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# The Long Game

How regulators and  
companies can both win

Paul Skidmore  
Jake Chapman and  
Paul Miller

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Paul Skidmore  
Jake Chapman  
Paul Miller  
November 2003

*Please note that the conclusions of this pamphlet are those of Demos only, and do not necessarily represent the views of our sponsors.*

# Executive Summary

## **The Long Game**

Regulation today reaches into every aspect of our lives, from paying the gas bill to phoning a friend or using a credit card. Regulation is at the same time invisible and everywhere – we live in a ‘regulatory state’.

Yet despite its achievements, the regulatory state is on the brink of a crisis. This crisis is rooted in a gap between our high expectations of regulation, and the constraints on the ways regulators operate. The regulatory state has evolved rapidly to cope with changing economic demands, but there are clear limits to what it can accomplish within the confines of its original design.

This pamphlet aims to explore the ways in which regulation can adapt to meet new challenges. It argues that we should redefine the relationship between regulators and firms, in particular by developing a system of ‘regulating self-regulation’. By playing the ‘long game’, regulators and companies can create a virtuous circle of trust, adaptability and greater public value.

## **Welcome to the regulatory state**

The regulatory state was an attempt to create stability and control following the failure of the Keynesian welfare state and interventionist policies to deal with economic and political change. The privatisation of numerous publicly owned utilities led to the

creation of regulators that tried to foster competition while preventing companies from exploiting dominant market positions.

The purpose of regulation was defined largely in economic terms (for example keeping prices low or increasing competition) and was based on a centralised system of setting and enforcing detailed rules and standards. Regulation was taken away from political institutions and handed to independent technical experts.

The overall effect was to tackle perceived malfunctioning of regulated markets by breaking them down into discrete problems rather than seeing the relationship between regulators, companies and the market itself as part of a wider system.

### **The need for change**

In terms of its original purpose, the regulatory state has been very successful, transforming the economic landscape of the UK. However, success has led to increased expectations about what regulation can achieve. Moreover, with the increased pace of technological advancement and the emergence of complex new economic, demographic and environmental problems, the goals of regulation have grown ever wider.

These new problems are less measurable, and have no ‘right’ answer or technical solution that can be derived from predefined criteria. They have proved difficult to incorporate into the existing paradigm.

The system has responded by going into greater detail, but this has resulted in a spiralling raft of rules that quickly become outdated by changing expectations and new market developments. It has also tended to suppress rather than manage complexity, ignoring alternative perspectives and focusing only on those aspects of problems amenable to technical solutions.

### **Rethinking regulation**

Both the objectives that regulation is expected to achieve and the types of problem it faces have evolved. It is time to take a step back and reconsider the basis of the existing system.

Regulation exists to maintain the conditions necessary for private enterprise to function within a particular social context. This incorporates economic objectives such as policing anti-competitive behaviour but goes further.

It also includes other values that are important to society, such as trust, fairness and sustainability. This package of values can be described as ‘public value’. Therefore we can think of the purpose of regulation as maximising public value.

Devising a new approach to regulatory problems would mean addressing four key challenges:

- *Accepting uncertainty.* Regulators and government must acknowledge the complexity of problems and recognise that a stable, controlled state is impossible.
- *Prioritise public value.* Maximising public value will help to foster greater trust between regulators and firms.
- *Delegate regulatory responsibility.* The best way to handle complexity is to match it, and this requires adaptability. This cannot be done with detailed rules that seek specific outputs. Instead the system must harness the adaptive capacity of regulated firms by giving them greater regulatory autonomy.
- *Take an evolutionary approach.* The precise blueprint of the new regulatory system will develop and evolve over time and create the conditions to foster this evolution.

In short, to handle the complexity of the problems it is trying to deal with, regulation should seek to promote adaptability and maximise public value.

### **Towards regulating self-regulation**

For regulation to harness the adaptive capacity of firms, it must afford them greater autonomy. This can be achieved through a system of regulating self-regulation that combines the best

elements of central direction with the knowledge, commitment and participation of firms and their employees.

This pamphlet outlines six strategies to achieve this.

1. **Embrace co-production** – Self-regulation is crucial for external regulation to succeed. Therefore capacity for self-regulation and regulatory innovation within firms should be enhanced and cultivated.
2. **Get serious about principles** – Set out simple goals but be flexible about how these are to be achieved. This allows greater flexibility should circumstances change. In order to achieve this, trust must be built between regulators and firms.
3. **Let firms write the rules** (in line with generally agreed objectives) – This would create greater buy-in from staff, encourage innovation and also avoids having to make one set of rules fit many different firms.
4. **Earned autonomy** – Organisations that demonstrate their ability to deliver public value should be rewarded with greater freedom or discretion, while those that do not should be dealt with severely.
5. **Regulate the information commons** – No single decision-maker can understand everything about the system in which they work because there are too many different perspectives. Part of the regulatory task is to increase the flow, quality and management of information across a network, to improve knowledge and decision-making.
6. **Foster creative destruction** – Attempts at innovation are often stifled because they are built on existing regulations. To avoid this, greater fluidity should be built into regulatory arrangements through ‘sunset clauses’ and other incentives to clear away existing regulations after a given period of time unless there is a good reason otherwise.

The regulatory state will not be swept away overnight and regulating self-regulation will take time to develop. Nevertheless, we cannot leave its development to chance. We must identify and begin to make the kinds of investments that may seem small-scale or peripheral today, but could come to form the basis of a coherent alternative model in the future.

Britain has led the world in innovative regulation. To retain its world-class reputation, all those involved in regulation need to start playing the long game.

# 1. The Day the Lights Went Out

## *Welcome to the regulatory state*

*'He that will not apply new remedies must expect new evils; for time is the greatest innovator.'*

Francis Bacon, *Of Innovations*

Thursday 14 August 2003 was the day the lights went out. At 3:06pm eastern daylight time, 300 megawatts of electricity flowing along a major power line in Ohio suddenly reversed direction. The whole incident lasted no more than ten seconds before the line was automatically shut down. At 3:32pm, another power line sagged into a tree as the interruption caused the first of a series of other transmission cables to trip off-line. Soon cascading failures appeared across the whole eastern electricity grid linking Ohio to New York, Pennsylvania, Michigan and the Canadian province of Ontario, as replacement lines and power plants shut down to avoid being overloaded. Then at around 4pm, the dense interconnections between different points on the grid began to give the system a life of its own. With Cleveland starving for power, Ontario tried to pour electricity into Ohio almost doubling its normal demand from the New York grid. As the Midwest system collapsed under the strain, systems in Ontario and New York severed their external connections to protect themselves. Suddenly, power flowing from New York had nowhere to go, and 1,500 megawatts flowed back into the grid causing plants to shutdown across the state. Within 90

seconds, power supply across most of the east coast of the United States and Canada had been cut. The blackout was the worst in the history of North America, affecting up to 50 million people.

In the aftermath of the crisis, experts and politicians groped for an explanation – but each seemed to have their own perspective on what had gone wrong. Some viewed it as the inevitable (if unintended) consequence of energy deregulation; others as a simple failure to put in place proper incentives for long-term investment in infrastructure. Some accused the regulator of institutional sclerosis, for failing to adapt its approach to take account of the changing reality of the industry and the need to focus on more than just low prices. Others were more sympathetic, acknowledging the difficulty of accommodating multiple and to some extent conflicting objectives, with no easy way to prioritise or balance them over time.

On one thing they could all agree however: the root ‘cause’ of the crisis was complexity. This complexity was found in the design of the network itself, which had created forms of interdependence between different parts of the system that were simultaneously deep and barely visible. But it was also found in the dynamics of how the network was governed, and the range of objectives and perspectives that needed to be taken into account for regulatory decisions to be effective. And these twin forms of complexity – of industries themselves, and of the demands about how they should be governed – are not unique to energy. In different ways they are common to every single regulated industry.

This pamphlet sets out to answer the question of how regulation can adapt to the challenges of an ever more complex world. Regulation as a distinctive and dominant mode of governing grew out of a desire for stability in the face of dynamic change across many crucial sectors and industries. The regulatory state that emerged in the UK and many other parts of the world from the late 1970s was an attempt to restore order and legitimacy to a system of economic governance shaken by the failure of the Keynesian welfare state and its associated forms of intervention to deal with

the pressing problems that this dynamic change created. But with hindsight it is clear that the respite could only be temporary. In the long term, the only true steady state is a state of perpetual *adaptation* in regulatory goals and methods. If that's the case, we need to start investing in the creation of a more adaptable regulatory system now. We need, in short, to play the long game. For governance is like a high-interest savings account: small investments now can be worth a great deal in the future. But if we delay, we may never be able to make up the difference.

### **The regulatory state at a crossroads**

Regulation today reaches into every aspect of our lives. It's there when we pay the gas bill. It's there on the labels of the food we buy. It's there when we take a train, phone a friend or use a credit card. Regulation is at the same time invisible and everywhere – we live in the age of the 'regulatory state'.

Yet despite its achievements, this regulatory state rests on the brink of a crisis. This crisis is rooted in a gap between the expectations of what regulation should do, and the design constraints of the institutional context within which it operates. Practice has evolved rapidly to cope with changing reality as best it can, but theory, and in particular the *political* culture underpinning the regulatory state, has not kept pace.

This is manifested in growing confusion and disagreement about the purpose regulation is expected to serve. Regulation is being asked to walk on a razor's edge between stability and change: on the one hand, to keep markets in a steady state, correcting specific market failures and maintaining stability; on the other, to set the direction of travel and help firms and industries adapt to the long-term challenges of a dynamic, fast-moving, and uncertain world. We cannot have it both ways.

In this report we argue that the defining characteristic of modern regulation is complexity. This applies as much to the regulatory task itself – the multiple objectives that are set for it, and the diverse perspectives it must accommodate – as to the markets

and activities it is expected to regulate. No matter how elegant, a model of regulatory decision-making that relies largely on the technical expertise of an independent, specialist agency cannot and will not be enough to deal with this complexity. Instead what is required is a historic shift in the focus of regulatory regimes from maintaining stability to promoting adaptability.

The biggest challenge here is institutional. First, it means accepting that even if regulation remains a highly technical practice it is underpinned in the long term by an inherently social and political process of negotiation over its ends. But second, it means recognising that the key to the long-term success of regulation lies not in the novelty of the policy prescription but the ingenuity of firms, and whether this can be harnessed towards the achievement of regulatory objectives. Too often at present it is directed at *avoiding* those objectives through ‘creative compliance’.<sup>1</sup> We argue that an approach based on **regulating self-regulation** is the best way to align the innovation and adaptive capacity of firms with publicly mandated values and objectives.

