, in ways which reinforce their existing core purpose of nurturing the potential and learning abilities of their pupils. This position means that schools are potentially a focal point for new forms of bottom-up governance, and for stimulating learning activity across a much wider field of local activity. But exactly what forms they would need in order to do this, and how they would relate to other governance institutions and elements of community life, is yet to be worked through.

Learning in the 'network society'

The third cluster of issues concerns the ways in which schools might interact with the huge, distributed set of resources created by the rise of the 'network society'. This phrase can be taken as shorthand for the growth of technology and communications-driven interconnections and the erosion of traditional institutional roles and competences. Economic liberalisation, the internet, growing social diversity and so on mean that there is a vast range of information and knowledge resources distributed widely across our societies, accessible both through virtual channels and through a proliferation of alternative suppliers and points of access, including private firms and other public institutions like libraries. As the market for learning expands, driven both by social change and the knowledge-intensity of the economy as a whole, the ways in which schooling diversifies the opportunities available to students, and the forms of specialist knowledge it develops for itself, become crucial. New skills and competences, for example in using ICTs and learning how to make virtual transactions authentic, become a crucial addition to basic education. But the most pressing question for schools is what organisational forms and strategies allow them to become an effective part of a burgeoning network environment, and to find a respected and valuable place in the institutional ecologies that it is busy creating.

Possibility space scenarios for schools

The discussion so far clarifies both the tensions between some current trends, and the possible forms and functions for schooling that are emerging out of them. These possibilities are not necessarily incompatible – they might combine in various ways. This section attempts to make some of the longer-term choices ahead more explicit by creating 'possibility spaces' for schooling. Our analysis leads to four different 'ideal type' scenarios for what schooling could become, each with its own implications.

These are not, however, the kind of scenarios that are used by businesses, armies, or other organisations to work out detailed strategies ahead of the game. Instead the aim is to broaden the analysis to include issues and possibilities that are 'off the board'. We hope that these possibility space scenarios reveal hidden potential by deepening and extending the analyses of alternative paths and probable outcomes.

Such thinking can be easily shut down if the scenarios are unworkable (implausible), clash directly with society's values, or can be expected to produce clearly inferior socio-economic outcomes (quality of life). For this reason it is important that the scenarios be roughly equivalent in the sense that none represents a clearly 'worse' outcome for society as a whole. Thus in each of the following scenarios schools are considered to be relatively successful in playing the roles assigned to them and in operating at levels of efficiency that are generally acceptable. Borrowing from economics, this rule can be called 'ceteris paribus' or 'keeping everything else equal'. Though the scenarios certainly differ and particular ones will appeal, or not, to different people and constituencies, there is no reason to reject or choose a particular scenario because it is so clearly inferior or superior from the point of view of public acceptance or desirability.

The two dimensions of our possibility space for schools are:

- the roles that schools play in society, based on the five roles we have already outlined
- how schools are organised in operational terms. The most important distinction here is between competition, or diversity of supply, and monopoly supply, or something near to it

23 The distinction between monopoly and competition does not imply any specific style or method of management, or that the quality of management would be inherently better under either option.

There are, in reality, many possible mixtures of functions, and different gradations of organisational form. But to make the choices and differences clear, we will concentrate on the ‘ideal types’.²³ However, for the purposes of making the choices and differences clear, the four scenarios described below are painted, not in shades of grey, but as exclusive, black or white options. In line with the ‘ceteris paribus’ assumption, we do not address here the perceptions of the different options by students, parents, teachers or society at large. For the time being, we are only exploring the possible ways that schooling might fit into a future society, and their key tasks and structures under the different options. Differentiated in this way, the scenarios help to illustrate the strategic choices facing decision makers throughout society, including school leaders.

		Organisational form	
		Competition	Monopoly
Functions (custody, behavioural, cognitive, screening, socialisation)	Status quo (all five functions)	Scenario 1 Supply diversity	Scenario 2 Mass-customised schooling
	Post-transition (only one function)	Scenario 3 Learning benchmark (only cognitive)	Scenario 4 Learning broker (only screening)

In what follows, we examine what each of the main scenarios would mean, and offer a fictional narrative that might help in imagining both what it would look like and how it might shape. The stories are not predictions or preferences; they are only there to assist the imagination.

Scenario 1

One of many: supply diversity reigns

In the first scenario, schools retain the same set of functions as in the past. That is, schooling continues to be compulsory, with a monopoly over the daily custody of a large cohort of the population, mostly young people. Schools still use the efficient classroom model for reducing the cost of this supervisory function. Inculcating punctuality and obedience to authority are still central to the school's mandate. Literacy, numeracy and the capacity to find information, but not necessarily the skills needed to convert it into knowledge, define the main cognitive aims of schooling. Over time the level of outcome expected from these cognitive tasks has increased steadily, but the basic nature of the work remains the same. Thus the types and range of knowledge, understanding, motivation and ability that society expected to emerge from the experience of schooling would be unlikely to change radically. The screening role, closely correlated with the familiar forms of labour market signalling and the resulting social stratification, also stays in place. Schools are still expected to instil certain common bonds of citizenship and civic understanding as part of their general social role.

The main difference from today is that the monopoly status is gone and a range of alternative suppliers are operating. No single model prevails across all jurisdictions. In some places schooling is provided on a for-profit basis, in others by not-for-profit organisations. In many, there is a mix between the two. Methods for governing these 'competitive' systems also vary widely, since there are many different ways of ensuring that non-monopolistic providers meet the functional objectives of schooling. For example, it is still possible to imagine a National Curriculum being a requirement across a diversified school system. Even more plausible is the possibility that standardised testing and performance tables would prevail across the system, and that suppliers, whatever their origins, would be required to conform to certain minimum standards, and to stay above certain levels of performance. It is also possible that choice of school supplier is given to parents through vouchers or credits, or that different suppliers would compete to win contracts from public authorities, and would then offer school places in particular geographical areas, using selection and pricing criteria set by the policy-makers. Thus supply diversity does not necessarily mean widespread choice of school for all students, although that is a possibility.

Supply diversity could take many different forms, depending partly on the set of constraints and rules set in place by the governance system. The overall regime might, for example, make funding available to any school or provider that can demonstrate competence beyond a minimal set of requirements, and demonstrate that there is potential or actual demand for their services. Virtual 'e-learning' services could provide an important component of the cognitive package offered to students by particular suppliers, although they would always be combined with the custodial function we described. It is possible to imagine a very wide range of providers operating in a system as big as England's, but many of these might operate at the margins, with much of the activity dominated by a few big names. Thus the markets created under supply diversity might be very open, or they might involve oligopolistic domination for large volumes of activity between a few dominant organisations, possibly operating under strong, recognisable educational 'brands'.

What distinguishes this scenario is the range of operational methods for delivering schooling implied by the existence of competition and the possibility of switching between different suppliers. Diversity of interest and methods approach could create greater openness to alternative management strategies and potentially to alternative curricula and new pedagogical approaches. But innovation and success are not foregone conclusions since competitive pressures can also entrench dominant players and encourage defensive behaviour. Similarly, the extent to which definitions of attainment and the

benchmark measures by which they are monitored remain static and tightly defined has a major impact on the range of pedagogical and organisational innovation that develops under such a system.

Much will depend on how the diversity of supply is managed and how outcomes are measured. In such a scenario, the capacity of governments and educational authorities to write and manage contracts becomes a crucial element of how well the system works overall. Other issues, such as the readiness of the public and of politicians to tolerate failure by particular suppliers, the distribution of risk and accountability across the range of suppliers, and the extent to which governments are prepared to invest in creating new sources of supply would also influence the overall landscape. The methods of coordination and exchange between schools and suppliers would also have a crucial impact on the diffusion of different methods and outcomes. It is possible to imagine competing suppliers forming networks of schools in particular areas, and seeking to encourage specialisation and collaborative exchange between them. There are many examples of competitive markets operating in ways which push up the level of information and knowledge exchange between organisations, but equally competitive interest could act as a barrier to the diffusion of innovation and new practice. Overall, as in the other scenarios, the capacity of policy-makers and regulators to help design a system that is capable of learning from itself, and continuously adapting to the streams of innovation that are being generated from within it, is crucial to its effectiveness in fostering learning outcomes for students.

Clash of the titans?

During the 2020s a competitive struggle intensifies between the two leading corporate suppliers of managed learning services: **3Rs** – a private, not-for-profit trust which has grown rapidly by offering reliable, high quality traditional teaching of basic competences, supported by a highly structured, proprietary online curriculum originally developed in the 1990s; and **Wellbeing Solutions** ('education for the whole child'), a commercial firm founded by a group of former head teachers and LEA officers, which specialises in providing tightly structured, high impact management teams to take on the management of groups of schools and deliver improvements in basic educational provision. Wellbeing Solutions specialises in a pedagogical approach which seeks to address the 'full needs and potential' of school students, and delivers improvements in cognitive attainment and motivation partly by brokering partnership agreements with other public service providers in local areas to improve the contribution of welfare, housing, health and cultural services to the 'integrated personal development' of the students under their care.

While both providers claim to espouse distinctive, value-driven approaches to teaching and learning, and both disseminate high profile examples of improved 'outcomes' in the schools they run, the differences in overall effectiveness measured by financial cost and aggregated performance data are marginal. During the same period, a legal case brought by the Small Schools Alliance to the European Court of Justice creates a new obligation for government to fund the flotillas of small, parent-run schools espousing alternative curriculum philosophies, and the number of small educational suppliers grows rapidly as a result. Large-scale providers of schooling services develop a series of partnerships with global consulting and professional services firms to provide ongoing career development support to their teaching forces, with the result that more than half of all practising teachers attain the 'global standard' for lifelong learning and information management among knowledge professionals.

A political struggle and intense academic debate breaks out over whether or not the 'integrated development profiles' of students patented by a consortium of leading research institutes and school networks in 2012 are a better benchmark for assessing supplier performance than the existing unified award framework for 14-19 year olds developed by the Tomlinson Commission during 2003–06.

24 Mass customisation is a contradictory term in many ways. Mass production is closely associated with the idea of standard products with uniform uses created in repetitive production processes characterised by a strict division of conception and execution. Customisation is often thought of as a throwback to pre-industrial artisanal methods where uniquely personalised products were commissioned by the user from a skilled technician. Currently mass customisation has not been well defined. In some cases it is considered an extension of industrial methods to 'one-off' items, but still maintaining the basic Taylorist division of labour. Much of so-called 'knowledge management' follows this path. In other cases there is a genuine search for new methods and relationships, but for the most part these experiments suffer from the lack of key elements for success such as the network infrastructure (transparency, trust, etc) and highly developed 'discerning tastes' on both demand and supply sides.

Scenario 2

Modernising the factory: a monopoly delivers mass-customised schooling

Scenario 2 also continues with the traditional functional roles of schools, but distinguished from Scenario 1 at the operational level because monopoly provision prevails. This scenario is assumed to be one where efforts at reforming public school system management have largely succeeded. In operational terms, public school management and leadership have become aligned with the most innovative and effective methods of knowledge management and coordination. The professional identity of teachers has developed to the extent that most teachers internalise initiative and responsibility in ways that give them 'partner' status in the ongoing reform of the system. This helps to solve the inherent organisational limitations of top-down control as a route to delivering greater diversity. The overriding goal of the school system as a whole becomes 'mass customisation': the delivery of educational provision and experiences that cater for the vast majority of students through the same organisational framework, but succeeds in shaping what is offered according to the personalised needs and potential of the individual student.²⁴

Schools strive to offer 'tailored' programmes of teaching and learning to students in strongly defined shared settings. While individual profiles and pathways become more important, schools are still expected to make an important contribution to civic awareness and social cohesion. Schools develop a wide range of partnerships and strategic alliances to assist them in providing enhanced learning opportunities and give them access to the latest developments in management techniques, pedagogical evidence and technological innovation, but their basic organisational form remains intact.