### **The nature of the crisis**

By any reasonable measure, the regulatory state has achieved a remarkable transformation of Britain’s economic landscape over the last two decades. Huge swathes of economic activity that were hitherto characterised by public ownership and monopoly have been privatised and subjected to competitive forces. Highly competitive markets have emerged in place of what were once public utilities in the supply of gas and electricity, telecommunications, air transport and beyond.

These achievements were made possible by a period of ‘hyper-innovation’<sup>2</sup> in institutions and governing methods from the early 1980s. Such was the scale of the technical and institutional innovation during this period that Britain is still regarded as ahead of the curve, and is held up by organisations such as the OECD as a world leader in regulatory strategy.<sup>3</sup>

Our central argument in this pamphlet, however, is that this

model of regulation – which has served us so well for the last two decades – is ill-suited to the demands being placed on it by a set of new, complex and long-term challenges that are with us now or on the near horizon. These include:

- economic change, and creating an appropriate operating environment for increasingly globalised industries acting across national borders while simultaneously keeping up with higher levels of industrial innovation and the convergence of previously separate sectors
- demographic change, and finding ways to encourage an ageing society to make better provision for its old age
- environmental change, and the need to reorient economic life towards a more sustainable, low-carbon future with devastating environmental consequences if we fail so to do
- technological change, and how we manage the risks and maximise the opportunities which rapid, often disruptive technological innovations present.

The danger is that nothing breeds failure like success: the success of the old regulatory paradigm in dealing with the challenges that were set for it has contributed to an underlying complacency that it will be equally well-equipped to solve the new problems we face. The questions that were asked then – how can we tame monopoly power, how can we improve efficiency in the publicly owned utilities, how can we protect consumers and keep prices low – are in many cases not the questions that seem most pressing today. In many sectors, these questions have been answered and withdrawal from conventional economic regulation seems feasible.<sup>4</sup>

These new problems are of a qualitatively different order. It is not that solutions are harder to find, but that they cannot really be solved at all in a conventional sense. They have no ‘right answer’, no technical solution that can be determined by reference to

predefined criteria. Yet our regulatory regimes have largely been configured to deal with problems that *do*. In fact, their success has been due to their capacity to define away problems that do not have such technical solutions as being somehow outside the regulatory space, a matter for politicians to address.

To understand why, we need to understand where the regulatory state came from. It grew out of a determination to restore order and legitimacy to a system of economic governance shaken by the failure of the Keynesian welfare state and its associated forms of public intervention to deal with the new economic and political realities of the 1970s and 1980s: the vulnerability and interdependence of national economies in relation to the global economy, particularly in finance; the rapid pace of technological change; the fiscal crisis of the state; and the challenge to the legitimacy of government and collective action presented by an increasingly individualist consumer capitalism.

Yet the emergence of the regulatory state is a story of continuity as well as change. On the one hand, it certainly reflected a profound break with the past in terms of the size, role and objectives of government. But on the other, it retained a basic belief in the capacity for government to maintain order and stability within a complex, dynamic environment, albeit by different and less direct means. The essential features of this were:

- a simple, narrow economic calculus about the purpose of regulation, that emphasised the correction of specific, predefined market failures (especially the abuse of monopoly power in former public utilities) rather than more ambitious objectives for managing the whole economy
- a set of instruments which, though never conforming to the stereotype of command-and-control, nevertheless emphasised the setting and enforcement of detailed rules, standards and prices from the centre
- even greater faith in a particular kind of technical,

- expert knowledge as the basis on which effective decisions could be made
- a suspicion of the capacity of *political* institutions to use that knowledge effectively, and hence its location within the supposedly more neutral institutional space afforded by specialised independent regulatory agencies.

It is the last of these that it is arguably the most important. The regulatory state gave powerful expression to the idea that economic stability and order lay in governing arrangements based on independent, technical expertise. But, by implication, this reinforced the converse view that adaptation and change were inherently *political*. This dichotomy between a stable regulatory space and an adaptable political space was unproblematic while the purpose of regulation remained relatively settled. But for a whole series of reasons, it has not.

### **Complexity makes control impossible**

First, the driving forces of complexity have not relented, nor have they been tamed by the regulatory strategies put in place over the last 25 years. In fact, the world now seems a more uncertain, unpredictable and volatile place than ever before, due to an unprecedented degree of global ‘connexity’<sup>5</sup> or interconnectedness through flows of communication, culture, people and finance within and between countries.

Second, this interconnectedness undermines reductionist approaches that tackle problems by breaking them down into smaller chunks – precisely the approach adopted by the regulatory state – because this simply means that other problems are ignored, or worse, exacerbated. This explains why many of the traditional regulatory concerns (for example, with policing network monopolies) are now supplemented by a raft of other social, economic and environmental objectives. Short-term goals must be balanced by long-term needs: in sectors such as telecommuni-

cations and energy, for example, existing approaches may not be sophisticated enough to facilitate the investment in technology and infrastructure needed to adapt to the long-term challenges that rapid technological innovation and environmental sustainability present.<sup>6</sup> The management of risk is also an increasingly important regulatory task, particularly in financial services but also in relation to the regulation of increasingly content-rich mobile telecoms services and the maintenance of security of supply in energy and water.

This fragmentation of regulatory purpose would be less problematic if different objectives were entirely compatible with each other, if the relative importance of each remained stable over time, and if there was general agreement about the priority that should be afforded to each. Of course none of these conditions holds true. Hence the third challenge to stability: the existence of multiple, sometimes incompatible objectives and multiple perspectives on which (if any) should be prioritised.

For all of these reasons the adaptation of regulatory approaches and objectives has been essential. New purposes have been added, old loopholes patched. Regulatory agencies designed simply, in Stephen Littlechild's memorable phrase, to 'hold the fort until competition arrives',<sup>7</sup> show few signs of disappearing, even if some have been merged to match the converging sectors they were designed to regulate. But because regulation has been equated with stability such innovations have been focused at the level of *policy*, through bureaucratic attempts to maintain coherence in the face of dynamic change. The focus has been on adapting the system, not making the system itself more adaptable.

The origin of the phrase 'red tape' – the ribbons used by lawyers to tie their papers together – resonates powerfully with the idea of regulation as an attempt to hold things in place. That red tape has become synonymous with overly rigid, bureaucratic forms of regulation reflects the inherent difficulty of trying to maintain coherence from the centre through ever more complex rules.

What both sides in the perennial debate about the burden of red

tape have largely ignored, however, is that the most crucial choices are not between more or less regulation, but about how we can create regulatory systems capable of adapting to the new demands and expectations constantly being placed on them without simply ratcheting up the volume or burden of detailed rules. We need, in short, to create regulatory systems capable of learning how to do better without waiting for central command. As Donald Schön foresaw long ago:

*The loss of the stable state means that our society and all of its institutions are in continuing processes of transformation. We cannot expect new stable states that will endure even for our own lifetimes.*

*We must learn to understand, guide, influence and manage these transformations. We must make the capacity for undertaking them integral to ourselves and our institutions.*

*We must, in other words, become adept at learning. We must become able not only to transform our institutions, in response to changing situations and requirements; we must invent and develop institutions which are 'learning systems', that is to say, systems capable of bringing about their own continuing transformation.<sup>8</sup>*

Our contention is that the greatest source of learning and adaptive potential within regulatory systems resides not in the design of regulations but in changing the way regulators and firms relate to each other in the achievement of regulatory objectives. The challenge is to envision new systems of regulation that capitalise on this potential, and to understand how they might be created.

### **Regulating self-regulation aligns adaptation with public value**

This pamphlet is categorically not a manifesto for defeatism or laissez-faire. Complexity makes public intervention more not less necessary, by destabilising the rules by which social order is maintained and risks to citizens' well-being and welfare are

detected and mitigated. But it also undermines the legitimacy and effectiveness of government's traditional attempts to rectify this from the centre. So the question is what kinds of public intervention?

Our thesis is that by focusing on the relationship between regulators and firms we can learn to have our cake and eat it too. We can develop systems of regulation that combine the moral purpose which central direction provides with the flexibility and scope for innovation in organisational practices and behaviours that resides within firms and industries. We should create models of 'regulating self-regulation' – ways of steering the instinctive, self-organising responses of firms and sectors towards desirable regulatory outcomes, rather than specifying how they are to be achieved from the centre.

As we argue, this will require a degree of institutional innovation potentially as radical as that which accompanied the regulatory state. The biggest challenge of all may be in finding ways to restore the necessary trust, not just in public institutions but also in corporations, for a system of regulating self-regulation to be legitimate and effective.

Part of the solution to this is to broaden the focus of regulation from a narrow economic calculus to a wider conception of 'public value', which emphasises concepts such as trust, legitimacy and fairness that are of crucial importance when the goods or services being described (including regulation) are public and are produced by or through the collective power of the state. As we'll explain further in chapter 4, public value is a multifaceted tool that provides a more promising way of accommodating incommensurate goals. The regulatory debate will never be settled; the aim must be to create a never-ending debate about the priority of different types of public value, and how they can best be achieved.

### **Closing the ingenuity gap**

Long-term change is compositional; the problems that have defined regulation up to now, and the methods that have been employed to

address them, will not simply disappear or be replaced overnight. They will remain an important part of the overall regulatory picture, and we would not want to suggest that the vast accumulated expertise about how they should be tackled will somehow become redundant.

But over the coming decade and beyond, the problems that the regulatory state has hitherto failed to deal with will become increasingly hard to avoid. Furthermore, the dynamism of modern economic, social and technological change will throw up new and complex challenges whose contours have not yet even begun to emerge. As we survey this future landscape, the task of regulating has rarely seemed more complex, nor our regulatory toolbox more ill-equipped to cope with it.

This is our twenty-first century lament: we are identifying problems faster than we are learning how to address them. The regulatory state was itself a profound innovation in governance but to close the ‘ingenuity gap’<sup>9</sup> between the scale of the problems we face and our capacity to solve them, we need to sustain that level of innovation into the coming decades. We must develop systems of regulation that can learn to manage complexity, not just wish it away. If that is to happen the political debate about regulation cannot continue to fumble around in the darkness. It’s time to switch the lights back on.