Education is a public priority

This scenario is in some respects closest to what many in the English school system, and several others, are currently striving to achieve. In one sense, it depicts an ideal set of outcomes for the various sets of interests that play important roles. The growing autonomy and internalised responsibility of teaching professionals provides a resurgent sense of professional satisfaction and esteem which helps to make teaching a more attractive and sustainable profession. While overall accountability for the performance of the system rests with politicians, they are able to shape an agenda that diversifies the patterns of provision and achieves higher levels of satisfaction and parental responsibility. Rather than an implicit, evolutionary adaptation to changing circumstances by schools seeking to preserve their essential institutional values and characteristics, schools become involved in a far more conscious and transparent exploration of new approaches to fulfilling their roles, and the most influential new practices arise as much from locally generated practice as they do from central strategists and policy prescription. Schools become much more adept at drawing on information and expertise from outside their walls, without having to depend too heavily on any one source of resources. Education policy-making and administration increase in political status and profile as education itself becomes more and more important as a vote winner and priority public good. And the focus of actual provision for students continues to broaden in ways which reflect society's growing emphasis on diversity of talent, identity and potential. The real question that emerges from this kind of storyline is not, therefore, whether it is imaginable, but whether or not it is actually possible to align the various conditions, innovations and relationships needed to make it work within the time horizons under which it would need to demonstrate its effectiveness. This is not just a question of generating the necessary innovations, creating the right priorities and relationships. It will also depend on whether factors in the external environment, such as economic shocks, trust in government, new forms of ideological contest, changes in student behaviour and expectation, and so on, might make sustainable monopoly-based provision impossible.

²⁵ Miller, R, *Measuring what people know*, OECD, 1996.

Overall, schools become exemplars of the ‘learning organisation’, in the sense that they develop models of leadership and professional cohesion that commit them to continuous, conscious adaptation and improvement in their capacity to offer customised learning opportunities to their students, and to maintain their multiple accountabilities and productivity goals within incrementally increasing budgets. ICTs provide an important tool for encouraging new methods of coordination, record-keeping and assessment, but its direct uses in the classroom do not produce radical changes in teaching and learning because they are adopted within a stable set of organisational constraints. This is a cost-effective way (not too expensive for the taxpayer) of sustaining the school’s basic custodial, behavioural, cognitive, screening and socialisation roles. Authority structures applied within schools, to the curriculum and to pedagogy, remain relatively unchanged. Modern management just makes them all work much better.

Scenario 3

Learning benchmark: publicly managed schools set the performance metrics

In this scenario schools retain the most obvious of the traditional functions – supplying educational services - while losing all of the other roles. Since we are focusing on schools, this is not the place to speculate about how the custodial, behavioural, screening and socialisation functions are dealt with. It is clear, though that the kind of ‘creative society’ that we explored earlier generates an entirely different context for the provision of these roles. An economy in which production and consumption were integrated through the continuous exercise of learning by doing, for example, might generate very different kinds of systems for assessing and validating what people know.²⁵ Similarly, community settings in which work and home life are much more closely integrated, in part through the capacities of seamless information technology networks, would make new ways of ensuring the care, supervision and safety of young people in different settings entirely possible. Taking these roles away from schools does not mean that society has decided that children do not need to know how to read by the age of six. Nor does it mean that schools do not have a role to play in ensuring a certain level of educational quality. Just the opposite prevails in this scenario.

Crucially, by dispensing with the custodial role, schools could be liberated to pursue a much broader, non-classroom-based pedagogy and curriculum. Escaping the supervisory aspects of schooling might make it much easier to set and meet the cognitive goals of a learning society, because the range of permutations for the organisation of teaching and learning activity does not have to revolve around the containment of a fixed number of students within a single set of physical boundaries during a pre-specified portion of the day and week.

Equally, being relieved of the screening function also overcomes a couple of crippling contradictions that handicapped the industrial era school – the moral hazard of evaluating its own output, creating either a dilemma for teachers who are committed to the success of their specific students or become increasingly controlled by the constraints of external assessment and regulatory regimes, and of sustaining social stratification (by serving different socio-economic constituencies and sorting different groups of children into different pathways or destinations, while being expected to champion meritocratic equality of opportunity).

The salient features of this system are a diversity of sources of learning provision – not just competing suppliers of standard schooling, but a much wider range of learning contexts and experiences – and the outcomes and capabilities that they produce are validated by systems and methods that lie beyond schools as organisations. As a result, publicly funded and managed schools are better

Selling off school buildings

In one North London borough, following a protracted and painful effort by central government to engineer improved performance in the borough's schools, a student strike eventually forces a crisis which attracts global media attention. Following a period of months in which over 70 per cent of the borough's school age students refuse to attend lessons, and in which a number of their parents are symbolically jailed for failing to ensure their children's attendance, the highly respected but beleaguered chief education officer forms a collective with a small group of the borough's head teachers and other senior educational practitioners drawn from around the UK, Canada and Singapore. Three members of this team bring with them the rights to trial a newly developed set of protocols and software tools for a network-based validation of a wide range of knowledge and competences.

They form a public interest corporation, limited by guarantee, and submit themselves to a vote of confidence by staging a referendum, not among parents or citizens, but among the youth population of the borough, in which they set out a manifesto for educational renewal comprising the following characteristics: the creation of a youth currency, in which attendance, attainment and other financial entitlements related to educational participation can be converted into a series of cultural, travel and further educational entitlements sparks interest among government and young people alike.

This currency is endorsed and its value matched by the governments of a small Caribbean nation with an economic interest in tourism and cultural industries. The initiative is twinned with a parallel effort to reinvent education within the Chicago School Districts. The closure of six of the borough's least popular schools and colleges is achieved through a redevelopment proposal to create new 'urban villages', and attracts huge quantities of financial investment by London professionals seeking affordable housing, shared access to new community learning facilities, and a chance to participate in community renewal. The capital raised is split between the creation of new educational buildings, investment in a digital knowledge base which brings together online course content, 24-hour e-tutoring services, a music and games file-sharing collective and a creative academy linked to a local music venue, which itself offers apprenticeships and international scholarships to young people. The package also creates a highly innovative form of governance in which the young people of the borough hold the golden share in the public interest corporation. The promise of improvements in formally accredited educational outcomes and opportunities over an 11-year period is twinned with the promise to submit the management of the borough's education to a six-monthly satisfaction audit among current students and their parents.

An international construction firm simultaneously strikes a deal with the education service to employ 5,000 of the borough's teenagers in an apprenticeship and employment programme to overhaul and rebuild the borough's housing stock, parks and administrative offices, providing work-based learning, vocational training and employment opportunities in a cluster of occupations ranging from architecture to landscape gardening, bricklaying to public space management. Part of the new scheme incorporates a 'social enterprise' strategy for the borough in which local residents can earn income and develop skills by committing time and effort through developing new childcare and out-of-school learning activities, their achievements being validated through the new network-based knowledge exchange.

After three years of chronic instability and political argument, the programme proves that it has raised participation, motivation and attainment four times faster than the best performing equivalent government programme, while street crime and burglary have fallen by 60 per cent. It strikes a deal with the Home Office to share revenues saved, and uses the money to extend its adult learning network to create learning and competency validation for adults who left traditional schooling with no formal qualifications.

positioned to serve as a benchmark for performance. In other words, if there are external, dependable and universally acknowledged methods for validating what people know how to do, the efficiency and effectiveness of the learning services offered by a school can be evaluated and serve as a quality 'benchmark' standard against which other types of school and non-school learning are compared. The thing that characterises public education, and thus justifies investment in it, is the excellence of its teaching and learning processes, the depth of understanding and range of capability that it produces in its students.

If publicly provided schools do a good job at helping people (young and old) reach key cognitive levels (competencies), then they will set a high benchmark for learning services. Of course, if management of the public schools is bad and people do not benefit significantly from the services on offer then the public schools will set the low benchmark that other services surpass, generating much more searching questions about the sustainability of public provision. The influence that schools have on the rest of the system is therefore one of example. The existence of supply diversity would provide a strong set of incentives to innovate and sustain excellence rather than to coast or stagnate, but schools would not be competing for students within a standardised set of constraints over what teaching and learning could entail; instead, they would be active participants in a much more diverse landscape of learning provision.

Scenario 4

Learning broker: schools monopolise competency validation and regulation of the educational supply networks

In this scenario, as in Scenario 3, schools shed four out of the five traditional functions, but retain a different one. This time publicly managed schools maintain a monopoly over the screening function. In this scenario schools are no longer a place where teaching occurs; by and large, classrooms are gone, along with the custodial, behavioural, cognitive and socialisation roles. Schools do two things: assess what people know how to do, regardless of how they acquired the knowledge, and serve as the quality regulator and information resource for the activities, places and suppliers where people can meet cognitive goals. Schools become the primary means of ensuring educational quality and transparency, through monopoly control over the crossroads where learning demand and supply meet.

As the exclusive learning broker, schools are the sole go-between and clearing house, the place where all learning-related offers and messages are left, evaluated, posted and dispatched. Schools assess whether a person has actually acquired certain competences, as well as the process through which they acquired them.

With this information schools are able to play two roles: first, as the legitimate and trustworthy 'human capital asset bank' that can safeguard and disseminate information such as an individual's knowledge 'credit rating'; and second, by connecting what people know with understanding of how they acquired it, schools can help guide people to the appropriate learning situations and services.

Both of these roles require considerable expertise. Evaluation of what people know how to do, particularly in ways that fully capture the range of intelligences and avoid fixed, ex-ante and narrowly defined skill definitions, needs a wide variety of methods and requires much higher levels of ongoing investment research and enquiry. Some former teachers, in this scenario, become different kinds of 'assessment specialist', investigating the various ways in which knowledge and ability can be developed and validated. Others become expert in the management of new systems for integrating and exchanging information about what is happening where, ensuring the transparency of the network, establishing trust in the information it provides, developing search engines and navigational methods, and so on.

One particularly important area of specialism involves the design of 'learner pathways', understanding how individuals can navigate the networks to access information about what and where they can learn, and helping to advise on how to build up personalised programmes of learning out of manifold possibilities and opportunities. All these practitioner roles also involve ever greater understanding of the diverse ways in which people actually learn. That said, the nature of the system means that education professionals are not exclusively equipped to pronounce on what counts as valuable learning; because of the transparency and distributed nature of the learning exchanges, this capacity becomes a shared property of the networks as a whole, reinforced collectively by those who participate in them.

There are many ways that schools could be managed and organised in operational terms in order to play this pivotal screening or 'human capital transparency' role. However, some generic capacities, building on existing core competencies of schools and education departments, are likely to be important. The ability of schools to operate within specific local contexts, and to mediate between diverse groups of users and stakeholders in ways which sustain wider social trust is an essential building block. Existing expertise in learning and knowledge transfer, and high level understanding of how regulatory regimes assess quality and manage risk could also be adapted to these new roles, although this would also imply significant learning of new roles and methods of intervention. 'Network architecture', the ability to design, repair and develop the overall infrastructure and resilience of the networks supporting all this distributed activity, will also become a key task both for schools and for education policy-makers.

The monopoly position in brokering and validating, which partly arises from giving up a presumed monopoly on accredited learning, brings with it certain crucial advantages – legitimacy because of accountability through democratic means, neutrality in terms of the moral hazard of evaluation, and the capacity to fund research needed to continuously improve evaluation methods and refine regulatory regimes.

Rise of the contracted learning provider

In one county, the head teachers decide that they want to remain part of the government school programme, but give up on attempts to shore up and hold together their creaking building stock and note the proliferation of alternative, community-based and employer-driven learning activities which their schools are only marginally connected to. They gain permission to covenant all school building stock to housing and industrial developers, and create a new, county-wide learning network headquartered in the old offices of the LEA, along with a series of leasing agreements under which learning takes place across a wide range of contexts, including the office buildings of major employers, parks and rivers, housing estates and other community facilities. The county's library network, along with a number of local and regional museums, volunteer to help form a network of local learning hubs, providing access to the broadband network which provides information and coordination about learning opportunities and the local site for a wide range of advisory and social support services, including part-time employment agencies, university applications, family learning and primary health care. Students are issued with a smart card with network-based biometrically accessed cyber-citizenship which they control and which serves a wide range of functions from proof of identity to knowledge assets that have been validated. At any time of day or night the Chief Learning Officer or one of her 16 assistant directors can find out what percentage of the youth population is engaged in registered learning activities, and how many individuals are missing from their planned programme for that day. Much of the county's teaching force finds employment with a new range of contracted learning providers, while a smaller proportion becomes part of an experimental training programme to develop 'pathway and assessment specialists'. This core of educational experts is merged with the county's Connexions service to offer a universal learning brokerage service to young people in the area. The local Learning and Skills Council agrees to find a pilot programme which benchmarks the various approaches used by leading employers to assess and validate worker competence, and the results are used both to broaden the framework of standards used in local learning exchanges and to recruit a large number of employers into providing work-based learning opportunities to young people.