## 2. A Man Alone in a Room

### *The conventional wisdom and why it fails*

*'Can it be that it was all so simple then...'*

Barbara Streisand, *The way we were*

A man sits quietly alone in a room at the offices of the UK's Radiocommunications Agency. Shortly after 1:30pm, the fax machines littered around the room begin to whirr into life. But the messages being received are not the routine trivialities of everyday organisational life. Billions of pounds, the fortunes of several massive companies, and the opportunity for the British people to benefit from the most-up-date technologies are at stake.

It is 6 March 2000, the start of the auction for the third generation or '3G' mobile phone licences: the pieces of paper that will allow operators to provide high-speed internet services to mobile devices via a newly available part of the radio spectrum. It is also the height of the internet bubble, with the media and stockmarkets alike awash with irrational exuberance about the possibilities, and the profits, that new information and communication technologies promise to bring.

Thirteen bidders are competing for five licences. Each bidder has a dedicated number to call; a dedicated fax machine stands ready to answer. With each round of bidding, the price goes up as the companies vie to better the previous offer. At round 94, the first company decides to bow out. By round 150, only five are left

standing. The final proceeds from the auction reach more than £22 billion, vastly in excess of expectations. Government announces its intention to pay down the national debt, and for a short while the UK once again basks in the white heat of technology, and the warm glow of policy innovation, as other governments prepare to follow its lead.

But then things start to go wrong. In the autumn the internet bubble bursts, with technology stocks hit particularly hard. Expectations of future earnings are revised radically downwards. Having opted to pay for their licences up front, the successful bidders are saddled with billions of pounds worth of debt, and no immediate means of paying it off. To make matters worse, the industry regulator Oftel accuses the operators of cartel-like behaviour and begins to agitate on mobile termination rates (the cost of calls to mobiles originating from other networks) and the international roaming charges on using mobiles abroad, two key sources of revenue in the highly competitive mobile market. And to cap it all, operators find their potential profits from wireless internet being eaten away by a new technology in the shape of Wireless LAN or WiFi, whose rapid success owes much to the fact that it was unanticipated and therefore unregulated.

As John Naughton has argued, the upshot of the whole exercise has been to leave the balance sheets of several massive firms devastated and, as a result, the pension funds that invested in them even more shaky than they would otherwise have been; 3G services have been delayed, and when they eventually arrive will be much more expensive than predicted; as a result, the 3G market in Britain could remain depressed for years and dominated by unsavoury but lucrative services.<sup>10</sup>

So who was to blame? Was the government to blame for designing a flawed auction process? Was it the operators' fault for behaving irrationally in the bidding process? Should the regulator have backed off, to allow companies to claw back some of their investment? Should investors have been more aware of the risk posed by competing technologies such as WiFi?

## **The limits of rational decision-making**

The answer is that it was all of these, and none of them. The story of 3G is a story of how apparently rational and understandable behaviour can still contrive to produce unintended and incomprehensible consequences. It is the story of what happens when a particular technical, reductionist approach to problem-solving is applied to problems for which no simple technical solution exists.

At first glance, 3G may seem like a special case. But as we will try to show, it shares a set of basic characteristics that are common to regulatory dilemmas familiar in many other sectors. These characteristics include:

- a high degree of uncertainty
- the existence of significantly different perspectives on the problem at hand
- little agreement on the nature of the problem, let alone its most appropriate solution.

Our argument in this chapter is threefold. First, we argue that this type of problem, which we call a ‘regulatory mess’, is becoming more common and more visible. Second, we argue that the regulatory state managed to delay the appearance of these messes by suppressing those aspects of problems that could not be dealt with through a particular kind of technical decision-making, and tackling only those that could. But as we will show, this approach was inherently unsustainable, partly because external factors such as technology and globalisation have continued to create new messes, but also because the internal contradictions of the regulatory state paradigm itself have undermined the continued viability of this approach to dealing with complexity. Third, we argue that in the long run, dealing with messes is going to require a different approach, or we risk losing the very legitimacy on which regulation depends.

### **The regulatory state was a response to complexity**

The regulatory state was a response to growing complexity, in particular to the growing interconnectedness and interdependence between sectors and between national economies and international financial markets, and the limits that this imposed on government's ability to micromanage either (see Appendix for a more detailed discussion).

However, the way it sought to deal with this complexity was to suppress it, in two crucial ways. First, and most obviously, it radically scaled back the state's ambitions, recasting its role in correcting specific market failures. But the second, and more subtle way in which it suppressed complexity was to reduce the many objectives that could (and indeed, often were) specified as legitimate goals for regulation to a single basic goal, that could be defined against clear technical criteria, against which any potential regulatory intervention was to be judged.

From the word go, regulation was expected to balance a range of different priorities. But as Mark Thatcher has shown, at the time of their establishment the regulatory agencies were given little guidance about how this balancing act was to be achieved, and left largely to arrive at their own working method.<sup>11</sup> The early regulators calculated that, paradoxically, to maximise their power and influence they had to constrain it. By defining their proper jurisdiction in terms of a narrow range of 'technical' problems, and defining everything else as 'political', they hoped to maximise their sovereignty over those problems they felt best able to solve and minimise the extent to which they were seen to be making decisions that might compromise their legitimacy. In particular, even though they were constantly making trade-offs between different priorities by emphasising some problems and ignoring others they did not, as far as possible, want to be *seen* to be making trade-offs. In this way, the regulatory state defined as problems only those technical issues it could resolve, a classic tactic that all paradigms deploy.

The most important simplification was to prioritise protecting consumers and securing effective competition, and to claim that the latter was the best method of achieving the former, while giving other statutory duties much less prominence.<sup>12</sup> The logic seemed obvious: competition equals lower prices, which benefits consumers. Regulators could therefore essentially operate according to a single objective – competition – that carried with it clear technical criteria against which regulatory intervention could be planned and justified.

There is no doubt that, for a long time, this logic held. But it could not last forever. Lowering prices and protecting consumers were not synonymous but simply temporarily aligned. Eventually, they would move out of alignment.

### **The approach unravels**

This strategy was a classic example of reductionism: dealing with problems by breaking them down into more manageable chunks. Reductionism is a very powerful way of dealing with problems that are too hard for us to understand directly. It achieves understanding by first breaking the problem down into smaller parts which can then be analysed and understood in detail. It is presumed that reassembling these parts into the whole is not problematic.

But this strategy is unsustainable for two reasons. The first relates to external factors. Technological change has not relented over the last two decades. In fact, the changes that spelled the end of the national monopolies in telecommunications really only marked the beginning of a long wave of innovation whose ultimate impact could potentially prove as disruptive as electrification was in an earlier era. The pace of change makes life very difficult for companies, who find their best laid plans undermined by the unpredictability both of technological developments (such as the emergence of WiFi) and in their application (such as the unexpected popularity of text messaging, originally intended as a way of sending customers billing information). But the same

applies to regulators. Heraclitus' adage that 'you can never step in the same river twice' could be a maxim for the difficulty regulators face in an incredibly fluid environment, where any in-depth technical assessment of a regulatory issue is likely to be out-of-date the moment it appears – a static snapshot of a dynamic world. What looks like excessive profits at one moment may with hindsight seem like a legitimate reward for risky investment. But surely flexibility carries its own problems: if regulators are continually changing their approach how can they provide the stability which companies and investors need?

As ever, the most significant implications of technology are not by and large contained in the whizz-bang gadgets at the leading edge, but in the ways in which new innovations combine with existing goods and services to create radically new offers and undermine existing demarcations between sectors. Just as the integration of national stock market trading systems and a global communications infrastructure created the conditions for the rapid growth of international financial markets, so too are new technologies causing the convergence of telecommunications and financial services, making it possible for users to access their bank accounts via mobile phones, or to pay for car insurance by the mile through black boxes in their cars linked to global positioning satellites. This demands new forms of regulatory coordination, and creates new categories of regulatory conundrum.

Globalisation, too, continues to disrupt national regulatory regimes. Global interdependence can take many forms. Sometimes it is literally physical connectedness. Over the coming decades the UK will become increasingly reliant on gas supplies from overseas. In this context, security of supply will be as much to do with high diplomacy and geopolitics as it is investment in domestic infrastructure. In other sectors, interdependence is rather more intangible. The '1992' project to create a Single European Market harmonised rules and standards for all kinds of goods and services traded within the European Union. But while the pace of integration has slowed a little from its peak in the early 1990s,

sectoral harmonisation has continued to spread from one sector to the next. To the already relatively Europeanised sectors of telecommunications, air transport and environmental regulation, we will increasingly need, over the next few years, to add financial services and energy. Creating the right kinds of ‘federal’ structures to balance European coordination with scope for tailoring and innovation in the design of national regimes was a major challenge identified by almost everyone we spoke to, regulators and regulated alike. This is particularly true in the financial services sector due to the implementation of the Financial Services Action Plan: ‘We’ve simply got to get the European fix right’, said one executive we met.<sup>13</sup>

But the second, and arguably more important point, is that the reductionist approach of the regulatory state suppressed rather than managed complexity. It could temporarily delay but not prevent the emergence of problems with which it could not deal. It contained, in other words, the seeds of its own destruction.

### **Messes and difficulties**

Before we explain why this is the case, let us return to the concept of the regulatory ‘mess’. The reductionist approach succeeds by excluding this category of problem, and concentrating on a different category which we call regulatory ‘difficulties’.<sup>14</sup> Problems referred to as difficulties are characterised by a reasonable degree of certainty. There is agreement on what the problem is, what the goal of any intervention should be, and what the solution might look like. That doesn’t mean that difficulties are easily solved, but that they are at least ‘bounded’ in terms of the time, resources and expertise needed to solve them. If you work hard enough and long enough you will find a solution – and you will know when you have finished. As a result, these problems lend themselves to the kind of mechanistic thinking and independent technical expertise associated with modern regulation.

Regulatory messes, on the other hand, are characterised by uncertainty. There is little agreement about what exactly is wrong;

there may not even be agreement that anything is wrong. As a result, the appropriate goal for any intervention is highly contested and there is no prior knowledge of what a solution might look like. Above all, because of the existence of multiple, equally valid perspectives and the uncertainty and disagreement, messes are ‘unbounded’ in terms of time, resources and expertise needed to solve them. There are no easy or technical solutions. Indeed, messes are sometimes referred to as ‘wicked problems’, because they are never really solved in the conventional sense.

Much of the routine, day-to-day work of those involved in regulation continues to involve regulatory difficulties: routine problems that have a technical solution. Our argument is not that these problems are going to go away, but that messes are becoming more common, more visible and more pressing for eight interrelated reasons.

### **Reason 1: the success of the regulatory state**

The first is that the regulatory state has been very successful in terms of its original purpose. Enormous productivity improvements have been possible. Prices have been kept low, and in a number of sectors the introduction of effective competition has made regulatory withdrawal feasible. But this success has bred enhanced expectations of what regulation can achieve. In almost every regulated sector, the formal (and *de facto*) regulatory objectives have increased over the last two decades. Not only that, but the character of these objectives has also changed, with social and environmental goals becoming increasingly prominent. In energy, for example, security of supply and addressing fuel poverty now merit equal attention alongside traditional concerns with promoting competition. Albert O Hirschman has argued that insatiability is a basic characteristic of the human condition, and quotes Kant in defence of this position: ‘Give a man everything he desires and yet at this very moment he will feel that this *everything* is not *everything*’.<sup>15</sup>

This resonated with many of the people we spoke to involved in

regulation. A regulatory official explained that politically ‘it is very difficult for regulators to “satisfice”’ because there is always more that could be done on a particular problem. Regulators have tried to respond to these enhanced expectations – one example is Ofgem’s innovative Information and Incentives Project (IIP), which grew out of a recognition that energy customers valued quality of service as well as price and that it was important to balance incentives for increased cost efficiency with incentives for improved service quality (see box 2.1).

**Box 2.1 The information and incentives project**

The Information and Incentives Project (IIP) was developed in 2000 to tackle weaknesses identified in the existing price regulation framework for electricity distribution and achieve a clearer balance between reducing costs and delivering quality of service, as well as placing greater emphasis on continuing performance rather than periodic price reviews.

IIP began by focusing on improving the quality of information supplied to Ofgem about the quality of service provided by electricity distribution companies to their customers, and developing new reporting arrangements. Once the improved information flows were in place, Ofgem was able to design incentive arrangements around these, linking financial payments to changes in quality of service. These financial payments have the effect of rewarding companies for delivering the appropriate quality of service and penalising those that fail to do so.

IIP provides certainty to companies about the quality that they are expected to deliver, and provides the possibility of gaining financial rewards for out-performing their targets. Customers benefit from the stronger incentives placed on companies to deliver service quality.

The problem for regulated firms is that the goalposts seem to keep moving. No sooner does one regulatory issue appear to have been

dealt with than a new one has appeared – an additional source of uncertainty in an already uncertain world. One executive described feeling trapped in a vicious circle, where his firm's cooperation contributed to the success of regulation, which in turn simply fed demand for more regulation – a process he described as having 'no brakes'.

### **Reason 2: market failure is not a technical assessment**

This also highlights another underlying weakness in the regulatory state paradigm. One of its central tenets is that the purpose of regulation is to correct market failure. Implicit in this is the notion that market failure is an objective fact, which can be evaluated against technical criteria. But the experience of the last 20 years suggests that market failure is a deeply contested term, and while it may have a technical economic definition, different stakeholders adopt fundamentally different perspectives on what constitutes failure according to their values and assumptions about how markets work and what they should and should not be expected to achieve. To provide just a few examples:

- The government's Stakeholder Pension policy reflects a belief that the market should be able to provide long-term savings products that are suitable even for those on low incomes, and that a one per cent price cap is a legitimate way of ensuring that stakeholder pensions are accessible to these groups. The insurance industry, by contrast, believes that the market cannot be expected to provide savings products for such a large group, and now believes very strongly that the one per cent price cap is a completely unrealistic reflection of the cost of bringing such a product to market.
- Ofcom and the Competition Commission believe that mobile phone operators are exploiting their market power in the charges they levy on calls to mobile networks that originate from other networks, and have

demanded that these be significantly reduced over the coming years. The mobile operators by contrast believe: first, that the mobile market is highly competitive so such regulation is unnecessary; second, that these charges are a proportionate reward for the risk that operators have incurred through their investments in infrastructure and operating licenses; and third, that the charges are fair given the advantages that fixed line operators (particularly BT) have over mobile operators.<sup>16</sup>

- In the long term, energy companies and to some extent Ofgem believe that fuel poverty is best tackled through the tax and benefits system. The regulatory regime can assist in the achievement of this goal, particularly by promoting competition and so ensuring that prices remain low, but should not be expected to do much more.
- In the long term, energy companies believe that fuel poverty is best tackled through the tax and benefits system. Ofgem considers that a number of factors contribute to fuel poverty, including incomes, housing stock and energy prices. The regulatory regime must also assist in alleviating fuel poverty, reflecting Ofgem's duty to have regard for the interests of consumers on low incomes, but the tax and benefits system must also make a significant contribution to the achievement of this goal. By contrast, it is clear that many lobby groups believe that the regulator and firms should be expected to play a much more active role in reducing fuel poverty, and government itself clearly favours regulation rather than the tax and benefits as a means to that end.

Our aim here is not to contest whether or not these are forms of market failure: a convincing case can and has been made for

all of them. But what these examples illustrate is that what constitutes market failure may have less to do with the properties of a particular market and much more to do with the dominance at any one moment in time of a particular set of ideas and received wisdoms.<sup>17</sup> This may help us to explain why, rather than leading to regulatory withdrawal, the success of regulatory regimes has led to the addition of new and different regulatory objectives: it reflects the changing ‘terms of trade’ between competing accounts of what regulation in a particular sector should be expected to achieve. Paradoxically, in other words, it is not so much that new market failures have appeared which justify new regulation as that new regulation has appeared which defines new market failures. If we want to understand this process, and how it is likely to change over the coming decades, a paradigm that clings to a notion of market failure as a technical assessment will not do.

### **Reason 3: the myopia of the old paradigm**

The success of the regulatory state in dealing with the kinds of market failure it initially prioritised – such as exploitation of market power – were due to its deliberate marginalisation of longer-term problems. For example, one way that cost efficiencies were achieved was by ‘asset sweating’. Because the publicly owned industries had tended to over-invest in infrastructure the strategy worked well initially – but it was a strictly time-limited offer. Low prices came at a price, and that price was under-investment in infrastructure. Old habits die hard, however, and regulatory regimes have not evolved strategies for promoting long-term investment in infrastructure as easily as they did those for short-term efficiency improvements.<sup>18</sup>

This is particularly an issue in the energy sector, as acknowledged in the recent Energy Review, because it is not simply that old infrastructure has to be replaced but that a substantial shift in the energy resource base of the economy has to take place from fossil fuels to low carbon alternatives if the impact of global climate

change is to be mitigated. The Energy White Paper recognised the need for greater investment in the future to respond to these new challenges. However, similar problems also exist in water, transport and telecommunications, and in a rather different way in financial services, where the failure to create a regulatory, policy and commercial environment conducive to long-term saving has contributed to a growing 'savings gap' and the potential 'pension timebomb' that a higher ratio of retired persons to people of working age might create. The long-term benefits of narrowing this gap through, for example, a process of consumer education and cultural change would entail a massive short-term cost.

Part of the reason for this failure is that the regulatory state sought to treat individuals' preferences as given – this was another way of simplifying complexity. But these preferences are neither given nor fixed; instead they are shaped and reshaped by all kinds of factors, including the salience of particular events: the average New York City electricity consumer is likely to put a higher priority on security of supply *after* the blackouts.

A long-term time scale is a common characteristic that sets messes apart from difficulties: they are 'long-fuse, big bang' problems, that can be taking shape just below the surface without being noticed and then suddenly unleash extraordinary disruptive power. Yet regulation has historically tended to operate reactively, with new arrangements introduced only when the older ones are found to have failed in some way – and, as they did after the blackout, individual preferences shift to legitimise such a shift. With many regulatory messes indisputable evidence of the failure of the old regime will not necessarily be uncovered until the costs of rectifying it have become very onerous. There is also a danger that regulatory regimes swing wildly from one crisis to the next, without taking the necessary long-term view. One regulatory official in the energy sector argued that for all the talk of balancing multiple objectives, a single major interruption of supply would be all that was required to reduce regulation to the single objective of avoiding a repeat failure.

### **Reason 4: the swing to the public**

Importantly, the political and regulatory environment is itself crucial in shaping preferences. Albert O Hirschman has argued that modern societies oscillate between intense public concern and concentration on private goals.<sup>19</sup> This oscillation is caused by disappointment: people having too much of a good thing, and seeking an alternative source of satisfaction. Hirschman's insight helps us to make sense of the shift from the Keynesian welfare state to the regulatory state. After 30 years during which collective (public) welfare goals were prioritised, the regulatory state signalled a shift towards the private interests of individuals as consumers – hence the importance of widening choice and ensuring low prices.

There is mounting evidence, however, that we are beginning to see a shift back towards broader public goals. Many of these invoke 'citizens' alongside customers as the intended beneficiaries of regulatory intervention. For example, the deliberations over the Communications Bill were dominated by arguments about whether citizens or consumers should take precedence in Ofcom's regulatory approach; the final compromise was that it should balance both, and its lexicon now includes the notion of the 'citizen–consumer'.<sup>20</sup>

Many also revolve around the management of risk: mitigating the potential impact of climate change by switching to low-carbon energy sources; encouraging individuals to provide for their financial security in old age; protecting vulnerable users of mobile phones from exploitation by unscrupulous providers of services; shielding the public from potential harm caused by biotechnologies such as genetically modified foods; and so on. In all of these cases, the state is not merely a neutral arbiter but an active player seeking to mobilise people's values in a given direction.

The regulatory state paradigm emphasised the private<sup>21</sup> values of economic efficiency, depicted individuals as consumers, and largely saw preferences as given.

This notion of public goals, based on an image of the individual

as citizen, whose preferences are capable of being shaped by the political and regulatory environment, therefore represents a serious challenge to this model of how regulation should work.

**Reason 5: real problems do not come neatly packaged up**

The reductionist approach that underpins the regulatory state relied on being able to simplify problems into manageable chunks, without losing anything fundamental in the process. In a way, the proliferation of regulatory agencies to cover all manner of activities and sectors reflects a belief that problems are best dealt with by breaking them down, and assigning responsibility for tackling them to specialised agencies.

But in real life, problems do not come neatly packaged up, as the case of Eaglesham Moor demonstrates (see box 2.2).

***Box 2.2 When regulatory objectives collide: the story of Eaglesham Moor***

The story of Eaglesham Moor is emblematic of what happens when regulatory objectives collide. The result is not just that firms end up spending a lot more time and resources satisfying different regulatory objectives. It is also that somewhere, somehow, a balance has to be struck between them.