Part 3

School leadership:
what roles might schools
play in transition scale
change?

One crucial question posed by the four scenarios we have set out is how closely organisational form and institutional function are linked. It is precisely because our current schools have provided an efficient way of performing several roles through a single organisational framework that they have endured in that form for so long. Is it really possible to think about radical changes in the roles that schools perform, acting as enablers in equipping the society around them to thrive as it becomes more complex, diverse and decentred?

As the reader may well have noticed, the short stories that we offered as hypothetical illustrations of the four scenarios all contain major gaps. In order to give concrete manifestation to the concepts, we have to assume that other functions are taken up by new systems and capabilities that are yet to be invented. But could it be the role of schools to be at the vanguard of this kind of societal change? Answering that question depends partly on one's own choice of values. But it seems clear, nonetheless, on the basis of the empirical trends and possibilities around us, that major societal change of one form or another is already a reality.

The fact that such transition is widely accepted, even though its long-term outcomes are unknown, makes it imperative that we address the question of how far schooling could reshape itself to fit the contours of a changing society. And in doing so, we will have to confront the tensions and paradoxes that may be involved in pulling apart the various roles and methods that have been bound up in schooling for so long.

That means that we have to ask whether it is possible to imagine, for example, a sufficiently efficient alternative to the use of classrooms to solve the custodial challenge. Are the custodial boundaries of the classroom necessary for the task of developing the behavioural norms of a learning society? Possibly even more intractable, how far are the screening functions on which any economy depends linked to measures of ability and achievement like the high school diploma which rest on standardised inputs and externalised assessment? These questions challenge the sharp distinctions between scenarios that we have presented, because they force us to ask whether or not the various roles that schools play can actually be separated or reconfigured in such radical ways.

However, the point of the scenarios is not to obscure these more modest possibilities, but exactly to highlight them in ways that facilitate new and sharper questions about what is possible. In doing so, we can create the conditions under which real choices about the probability and desirability of different alternatives can be made, and strategies for achieving them elaborated.

As we argued earlier, schools occupy a pivotal role in shaping the adaptive capacity of wider societies because of their particular influence in shaping the routines and destinations of the young. As the importance of knowledge and everyday creativity grows around us learning becomes more and more important for economic and social sustainability, education becomes more and more important as a vehicle of opportunity and social mobility. As a result, it carries the burden of parental aspirations more and more intensely. But it is unclear to what extent schooling increases the motivation, capability and understanding with which fresh generations face the future, or whether they in fact help to hold in place institutional methods and social assumptions which act as a brake on what is possible. In reality, they probably do both at the same time.

The strategic questions are: which synergies might schools be able to foster, and how?

The traditional functioning of schools as organisations presents several potential barriers to the possibility of transition scale change, whether or not is considered desirable. If the possibility of such change depends on generating higher capacities for:

- autonomy
- experimentation and reflection
- adapting to unpredictability

then the classroom-based approach to managing custody and behavioural development are probably not direct contributors.

Equally, the role of schools in developing specific forms of academic and subject-based knowledge may currently be at odds with the broader goal of equipping all students to learn through life. Although deep forms of subject-based understanding certainly require both motivation and a range of disciplines and techniques of learning itself, the current approaches to specifying curriculum content and teaching it through fixed routines to standard-size groups of students places clear limits on the scope for developing the skills of learning. Again, a different combination of content and learning ability begin to imply different patterns of organisation for schooling. The increasingly explicit goal of tailoring learning pathways to the attributes and aspirations of the individual learner also implies major organisational changes.

Third, schools are expected to do more and more to socialise the young: towards citizenship, social and emotional health, ecological sustainability and more. For various reasons, this collective task seems to have become increasingly difficult for the rest of society to perform. It is a paradox that the expectation passes to schools, given that the range of methods they are able to use relies on a set of hierarchical relationships that have declined in other contexts. If schools have to rely on these to carry out the processes of socialisation because of the organisational constraints of their form, can they really be contributors to new forms of social capital, affiliation, and collective problem-solving ability?

Finally, a fundamental part of the way that schools work is the sorting of students into categories of attainment and the award of academic credentials. In the kind of post-transition society we have outlined, such credentialism is very poorly adapted to providing real-time, highly accurate and trustworthy identification of a person's or team's capacities. But the lack of clear and reliable signals about what people can do will in turn inhibit the formation of new collaborative networks and patterns of organisation. It is quite likely that the systems we currently rely on for awarding credentials could lose much of their influence if the development of different methods for validating knowledge reached a critical mass. If schools did not offer credentials in the traditional sense, would they still be schools?

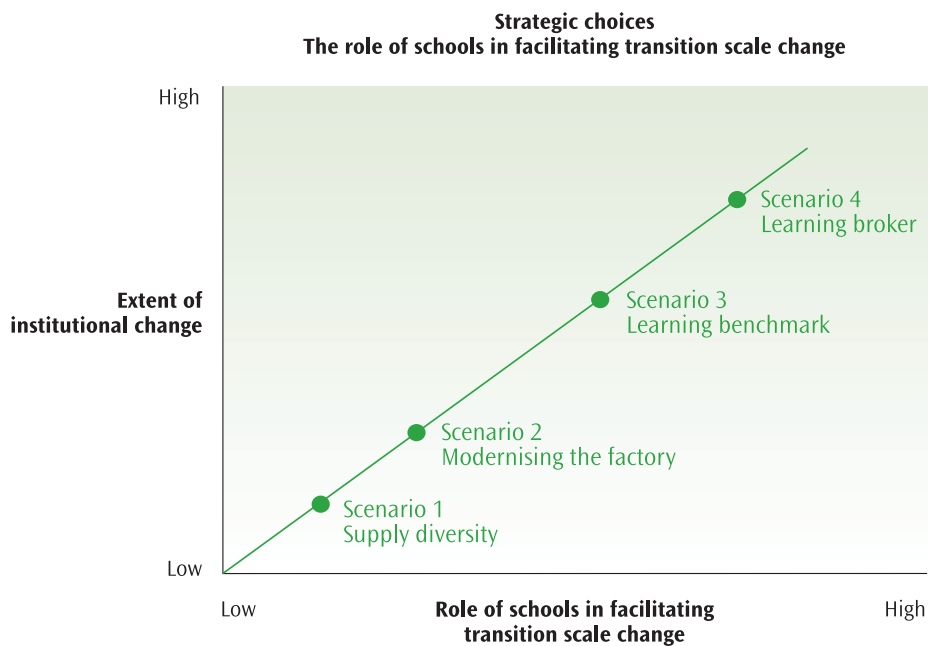
Diagram 7 sets out the possible contribution that our different scenarios for schooling could make to transition scale change. In Scenarios 1 and 2, with schools retaining all their traditional functions, the likelihood is that they would help to sustain a wider status quo. In Scenarios 3 and 4, there is a much greater possibility that schooling could make a direct contribution, both by opening up space for alternative methods and institutions, and by themselves generating a set of innovations that could directly support the 'synergies' of 21st century transitions. But as the diagram also makes clear, the transformation of schools under these two scenarios implies much higher levels of institutional disruption and uncertainty.