The Whitelee Forest is a windswept area on the upper reaches of Eaglesham Moor, ten miles south-west of Glasgow. To ScottishPower it seemed the perfect location for building Europe's largest wind farm – undeveloped, located near a major conurbation to minimise transmission problems and very, very windy. Yet Eaglesham Moor proved to be a serious regulatory headache. The decision to build the wind farm was driven by the government's Renewables Obligation, which requires electricity suppliers to supply a portion of their sales from renewable energy sources. The Renewables Obligation, which reflects the UK's commitment to achieve reductions in CO<sub>2</sub> emissions under the international agreement signed at Kyoto, is administered by Ofgem.

But before the wind farm could be built, planning consent was required of the Scottish Executive and no less than three different local authorities were statutory consultees. Careful consultation with the local communities and with the Royal Society for the Protection of Birds over EU-protected bird habitats, ensured that this aspect of the process went smoothly, but the owners of Glasgow Airport, BAA plc, objected on the grounds that the turbines would be seen by the airport radar. ScottishPower worked with BAA's supplier, NATS, and funded a technical upgrade to the radar similar to that used overseas, but at the time of writing, BAA will not withdraw its objection until the upgrade has been proven to work in the UK and has been certified by the Civil Aviation Authority, the air safety regulator.

Each party is following its own regulatory rules and has legitimate interests at stake, but the outcome is further delay, additional costs and one set of regulatory requirements effectively frustrating the speedy implementation of government policy in another sector.

In cases like this, the problem cannot be solved by going into ever greater detail, or adding new layers of specialist expertise. That is because a central feature of the problem is the very fact that there exist multiple, competing perspectives on the problem. It is difficult to incorporate this diversity into a linear rational model of decision-making, based on the existence of an objective truth, and is one of the reasons why such problems remain so intractable. As Schön and Rein argue:

*there is no possibility of falsifying a frame; no data can be produced that would conclusively disconfirm it in the eyes of all qualified objective observers. The reason for this is that if objective means frame-neutral, there are no objective observers. There is no way of perceiving and making sense of social reality except through a frame, for the very task of making sense of complex, information rich*

*situations requires an operation of selectivity and organisation, which is what 'framing' means.<sup>22</sup>*

The rationale for the regulatory state was that the value of technical expertise wielded by an empowered independent regulator was that it could be neutral and efficient in a way that political institutions never could be. But any analysis based on a single perspective or framework is loaded and never neutral. It will always be biased towards one particular way of looking at the world. In the environmental sphere, for example, there is a sense that environmental objectives need to be argued in economic terms if they are to have any purchase in the Cabinet Office and Treasury. An expert with experience of a number of sectors agreed:

*There is no single version of the truth, especially not where there are multiple objectives which aren't easily translated into money terms. You can't put a value on eradicating fuel poverty, say, or even on maintaining security of supply.*

It should be clear that in all the complex, long-term, messy problems we have described so far in this report, multiple perspectives will be an essential characteristic. The approach adopted by the regulatory state, which assumes the existence of a single perspective and marginalises others that do not conform to this will run into serious problems. Its legitimacy will start to be questioned by key groups of stakeholders on whom its long-term viability depends. Just as importantly, it will mean that carefully planned interventions produce unexpected and undesirable results.

**Reason 6: treating a complex system like a machine will generate serious unintended consequences**

The regulatory state paradigm tried to deal with complexity, including the existence of multiple perspectives, by suppressing it. But in the long run, the effect of not taking complexity into account was actually to exacerbate it. The first and most obvious

consequence is that many regulatory interventions will generate *unintended consequences*. These arise because the intervention or regulation is based on the presumption that the regulator can understand and predict the results of this intervention. But what if the regulated sector is sufficiently incomprehensible and unpredictable – or *complex* – that this assumption did not carry?

Every regulated sector is littered with stories of regulatory interventions having unintended consequences. This chapter began with the story of 3G, but there are plenty more besides.

In telecoms, OfTel quite legitimately wanted to prevent BT from exploiting its market power. But it sought to do that by regulating to keep its prices low. In so doing, it actually prevented potential competitors from undercutting BT's prices. As a result, BT continued to enjoy enormous market power, and continued to require close regulatory supervision. Perversely, forcing BT to charge *more* might have been more effective as a regulatory strategy in the long run than forcing them to charge less.<sup>23</sup>

In energy, the white paper emphasised the importance of the UK moving towards a low carbon future, and highlighted the important role that three electricity generating technologies, namely nuclear power, renewables and combined heat and power (CHP) could play in helping to achieve this. But following a government policy commitment to reform the electricity market, and an Ofgem investigation which concluded that there were significant competition problems resulting from the operation of the Electricity Pool, Ofgem and DTI established the New Electricity Trading Arrangements (NETA). At one level, this was very successful in promoting competition – but it also had the effect of threatening the survival of the nuclear and CHP industries (nuclear company British Energy had to be bailed out by a multimillion pound government loan) and, at least in the short term, reduced the viability of renewables.

In financial services, regulations require life insurance companies' with-profit funds to be able to demonstrate adequate resources to cover future obligations. In the third year of

continuing declines in the UK stock market many funds found themselves in the position of having to sell equities in order to maintain cover – but by selling equities they drove the market down further thereby exacerbating the problem.

Sometimes unintended consequences result from cause and effect not being closely related in time or space. Changes in one place multiply through a series of feedback loops to have a dramatic impact somewhere else. One example of this phenomenon is the rise of the so-called ‘compensation culture’, which originated in the Access to Justice reforms of legal aid but has had potentially crucial regulatory consequences for the insurance industry (see box 2.3).

***Box 2.3 When good ideas go wrong: access to justice and the ‘compensation culture’***

When three dozen British people burnt by McDonald’s tea and coffee lost their claim for damages against the firm, it was hailed as evidence that Britain was stopping its inexorable slide towards an American-style ‘compensation culture’ in which personal responsibility is out and permanent litigation is in. But was it? Some argue that the compensation culture is just a media fabrication, but the Institute of Actuaries claims that it’s costing £10 billion a year, or one per cent of GDP – and rising.<sup>24</sup> And it is policy-holders that end up paying through higher premiums.

For our purposes the compensation culture is a great illustration of unintended consequences: when good ideas go wrong. The Access to Justice reforms introduced in April 2000 were designed to put the legal aid system on a more sustainable financial footing. One way of achieving this was to end legal aid for those claiming compensation after an accident, and encourage the use of alternative provisions – in particular, greater reliance on conditional fee or ‘no win, no fee’ arrangements.

But by giving a sudden and massive boost to personal injury

lawyers, this unleashed a new market dynamic: specialist practices flourished, combining aggressive competition for market share through high-profile marketing campaigns and fee structures that effectively allowed them to cover themselves against lost income from unsuccessful cases. This in turn, meant that a large proportion of individual awards were actually swallowed up in legal fees. With claims growing by 15 per cent a year, demand stoked up in part by advertising, ordinary insurance policy-holders were left to pick up the tab – particularly problematic in the case of something like Employers' Liability Insurance, where excessive premiums impair enterprise or worse, drive jobs into the insecurity of subcontracting and the black economy.

Sometimes these unintended consequences can be rectified. In the case of with-profit funds, the Financial Services Authority (FSA) took action to grant certain stronger firms waivers over the rule on capital requirements to prevent further damage to companies and further market depression from unnecessary sales of equities. But often, attempts to correct the problem simply shift it elsewhere, and rarely address the problem directly. When the harmful effects on human health of organophosphate sheep dip became known, the government introduced new regulations to encourage farmers to switch to an alternative mix. But it emerged that the alternative version was highly damaging to invertebrate and fish populations in rivers. A human health problem had become an environmental problem – but the basic issue, of how best to protect livestock from pests, remained unresolved.

The introduction and frequent failure of these 'patches' to earlier regulations in an attempt to close a loophole or correct an unintended consequence is familiar from many sectors. Each iteration of new regulation and correction adds to the complexity faced by the regulated companies. Firms respond by creating bigger compliance teams ('which grow like amoebas, popping up one,

four, eight', as one financial services executive put it) and make a name for themselves through their ability to master the latest utterings from the regulator. As rules become more and more detailed, the potential increases both for 'honest perplexity' – simply not understanding them – and 'creative compliance' – deliberately adopting a formalistic interpretation of the rule, to comply with its letter but not its spirit in order to gain some slight competitive advantage. The regulator, in turn, responds with a new patch, in an apparently unstoppable feedback loop towards ever greater complexity, and cost.

Given the complexity of the real world, mistakes and unintended consequences are inevitable. But if we are to learn to deal with that, we need a regulatory approach that acknowledges as much, not one that assumes it away with a wave of its reductionist wand.

### **Reason 7: command-and-control is counterproductive in the long-run**

An important set of unintended consequences originate in the dynamic that a command-and-control model of regulation establishes between regulator and regulated. It is very easy to make command-and-control into a straw man, making out it is something that it is not in order to argue against it. In practice, most regulatory systems, including those that have emerged under the regulatory state, are much more nuanced than the classic model of command-and-control would suggest. Yet these myths still matter. Command-and-control is a mindset as much as it is a practice. In the regulatory state, the setting of rules, monitoring of compliance and modification of behaviour through enforcement powers remains most people's intuitive understanding of what regulation looks and feels like, even if in practice the range of strategies has become much more diverse.

There are a number of reasons to suppose that command-and-control is ill-suited to changing regulatory demands. First, command-and-control is designed to induce stability through homogeneity rather than diversity in terms of responses from firms

because it formally or informally specifies how standards are to be achieved. Around each price review Ofwat, for example, approves an itemised list of investment projects that water companies are planning to undertake to determine whether they meet the necessary criteria. This kind of approach may be fine when well-entrenched behaviours need to be disrupted. But once the overall direction of travel has been set, it is important to maximise the potential for innovation, experimentation and learning what works – command-and-control restricts that.

Second, command-and-control tries to accommodate complexity at too high a level. This leads to prescriptions that are poorly tailored to the circumstances of individual firms. It is also cumbersome, since its legitimacy depends on defining a single rule or standard to cover all eventualities, with little flexibility for changing circumstances, despite the fast pace of change in many of the industries in which it is applied. Adaptation typically serves to increase complexity because it tends to take the form of adding to the thicket of rules, making them more detailed in order to close loopholes, or introducing new exceptions or extensions.

But third, and most crucially, command-and-control is counter-productive in the long run because it rests on a form of institutional authority that is increasingly under threat. Command-and-control works against the grain of the individualism which characterises modern societies, in which the values of individual autonomy and self-determination are highly prized. As Tom Bentley argues, it assumes

*a directive model of institutional authority in which the priorities, values and knowledge held at the centre of an institution or community will shape and control the behaviour of those who make up the wider system. But this assumption does not carry in societies where active consent is needed to achieve most kinds of public good, and where people's freedom of choice and action is often paramount as a cultural and political value.<sup>25</sup>*

When it comes to regulation, what this means is that command-and-control antagonises people, and panders to their worst instincts not their best. To characterise business people as self-interested profit-maximising machines may be useful for developing elegant theory but as Ayres and Braithwaite argue it is far too simplistic as a model of the real world. People in business (as elsewhere) are complex bundles of emotions, sometimes self-interested, other times public-spirited, sometimes looking to make a profit, other times looking to do the right thing. Firms have a number of different roles and instincts with respect to regulation. A host of scholarship supports Braithwaite's insight that command-and-control can undermine their better instincts: 'overly legalistic regulation can be ineffective because its very legalism dissipates voluntary responsibility – the will to comply with reasonable regulatory objectives'.<sup>26</sup>

Our research confirmed this view. One telecoms executive angrily defended the industry's record on policing social and environmental issues, and rejected the need for outside interference: 'This is absolutely natural for our business. We don't need Ofcom to tell us to do this.' Command-and-control was blamed for creating a compliance culture which reinforces bureaucratic imperatives to risk aversion and 'to go by the book', focusing on ticking boxes to cover one's tracks rather than on actually improving outcomes. We spoke to one insurance executive who was scathing in his attack on the way that command-and-control regulation went hand-in-hand with organisational mediocrity in the private sector: 'It plays to the worst instincts of businesspeople not to be innovative, and to do only what is necessary . . . It is easier to comply than to change the system.'

Command-and-control also encourages a regulatory culture in which everyone assumes everyone else is 'game playing.' RPI-X was designed to be a one-off: a way of giving managers an incentive to make efficiency improvements, in effect by allowing them to keep information about the potential efficiency of the firm hidden. Littlechild himself wrote that 'the one-off nature of the restriction

is precisely what preserves the firm's incentive to be efficient.<sup>27</sup> But the effect of retaining RPI-X over a long period removes that quality, and risks turning regulation into a game of hide-and-seek. In the water industry, for example, companies now routinely use price reviews as an opportunity to play the system, channelling resources into different columns of allowed expenditure to maximise their profits. Unfortunately, this game playing is also a feedback loop, as it reduces the chance of the players trusting each other to 'play fair' next time.

### **Reason 8: without trust, rules descend into detail and creative compliance**

The lack of trust between regulator and regulated also undermines the effectiveness of one of the central tools of the regulatory state paradigm: rules themselves. Although it seems self-evident that regulators have to produce and enforce rules, their use raises a number of significant technical problems. As Julia Black argues, these can be summarised under three headings: inclusiveness, indeterminacy and interpretation.

*Inclusiveness* refers to the fact that rules are generalisations and in formulating them assumptions have to be made about what is relevant, so there is always a danger that a rule will cover too much or too little, particularly when the context in which it operates is subject to frequent change, as many regulated sectors are today.<sup>28</sup> *Indeterminacy* refers to the fact that there will always be a degree of vagueness or ambiguity about when a particular rule applies and when it does not. As Black puts it, 'the limits of human foresight mean that the least vague terms may turn out to be vague when applied to a situation unforeseen when the term was defined'.<sup>29</sup>

The last difficulty with rules, that of *interpretation*, is the most important. 'Only when the individuals or organisations interpreting the rule are empathetic to the goals of the rule-maker can problems with indeterminacy or inclusiveness be overcome.'<sup>30</sup> The problem is that this empathy is hard to come by. People and organisations with different histories, cultures and goals will

interpret rules quite differently because they have a different perspective or interpretative framework. Shared understandings, contexts, assumptions and conventions can be developed – but that requires trust, one thing the regulatory state is not configured to foster. In financial services, for example, we were told that, ‘the FSA does not trust providers to interpret things.’

Without trust, improving the quality of rules is usually taken to mean making their application clearer by specifying in greater detail when they should be applied. But this specificity often dilutes the overall purpose of the rule, encouraging creative compliance with the letter and not the spirit of the law. One of the most powerful illustrations of this comes again from financial services, and the FSA’s detailed rules on the provision of product information to consumers. Although the goal is perfectly reasonable, the result is that to ensure compliance companies produce materials so dense and impenetrable that most consumers would not actually bother to read them.

Here again is a feedback loop. Regulators write rules; companies are opportunistic and literal in how they apply them. Regulators write more rules to try and close the loopholes, but this extra layer of detail only dilutes the original purpose even more. The implications of this descent into detail can be quite extraordinary. As one regulatory official put it: ‘Our licences used to be 70 pages long. Now our licence *modifications* are 70 pages long.’

### **A crisis of complexity**

For these eight interrelated reasons, we believe the current regulatory paradigm is in crisis. We want to emphasise that this is not (yet) a crisis of performance. The financial services sector is not on the brink of imminent collapse. When we turn on the tap, water still runs out of it. It is much more a crisis of understanding. Our mental models about how the system is supposed to work seem less and less to match the reality. The result is growing dissatisfaction and discontent on all sides, with the legitimacy of the current regime increasingly called into question. Regulators are accused of

being self-aggrandising. Government is accused of using regulation to achieve its policy goals by the back door, and pass on the costs. Firms continue to be seen as greedy and evasive for complaining about regulation. We recognise that regulation needs to adapt to keep up with a fast changing world but we don't know how.

At the heart of this confusion lies the growing 'messiness' of regulatory problems, a messiness rooted in the underlying *complexity* of the social and economic systems in which regulation operates. This complexity means that systems cannot be controlled, nor can they be predicted. It is not new; indeed, the regulatory state grew out of a failure of an earlier governing paradigm to respond to it effectively (see Appendix). But the approach that it adopted was not sustainable because it continued to assume that the behaviour of systems *was* predictable and *could* be controlled, albeit by different means – it simply suppressed the features of problems not conducive to technical solutions, and put more and more faith in the knowledge and ingenuity of independent experts. In the long run, however, learning to manage complexity does not mean just thinking smarter but thinking differently.

# 3. The Machine Stops

## *Towards a new way of thinking*

*Above her, beneath her, and around her, the Machine hummed eternally; she did not notice the noise, for she had been born with it in her ears.*

EM Forster, *The Machine Stops* (1909)

Whether it's 'driving through change', 'stepping up a gear', or using the right 'levers' and 'mechanisms', the language of policy-making is usually mechanical. And the same goes for regulation. 'Regulators', one agency official said to us, 'are like railway signalboxmen, keeping everything running smoothly and in the right direction but not delivering a service itself as such.' Another interviewee agreed: 'Their job is to keep an appropriate hand on the tiller.'

These mechanical metaphors are comforting. The image they conjure up is of society as a stable machine, with the regulator or policy-maker as its expert operator or mechanic. Machines can of course be very complicated. The computer on which this text was written is made up of millions of tiny components. But however complicated they are, machines are basically predictable. Sometimes the computer behaves in ways that are beyond comprehension, sometimes things go wrong and sometimes not even an expert technician can fix them, but by and large the machine behaves predictably – indeed its success hinges on its predictability.

Policy-making and regulation finds its sources in the idea that economic and social systems are like this computer – complicated, and composed of many parts, but basically predictable. In fact this is axiomatic: modern systems of organisation are founded on a sense of rational purpose or what Weber called ‘rational-legal authority’ with decision-making structures based on merit, technical expertise and faith that ‘the people at the top know best’.<sup>31</sup>

Viewing systems as complicated machines is symptomatic of a way of thinking which makes (often subconsciously) a number of other assumptions, including that:

- organisations, regulated industries, economies and society in general behave *linearly*; that is, the outcomes they generate are directly related to inputs
- as such, their behaviour is generally *predictable*
- because it can be understood, this behaviour can be effectively *controlled* by well designed external interventions
- these external interventions can be planned *rationally* because there is only one valid view of what is going on
- this view is based on the facts established by objective (rational and dispassionate) observation from a single *external* position by policy-makers
- it is therefore appropriate and efficient to separate design (including policy-making) from *implementation*; if the diagnosis is correct, the remedy will be straightforward.

But what if society were nothing like a machine? What if, as we suggested in the last chapter, economic and social systems were not just complicated but *complex*?

### **Reductionist thinking**

In this chapter, we introduce a set of ideas associated with systems thinking which, we believe, offers a more promising way of

thinking about regulation and the problems it is expected to deal with. In chapter 2, we showed how the regulatory state had sought to deal with complexity by suppressing those aspects that were not conducive to technical solutions, and relying on the specialist knowledge of supposedly neutral experts. We argued that this approach was in keeping with a reductionist worldview that seeks to simplify problems by breaking them down into smaller components which can then be analysed and addressed, and which assumes that reassembling the component parts is unproblematic.

This reductionist approach has proved very successful as a way of tackling a particular class of problems which we called ‘difficulties’. But when applied to complex, ‘messy’ problems this approach creates the undesirable side effects we described in chapter 2, including:

- the generation of unintended consequences
- a vicious circle of ever more complex rules and frameworks
- growing mutual distrust and miscomprehension among actors in the regulatory process, and with it, a decline in the legitimacy of the process itself.

Given these drawbacks to reductionist mechanical thinking why does it remain so dominant? There are three main reasons. The first is that most people do not realise that there is an alternative that may serve them better. Reductionism has dominated scientific enquiry since the Enlightenment, and its influence has spread to our understanding of social and organisational life through its influence on economics in the eighteenth and nineteenth centuries and on the scientific management school in the twentieth.

The second reason is that the alternatives are not as well known, having entered into mainstream thinking only in the last 50 years – and are only really now being applied to the domain of human activity. The core ideas have emerged from the so called ‘complexity

sciences' that include cybernetics, systems thinking, network theory, chaos theory and associated ideas.

The third reason is that reductionist thinking provides an attractive narrative about order and control – about the potential for human society to be master of its own destiny – that is difficult for political leaders, and the citizens they lead, to let go of. But as we argue at the end of this chapter, and pursue more fully in the concluding chapter of this report, letting go is precisely what is required.

### **Systems thinking**

Systems thinking offers a more promising approach to understanding and managing complexity than reductionism, because it adopts a different strategy for simplifying problems. Rather than breaking problems down into smaller components which can then be analysed, it seeks to simplify situations by going up a level of abstraction. This involves discarding some of the detail, but it means that the connections between the components of the problem are maintained, whereas in a reductionist approach they are broken. This is a key advantage when, as we have argued, a key characteristic of regulatory systems is that they are made up of many richly interconnected parts, and it is the interactions between these parts that make their behaviour difficult to predict in advance.