The implication – though it certainly needs greater scrutiny and debate – is that the specific combination of roles and expectations that schools take on will have a greater impact on the shape of wider society, over the long term, than the specific forms and structures – private or public, centralised or decentralised – that define the management and organisation of schooling as a sector.

Strategic leadership depends on connecting the present with the future. For school leaders the challenge is to determine how schools might be most effective in helping to take us in directions that we hope or believe are desirable. Diagram 7 helps to illustrate the way in which our basic choices about what we expect from schools as institutions could influence – or inhibit – the ways in which wider societies change around us. This returns us to one of our starting questions: could schools occupy the pivotal socio-economic position as institutions in the 21st century that they so clearly occupied in the 20th? Should they?

The fact that we can ask this question at all helps point towards some concrete challenges for leadership that flow from the analysis.

Diagram 7
The role of schools in facilitating transition scale change



Challenges for school leadership

Today's school leaders occupy the same kind of pivotal position within their institutions that schools have occupied in wider society. As the expectations of schooling, the scrutiny and accountability given to their performance have grown, the visibility of leadership and the stakes attached to leadership strategies have also become steadily higher.

Over the last generation, a body of evidence and formal knowledge about what constitutes an 'effective' school has been accumulated, creating a more and more explicit set of reference points for the evaluation of leadership and the frameworks within which schools and their leaders are expected to act. As reformers have staked their own leadership positions on the improvement of performance across the whole school system, the role of leaders in generating and sustaining such change has become the subject of intense debate, financial investment and public expectation. Articulate parents are far more likely to seek out school leaders in their efforts to find the right school, secure a place for their children, and ensure that they get the right kinds of experience once they are enrolled.

In England, outstanding head teachers have become knights and dames, as government has sought new ways to recognise and symbolise their achievements. The existence of the National College for School Leadership (NCSL) is itself an illustration of the critical role that leadership now plays.

But the debate about what leadership should entail has rightly begun to mature away from a focus on the individual characteristics and skills of good leaders, and towards trying to understand the qualities of leadership as a process, the systems of relationship, exchange and organisation that underpin it, and the connections between different approaches to leadership and different possibilities for the way that schools themselves could evolve.

As in many areas of organisational life, it is now taken for granted that school leaders are tasked with responding and adapting to ongoing change. But despite the radical changes seen over the last generation, we have argued that this adaptation currently occurs within a highly standardised and resilient institutional setting – they can change many aspects of the way they manage, communicate, reward, monitor and drive the process of improvement in their schools, but it is very rare for them to be able to change the basic nature of the school itself.

If we are confronting the possibility that schooling could evolve in several different directions, then leadership, on several levels, will be instrumental in converting possibilities into reality.

Challenge one: confronting paradoxes

One basic challenge facing leaders, and something for which their followers look to them, is to identify and confront the paradoxes that are bound up in the challenge of leading today's schools effectively towards the future. Most leaders are motivated in part by the desire to see their organisations thrive; they internalise the values they see embodied in what the institution achieves and represents. This is part of the reason that they can guide and direct the efforts of others within it.

But in the context of radical societal change, is it necessarily the right response for leaders to defend and sustain their organisations even against the odds? Is it right that schools should continue to absorb roles and expectations that other parts of society no longer fulfil? As the pressures and forces acting on schools, from social fragmentation to economic restructuring, continue to produce incoherence and unpredictability, should school leaders implicitly seek to adapt in ways that improve the cohesiveness and resilience of their organisations?

There are powerful reasons why it might be valuable to do so. Many teachers feel that school can provide a sense of stability, community and constancy for students in circumstances where the rest of their lives may not. Many feel that they owe it to students to achieve the best possible learning within the parameters of school; they treat it as a sanctuary, which in many good schools it is.

But we cannot escape the reminder that schools are themselves part of wider society, and they cannot act indefinitely as insulators from the wider processes of change. The paradox that leaders may have to confront, therefore, is that sustaining schools as organisations, even when they are achieving incremental improvements in their output, might in fact stand in the way of developing alternatives that could serve higher learning potential. This is because the survival of schools helps to hold in place a set of barriers, imaginary as well as practical, to the development of alternative methods of organisation that could carry greater learning potential or be more appropriate and sustainable in a changed socio-economic context.

Another way to express this paradox is to ask: should school leaders be prepared to participate in the creative destruction of the organisations that they lead?

Challenge two: leading in open, uncertain environments

One implication of the shift away from a single, hierarchical model of 'effective' schooling is the recognition that school leaders must learn to operate effectively in situations and environments where what they should be doing is often not clear. Two factors have traditionally reinforced the perception that school leaders have a straightforward, if difficult, task. First, the fact that they become leaders by occupying a well-worn position within the organisational hierarchy of the school; as a result, their authority, power, and accountability are often associated with their institutional role rather than their ability to shape and lead wider processes of learning and adaptation. Second, the recent history of education policy-making in England and Wales has reinforced the expectation that school leaders should achieve 'effectiveness' by surrounding themselves with formal categories and criteria; 'successful', 'failing', or schools with 'serious weaknesses', for example, and various forms of external target and timescale by which improvement is measured.