Let us begin by outlining some of the key ideas associated with systems thinking. It is worth emphasising that systems thinking is not a competitor to reductionist thinking; it is actually complementary, because it provides a framework in which more detailed analyses can be made.

### **Systems**

The idea that the essential features of an entity are embedded not just in its components but in the interactions between them is the essential meaning of the concept of a 'system': a set of elements which, when joined together, form a whole whose properties make

it more than the sum of its parts. In systems terms, these are known as ‘emergent properties’, since they are not features of the individual components of a system but only emerge when these components are fitted together.

### **Complexity**

The concept of a system captures the idea that the interactions between different elements are as crucial to understanding the whole as the elements themselves. But there are many systems in which the interactions between different elements are predictable and understandable: again, this computer is one of them. We take ‘complexity’ to describe a situation in which the interactions between different elements are to a greater or lesser degree *un*predictable and incomprehensible. In this sense, complexity is both an empirical condition (the world can become more complex) and a perceptual condition (the world can seem more complex, because we cannot understand or control it).

On this view, complexity would be increased:

- by increasing or facilitating interaction between agents. This explains why complexity is so often used as a convenient shorthand for the effects of globalisation (which increases the interactions between actors across borders) and the information revolution (which has radically reduced the cost, time and difficulty of communicating with others)<sup>32</sup>
- by fragmenting the frameworks through which these interactions and communications are mediated and interpreted. This is precisely what is happening as a result of the increasing social and cultural diversity, growing individualism and ever more differentiated tasks and specialised forms of knowledge that characterise modern societies
- by increasing the autonomy of the agents within a system to interpret and respond to change in their own

way. The decline of deference and weakening of traditional forms and institutions of social authority and control that has taken place in recent decades has directly contributed to this

- by intensifying the interdependence between agents. Growing personal autonomy to make decisions is circumscribed by mounting recognition that the sphere of human action is actually shrinking, and that actions in one part of the world can have unforeseen knock-on effects thousands of miles away. The story of the butterfly flapping its wings in the Amazon causing a tornado in Texas captured this phenomenon in the natural world; the image of suicidal terrorists piloting passenger aircraft into the World Trade Centre captured it for the human world.

### **Feedback**

Complexity resides in the interactions between different elements within a system. By maintaining the connections between different elements of a system, systems thinking is able to build a better picture of how the interactions between them can produce unexpected cumulative results. Instead of assuming a simple linear relationship between cause and effect (A causes B causes C) as reductionism does, it becomes possible to see how in most systems every cause has multiple effects, which in turn are the cause of a series of further effects. As such, every cause is also an effect, and any change is the result of several prior causes and may itself contribute to a series of further changes. In systems thinking, these patterns of cause and effect are described as *feedback loops*.

There are two categories of feedback loops. Where the effect of feedback is to amplify or reinforce the initial change, they are described as *positive* feedback loops. Positive in this sense does not mean good or desirable: in chapter 2 we heard about the positive feedback loop that led regulators to produce ever more detailed rules in an attempt to cope with complexity, but in doing so

actually served to aggravate the problem. In everyday language we would call this a ‘vicious circle’, while one whose impact was more desirable we would call a ‘virtuous circle’. Both describe situations where small changes become big by going through multiple cycles of cause and effect. Where the effect of feedback is to counteract or balance out the initial change, they are described as *negative* feedback loops. These are the ‘brakes’ that stop positive feedback loops getting completely out of hand. To continue with the above example, there is a negative feedback loop in the shape of the danger that firms will not invest if regulation becomes too onerous, which in turn will create problems for government and force it to rethink. In this example, as in many systems, positive and negative feedback loops exist side by side, constantly counteracting each other.

Feedback loops also help to illustrate how cause and effect often are not closely related in space nor necessarily in time: many feedback loops have *delays* at key points in their operation. A simple illustration of this is trying to regulate the temperature of a shower. Because there is a delay between making an adjustment to the tap and sensing the resulting difference, we try to make a correction before an earlier change has taken effect with the result that the temperature swings between too hot and too cold. An example of how this plays out in regulatory systems is the difficulty regulators of network industries have in determining whether high profits following major investment are monopoly rents, which should be regulated, or a legitimate reward for risk-taking and innovation, which should be tolerated.<sup>33</sup>

### **Complex adaptive systems**

An idea borrowed from the study of natural ecological systems is that of the *complex adaptive system*. The notion of adaptive is that as well as being complex (made up of many interacting parts, the relationships between which can only be imperfectly understood) and having emergent properties, many systems also have a strong capacity to withstand changes in their external environment. This

enables them to cope with change while protecting some core attribute or characteristic crucial to its integrity. An obvious example of this is the human body, which is able to regulate its body temperature within a very narrow range while tolerating wide variation in external temperature. But this adaptation is also visible in the domain of organisational life: schools continue to exist in a form recognisable from their origins more than a 100 years ago, despite enormous changes in the environment around them. Despite enormous technological and commercial advances, many of today's most successful firms would seem familiar to a Henry Ford or Frederick Taylor. This resilience is rooted in the fact that most systems are themselves made up of smaller subsystems that have an adaptive capacity of their own: a team is part of a division is part of a firm is part of an industry is part of an economy, and so on.

This capacity to maintain core characteristics in the face of significant change is the result of a system being both open and closed: open to change in its external environment, but closed about how it interprets those changes and how it adapts to them. Crucially, the adaptive response will depend on the system's own criteria of what is and is not important to its overall integrity. The problem, from the point of view of anyone trying to change a system's behaviour, is that these criteria are quite difficult to predict in advance and so the precise adaptive response that a system will take is generally unpredictable. In a large organisation, for example, what superficially appear to be very radical changes – in formal procedures, staffing levels, or chains of command – often mask the conservation of informal processes and ways of working, core values, cultures or mindsets and, above all, an understanding of the 'right way to do things' internalised by the individuals within the institution that is much harder to influence.

In other words, systems reproduce themselves over time according to their own internal logic, a process that has been termed 'autopoiesis'.<sup>34</sup> The frustration of those trying to introduce change management programmes from the top of organisations, and the frustration of regulators that firms seem so reluctant to

comply with regulation, reflects a common experience of trying to change the behaviour of a system from the outside, without recognising the powerful internal, self-organising processes that will resist any attempt to change its essential features. Not only that, but attempts to do so by force or coercion will often reduce the capacity of the system to fulfil its core functions. Elsewhere Chapman has shown how the imposition of centralised targets and top-down controls in the NHS has in many respects reduced rather than improved its ability to serve patients.<sup>35</sup>

### **Non-linearity**

The combination of complexity, feedback and adaptive responses means that the behaviour of complex adaptive systems is unpredictable *in principle*. Cause and effect in complex adaptive systems is therefore said to be ‘non-linear’. There is no direct relationship between the size of the initial change and its final outcome. This clearly has crucial implications for the way that we seek to manage them.

### **Implications for regulation**

Try a simple thought experiment: compare the task of throwing a stone with throwing a live bird. The trajectory of a stone can be calculated quite precisely using Newton’s laws of gravity and motion and it is possible to ensure that the stone reaches a specified destination using this approach. However it is not possible to predict the outcome of throwing the live bird in the same way, even though the bird’s motion through the air is ultimately governed by the same laws of physics.

The difference lies in the fact that the bird is a complex adaptive system, the stone is a mechanical system – the difference lies in their *internal organisation*, not in their ability to obey or defy the laws of physics. Some commentators have pointed out it is possible to achieve a greater degree of control over the bird by tying its wings, weighting it with a rock, and then throwing it. This will make its trajectory (nearly) as predictable as that of the stone – but

in the process the capability of the bird system has been completely destroyed. From a systems perspective this is a little like what regulators do when they rely on command-and-control to force change on an organisation. A more successful strategy for getting a bird to a specified end-point might involve placing a bird table with its favourite food at the desired destination, harnessing its own self-organising processes to achieve the desired goal.

It should be emphasised that by introducing an alternative way of thinking about people, organisations and sectors of the economy we are not claiming that these *are* complex adaptive systems, any more than those using mechanistic thinking would claim that they *are* machines. Our thesis is that using a complex adaptive system as a metaphor and style of thinking will enable all those involved in regulation to start to develop ways of thinking and acting that take account of complexity, rather than simply seeking to suppress it – which is the main failure of the reductionist, mechanical way of thinking.

For though complex systems are unpredictable, and do not operate through simple cause and effect relationships, this does not mean that they cannot be managed – they can and must. What is required, though, is a re-evaluation of how and to what ends. In particular, our analysis points to four challenges that regulation must address over the coming decade and beyond.

### **Challenge 1. Accept uncertainty**

The central challenge to the reductionism of the regulatory state is accepting that a stable state is impossible. The combination of unpredictability, non-linear behaviour and loss of simple cause-effect relationships means that trying to impose stability or control a complex system by rules and interventions based on a supposition of causal relationships will simply not work. Specifying outputs on the system being regulated will lead to unintended and often undesirable consequences. At present these are then patched with even more detailed rules, creating a positive feedback loop of ever greater organisational and administrative complexity.

Breaking out of this positive feedback loop will only be possible if we can accept the paradox that stability is only possible through embracing perpetual adaptation, not of rules themselves but of the system as a *whole*. That depends on developing three features too often absent from current regulatory regimes:

1. *A more trusting relationship between firms, regulators and governments.* As we argue in chapter 5, the quality of rules lies not within their language but their interpretation. Improving their effectiveness depends on building ‘interpretive communities’<sup>36</sup> in which multiple perspectives and goals can be acknowledged, and the aims of rule-makers can be reconciled with the organisational imperatives of regulated firms.
2. *A ‘learning-by-doing’ approach.* This strategy accepts that the system is unpredictable and so emphasises experimentation with small-scale intervention and evaluation to discover what change results. In chapter 5, we show how regulators might tap into the innovativeness of firms to develop these new approaches on a small scale by allowing them to write their own rules.
3. *Higher tolerance of failure.* In conditions of uncertainty failure is inevitable. The question is how to respond to it, and whether we can get beyond the recriminations, blame-shifting and knee-jerk reactions that are often the typical response. As politically challenging as it is, greater openness to using failure as an opportunity for learning what to do better is essential. As Chapman has argued elsewhere, so long as ‘failure is unacceptable, learning is impossible’.