The organisational reality of leadership has always been far more complex, of course, and many of the current generation of school leaders have already embraced and defined a more open, autonomous and entrepreneurial approach to their role. But equally, many in education still tend to assume that the ideal situation is for 'the system' to create greater coherence within which schools can operate, for example, by intervening less from above, or by writing more integrated and intelligent policy frameworks and regulatory regimes, or by expecting schools to do less but better.

We are arguing that the complexity and conflict surrounding the way that schools work is a product of much broader forces, and the way that they interact. This means that a growing amount of the leadership task revolves around 'coherence making'; helping others to sort and shape the various challenges and resources around them into meaningful patterns through a constant process of adaptation, reflection and communication. This ongoing, evolutionary process implies a very different route to coherence, and a permanent recognition that school leadership is likely to mean operating in much more open and fluid environments even than current examples of 'autonomous' schools represent.

Challenge three: acting in the present and the future simultaneously

The analysis of change we have presented suggests that millions of incremental changes in practice and behaviour can add up to radical, system-wide change if they combine in particular ways. The implication for school leaders is that modest, embryonic innovations in organisation, teaching, or behaviour might represent the seeds of much more significant and long-lasting change.

As a result, leadership in education will involve more and more the need to operate with 'double horizons'; meeting current goals and demands while simultaneously exploring and moving towards much longer-term possibilities.

One difficulty with this is that the short-term so easily crowds out the longer-term. Another is that longer-term possibilities are inevitably more vague and intangible than the options of the present. But it seems clear to us that leadership will need to incorporate far more explicitly the potential connections – at the level of individual school and practice – between what we choose to do now and possible longer-term outcomes.

This will involve school leaders building further on their existing abilities to make decisions and build strategies that deal with multiple sets of parameters simultaneously.

One concrete way in which they might be able to do so is in using futures thinking itself to explore, with staff, students and others, possibilities for the future.

Challenge four: recognising the potential of embryonic practices

Building on the challenge of maintaining dual horizons is the leadership challenge of recognising and nurturing embryonic practices, and learning to incorporate them from elsewhere.

Though we described the partial centralisation of education policy-making and definitions of effectiveness above, the process of education reform in England is already well into the beginnings of another phase, in which central government recognises the limitations of command and control, and seeks to combine national priorities and standards in dynamic ways with a growing diversity of provision and with the autonomy of ‘informed professional judgement’.

Within this kind of framework, even in the short term innovation generated from the bottom up takes on a new significance. But over the much longer time frames we have been using in this report, new ways of stimulating and organising learning that arise from specific, local practice are equally, if not even more, powerful. In one sense the whole point of our analysis is that radical alternatives do not appear out of the blue, and cannot be imposed purely from a theoretical or ideological perspective. This means that school leaders should begin to recognise the potential for ‘system-building’ of innovations that could occur in or around their schools.

These practices may not fit with our current benchmarks or ways of measuring impact and performance, but that does not mean that a future system cannot develop the capacity to measure and evaluate in new ways.

Challenge five: avoiding reinvention of wheels

That said, the generation of potentially revolutionary innovations does not mean that every possible variation or innovation in practice creates value, or that outstanding but isolated practices will contribute to system-wide change. Systems as large and complex as schooling cannot be reinvented ‘one school at a time’. A relatively small amount of the knowledge and evidence available about effective learning is used as everyday practice by teachers today, in part because of the constraints on learning and knowledge diffusion presented by the institutional form and structure of schools themselves.

One major element of the leadership challenge is therefore to help generate organisational strategies, cultures and alliances that enable individual schools to connect their own learning and innovative capacity with those of others around them. This is a challenge of policy as well as of practice; it involves building connections and systems of ‘intermediation’ between schools, in ways which make it possible for new and more effective practices to generate critical mass, or to reach ‘tipping points’ where they become a feature of the system as a whole, and change the shape of that system in the process.

For leadership this might mean seeking to forge new and broader affiliations and communities of learning beyond the boundaries of the school or even the local area, and working to create internal cultures which are increasingly capable of using stimulus, challenge and example from outside. The way that schools organise themselves into networks, and purposes for which they use them, will become one of the vital determinants of the shape of educational provision over the next decade.

Challenge six: civic leadership

Another clear implication of the possibilities that we have set out is that school leadership may begin to encompass a far more direct set of interactions with ‘the public’ – that is, with communities, citizens and institutions beyond the school itself.

Of course, all school leaders deal with parents, local residents, public agencies, and so on as a matter of course. But if the challenges of adapting and reshaping schools to play new roles as societies continue to change around them involve creating a new set of relationships between learning activity across distributed networks and activities within schools, then the role of school leaders in brokering and shaping these new connections is crucially important.

Further away, we can begin to imagine situations where school leaders might not be primarily based in a single location, but would spend most of their time visiting different locations in networks of learning, and forging new connections across whole communities.

Closer to home, we can already see powerful examples of schools playing a part in neighbourhood renewal, developing the ‘extended schooling’ models that offer a wider range of community and welfare services, and supporting parents as adult learners as a way to enhance the learning potential of their children.

For new roles and possibilities to emerge for schools, it is clear that wider communities, particularly of parents, also need to learn to play new roles. Schools will have to generate new legitimacy for their new ways of doing things; in that sense, educational leadership partly requires the ability to help re-educate a wider public, though probably through the creation of new relationships of mutual learning.

Though many schools have highly respected places in local communities, we do not currently have very clear ways of understanding or evaluating the wider role that they play. Existing governance mechanisms, such as boards of governors, are relatively constrained forms of connection between organisation and community.

Challenge seven: distributing leadership towards new organisational forms

One very clear challenge emerging from the first six is that individual school leaders must learn to distribute leadership capacity more widely, both as a way to enhance the effectiveness of their existing organisations, and as an investment in future capacity to adapt on a larger scale.

Again, this is a practice that can already be observed in many different organisations. But it runs counter to much of the history of institutional leadership, and particularly to industrial models of organisation, because they concentrate power and decision-making authority in specific locations, usually where specific flows of information and knowledge converge.

Leadership development practice is, in some cases, already developing tools and models for 'distributed leadership'. One example is 'middle tier' programme developed by NCSL for supporting and preparing emerging leaders and middle managers in schools. This kind of approach is probably the beginning of a long wave of new development in both practice and theory.

The likelihood, as levels of knowledge, transparency and political pressure continue to rise, as they will in all societies where education is seen as a priority public good, is that the idea of continuous improvement in output and performance will become permanently established among the benchmarks expected of all schools. This expectation is already becoming intertwined with ideas about the 'learning organisation' and the development of new, knowledge-focused, 'communities of practice' in and around schools.

We can expect that 'distributed leadership' – the development of leadership styles and strategies that continuously spread the capacity to act, to initiate, and to learn on behalf of the whole organisation more widely across the people who constitute it – will become increasingly important to enhancing the adaptive capacity of the organisation. In many organisations, in all sectors, there are highly effective leaders who are sincerely committed to inclusion, shared responsibility and the idea of autonomy, but who have nonetheless learned leadership routines and survival strategies which make them indispensable pivot points of organisational effectiveness. If school leadership is to make its full contribution to the capacity of the education system as a whole, a different approach will be needed in time.

The consequences of this shift towards the distribution of power, responsibility, expertise and initiative is that strategies for educational renewal will continue to come against the limits and constraints of the school's own organisational structure, and the combination of simultaneous roles required of it. And here, in the short to medium term, is where leaders and leadership will confront the challenge of generating new organisational forms that can work in tandem with new distributions of responsibility and learning potential. Creating, borrowing and experimenting with new approaches to coordination, accountability, data collection and management, human resource development and many other activities therefore becomes a central challenge and responsibility of leadership.

In that sense, the discussion of challenges can be reduced further into a set of questions that might guide the next stages of the debate:

Where are the leaders, and the forms of leadership, that will:

- form a strategic alliance with parents and other community organisations to create the possibility of seamless, community-wide learning opportunities?
- generate the performance information framework that enables new benchmarks and metrics of learner progress to be developed across the whole system, including reliable ways of tracking learner motivation and experience in decision-making?
- develop an organisational structure that allows much more direct links between curriculum timetabling and pedagogical strategy, generating 'just in time' patterns of organisation which allow teachers, resources and physical spaces to be organised responsively around different patterns of learning activity?
- develop a new form of community governance that distributes responsibility for learning across a whole network of participating stakeholders in a local area, and draws on a much broader pool of expertise and commitment in shaping educational provision?

Answers to these, and questions like them, will give us clues about the extent to which schooling will be associated with triggering and enabling different kinds of transition in society as a whole.

Challenge eight: telling stories with moral purpose

The final, and perhaps most fundamental, challenge, relates to the role of leadership in articulating new possibilities through the narrative leaders offer to others. As leadership in modern organisations has become more and more an exercise in handling complexity and uncertainty, and as consensus about the legitimacy and value of different institutions has broken down, the role of narrative in leadership may have become even more important than ever.

In settings where distributions of power and patterns of organisation are constantly shifting, and the external environment is diverse and unpredictable, leaders are looked to more and more to provide a sense of purpose and coherence through narrative; being able to tell a story about where we have come from, where we could be going to, and what the milestones might be. The power of stories in mobilising energy and commitment, and in bringing together disparate resources into more powerful wholes, has always been particularly evident in education. Most of us have at least one story to tell about how our own experience of education influenced the development of our particular narrative.

So leadership in education will involve being able to express, and to live out, narratives about the value of learning and the ways in which understanding, skill and knowledge can be part of a good society. This ability is central to mobilising the resources and commitments that can make the stories true. The task of leadership includes being able to fire the imagination, as well as to generate and orchestrate the processes that can increase the range of what is possible. What often gives such leadership wider resonance and impact is its ability to project moral purpose, to make explicit and practical the basic commitments and intuitions that others have about what is of value.

As we have argued, the issue is not necessarily how to preserve the fixed institutional position from which these narratives have been crafted and told. Making today's schools the best they possibly can be is one task; a noble and difficult one. But an even more critical set of choices may be waiting for us, about whether there are trade-offs between the different roles that schools manage to combine, and about which of these roles it is most important that schools perform. There is no automatic preference here; the choice is genuinely open. In fact, we cannot know the real consequences of different paths until we have begun to work through their implications in more detail, and with more participants in the debate. But the role of school leaders in shaping narratives that can make the choices transparent to the rest of us, as well as in finding strategies to make the possibilities into reality, may turn out to be the most influential of all.

Tom Bentley

Director, Demos

Described as 'one of Britain's leading policy entrepreneurs' by the *Australian Financial Review*, Tom Bentley, works on a range of issues, including democracy, technological change, education, the future of government, globalisation, innovation and institutional strategy.

His recent publications include *Letting go: complexity, individualism and the left* (Renewal, 2002), *The Moral Universe* (ed. Demos, 2002), *It's democracy stupid* (Demos, 2001), *The Creative Age: knowledge and skills for a new economy* (Demos, 1999) *The real deal: what young people really think about government, politics and social exclusion* (Demos, 1999) and *Learning beyond the classroom: education for a changing world* (Routledge, 1998), described as 'one of the key education books of the decade' by the *Times Educational Supplement*.

Tom was born and educated in the East End of London and studied politics, philosophy and economics at the University of Oxford. A former adviser to David Blunkett MP, British Home Secretary, he regularly contributes to national and international media, and is involved in policy and political debate around the world.

Riel Miller

Organisation for Economic Co-operation and Development (OECD), Paris

Riel Miller works in the International Futures Program and is a Principal Administrator in the Advisory Unit on Multidisciplinary Issues to the Secretary General of the OECD, Paris.

He holds a PhD in economics from the New School for Social Research, New York and a Masters in Social and Political Thought from York University, Toronto. Riel started his career as a professional economist in the early 1980s at the OECD's Economics and Statistics Directorate.

His recent publications are in the areas of human capital accounting, the knowledge economy, community economic development policies and practices and the future of the internet.

He is the author of the OECD report, *Measuring what people know: human capital accounting for the knowledge economy*, and contributed a chapter 'Cyberspace: The Next Frontier?' to *Blueprint to the Digital Economy* (McGraw-Hill, 1998).

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National College for
School Leadership
Triumph Road
Nottingham
NG8 1DH

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