### **Challenge 2. Prioritise public value**

Each of these features depends on building regulatory systems that prioritise ‘public value’ – a concept we explore in greater detail in

the next chapter. Public value incorporates an economic conception of value but goes much further, incorporating concepts such as trust, legitimacy, equity and fairness that are of crucial importance when the goods or services being described are public and are produced by or through the collective power of the state. It is not a one-dimensional concept but a genuinely multifaceted tool.

Public value could reshape regulation in a number of important ways. First, it provides a framework within which to balance incommensurate goals. By itself it will not solve the regulatory debate, because as we have argued there is no right answer. But given this, it may help to create a shared language in which a more productive process of social and political negotiation can take place. Instead of interminable debates about red tape our aim should be an ongoing conversation about the relative priority of different forms of public value.

Second, public value can help to reshape the process of regulation as well as its ends.

The essence of our argument is that public value potentially constitutes a virtuous circle – a positive feedback loop. Greater trust between regulators and firms should allow firms to meet regulatory objectives in ways that are more aligned with its own strategic interests, resulting in greater buy-in and efficiency. This in turn will improve regulatory performance, and so create public value. But this virtuous circle will not happen spontaneously; it will have to be carefully fostered. In particular, it will need to be underpinned by a new approach to enforcement that prioritises trust, legitimacy and fairness. Failures and mistakes are unfortunate but to some degree inevitable. To some extent they are even desirable, if they serve as an opportunity for learning. But for that to happen, the enforcement framework must be calibrated around the preservation of public value, with those whose actions undermine public value or who do not demonstrate their willingness to make recompense punished most heavily.

### **Challenge 3. Work with the grain of complexity by distributing the regulatory task**

Complex systems are based on some core internal characteristics or values. When presented with changes in their external environment, there is a strong tendency, as we showed in this chapter, for these systems to adapt in ways that preserve and are consistent with these core values. Regulation can work against the grain of this adaptive response, but only at the price of generating unintended consequences and potentially reducing the capacity of the system as a whole.

In the long run, regulation needs to learn to work *with* the grain of this complexity. Rather than seeking to specify particular outputs, effective regulation thus becomes a matter of finding ways to harness the adaptive capacity of actors towards the achievement of shared public goals.

To emphasise the adaptive capacity of firms is to express a point that others understood long ago: to manage complexity regulators must be able to match it.<sup>37</sup> The best way to achieve this is to push the management of complexity further down the system by granting greater autonomy to subunits (eg firms), rather than try to handle it at the centre.

This is essentially a question about coherence in the face of complexity. Traditionally regulation has sought to achieve coherence through bureaucratic integration, most notably through the amalgamation of different regulators to create super-regulators in financial services, communications, energy and other industries. But there are limits to how far this approach can take us, because so much of the complexity resides in the interaction between firms and regulators. No amount of innovation or adaptation in the details of centrally-set rules can overcome that, and often it simply makes it worse.

To manage complexity in the long-term we need to distribute the regulatory task, to maintain coherence by mobilising adaptation across the system, not just at the top of it. In chapter 5, we sketch out a series of strategies for ‘regulating self-regulation’:

steering the self-organising, adaptive responses of firms and sectors towards desirable regulatory outcomes, rather than specifying how they are to be achieved in advance. The regulator's task is then to define the terms on which this autonomy is granted, including shaping the overall direction of travel, specifying boundaries that must not be crossed and so on.

### **Challenge 4. Foster purposeful evolution**

Creating regulatory systems that are better able to handle complexity requires an evolutionary approach. Beyond the principles we sketch out in the next chapters, the precise blueprint or architecture of the new regulatory institutions and arrangements cannot be master-planned in advance; it will develop over time, just as the regulatory state paradigm has taken many years to reach maturity. We cannot expect simply to replace one paradigm with another, since the necessary conditions and cultures will take time to develop – and in some cases may never develop at all.

But just because this paradigm will emerge does not mean it cannot be cultivated and shaped. Indeed, whether or not citizens, firms and regulatory officials can be persuaded to accept the risks and uncertainty that the transition to a new regulatory paradigm implies will depend on whether there are partly developed alternatives of which they can see the potential. As we argue in the final chapter, the central challenge is political, not simply in the sense of what government does but the culture and maturity of our politics itself.

At the beginning of this chapter, we suggested that reductionist thinking provides an attractive narrative about the achievement of order and control through central intervention. In a world that is increasingly complex – unpredictable and incomprehensible – this narrative is hard to resist. Citizens want to be insulated from risk and uncertainty, and politicians are still prepared to contend that they know how. But as we have shown, forms of intervention that rest on traditional sources of authority are rapidly losing their effectiveness, because they are ill-suited to the complexities of the

contemporary scene. We are left with a paradox: 'Control seems more necessary and less feasible than ever before.'<sup>38</sup>

To reconcile this tension, governments need to 'let go'.<sup>39</sup> Letting go is not the same as laissez-faire. Instead, it means sustained investment and innovation in new approaches and methods for regulating that do not rest on governments' capacity to command and control, and actively mobilising the support and legitimacy for this new paradigm to take root. We consider how this might be achieved in the final chapter; first though, we need to revisit what the underlying purpose of regulation ought to be in this new paradigm.

## 4. Ever Increasing Circles

### *Maximising public value in a changing world*

Picking up a thick black marker pen from the table, one executive we interviewed drew two large circles on the whiteboard. The first was three or four times the size of the other. ‘At the moment, this represents the economic regulation we face,’ he said, pointing to the larger of the two, ‘and this is the social. In the future, we’re going to have to get used to it being the other way round.’

Listening to him speak, what was striking was not just how disruptive this shift in the purpose of regulation seemed to be, but how inevitable. Economic regulation may not have been welcome but at least it was stable: it involved familiar, measurable concepts that members of the board understood. Companies knew which battles to fight, how to fight them, and whether they had won or lost. Social regulation was much tougher: it meant dealing in concepts such as social equity whose value didn’t always translate into a straightforward bottom line, and which strayed dangerously close to the fuzzy ground of social responsibility and corporate citizenship. Yet this shift in emphasis seemed unavoidable.

His experience is far from unique. The widening of regulatory remit and the inclusion of a growing range of activities and objectives – what critics dub ‘regulatory creep’ – is a story familiar across sectors and among regulated sectors and firms alike. The point of retelling it is that it seems to contradict two powerful assumptions of the regulatory state paradigm: that regulation is

about achieving stability (by ‘correcting’ market failure) and maximising economic values (such as efficiency).

This points us towards an important set of questions about the underlying purpose of regulation. In particular, is there a different way to understand the purpose of regulation that allows us to understand changes in priorities over time?

Our argument is that there is and that this understanding could help people such as our friend the executive make sense of their experience of regulation and better align their behaviour with the underlying reality of change. This matters because once we accept that adaptation rather than stability must be an inherent property of any successful regulatory system, it becomes possible to envisage new ways in which that could be achieved that do not rest simply on the accumulation of ever greater powers, remits and resources at the centre.

### **Moving goalposts?**

Like any complex adaptive system faced with profound changes in or threats from its external environment, a regulatory system will seek to preserve its integrity in terms of its core functions while permitting potentially significant change and adaptation in its outward appearance.

Understood in this light, the regulatory state was an explicit response to the challenge to the legitimacy and effectiveness of a governing system that external trends and the weight of its own internal contradictions posed. In particular, it sought to protect the governing system by transforming, and in many ways reducing, the role that government itself played in the performance of its core functions. At least to its proponents, the regulatory state was a way of saving government from itself: restoring the legitimacy of collective action, enabling government to do more by doing less (See Appendix).

The central dimension of this shift involved scaling back the state’s governing ambitions for the economy as a whole, and placing a new emphasis on improving the productivity and

performance of particular sectors through privatisation (in the case of the former public utilities) and deregulation (in the case of financial services, for example).

The turn away from control over the commanding heights of the economy through public ownership involved realigning public intervention with the values and vision of a 'popular' capitalism and 'shareholder democracy' in which ordinary people (particularly the affluent working class whose votes so decisively shifted the political terms of trade in favour of the Conservatives after 1979) could own shares.

Privatisation, in the sense of much greater involvement of private actors in delivering what had previously been public goods and services, was an attempt to respond to the rising relative importance of consumerism and individualism, and the values of individual freedom, choice, efficiency, value for money and customer focus that went with them. This reflected a shift away from the more egalitarian and collective concerns and values of the Keynesian welfare state. Managing utilities as private enterprises and subjecting them to regulation was seen as the most reliable way of generating the efficiency improvements that were required. The same impetus drove attempts in the public sector to mimic the private sector through contestability and the creation of specialised Next Steps agencies. And this also implied the individualisation and privatisation of many of the risks that had hitherto been managed collectively. The most striking example of this is the pensions system, which in the 1980s underwent a fundamental shift in emphasis from reliance on the government to the need for self-provision by employers or individuals themselves.

Finally, the delegation of decision-making authority to supposedly neutral, expert agencies was a way of restoring the credibility of decision-making in a system that had been undermined by short-termism, instability and inconsistency of successive governments' 'stop-go' economic policy.

Yet there was no reason to suppose that the adaptive challenge facing regulation would remain stable. As we have argued already in

this pamphlet, a host of new variables now require attention, including:

- *Resurgent interest in collective goods* – it would be a caricature to say that the regulatory state was simply responding to individualist imperatives, since its impact in terms of productivity and overall welfare benefited the population as a whole. Nevertheless, its driving force was a consumer-based individualism and the demands that accompanied it – for share ownership, low prices, and customer choice. What marks the current period out is that these demands (though still salient) now take their place alongside a renewed interest in collective goods of various kinds. Some of the manifestations of this include:
  - widespread concern about the excessive power of large corporations and the increasing prominence of the ‘corporate social responsibility’ agenda, with firms’ behaviour towards the stakeholders and environments affected by their activities under unprecedented scrutiny
  - the rapid growth in public awareness of global environmental issues, beginning with CFCs and the damage to stratospheric ozone in the mid-1980s followed by climate change in the 1990s (culminating in the Kyoto Protocol in 1997)
  - perceptions of a pensions ‘crisis’ and mounting pressure on government to resolve it as current generations near retirement with both greater understanding of the costs of self-provision and rising expectations of what that life stage might involve<sup>40</sup>
  - a desire to achieve social and environmental goals through market regulation rather than or in addition to more direct forms of state intervention

(eg Ofgem has a specific duty to have regard for the interests of consumers in fuel poverty, rather than it being seen simply as a tax and benefits issue).

- *Sustainability* – this renewed interest in collective goods has been accompanied by a growing recognition in many sectors that attempts to force regulatory systems to prioritise short-term goals may seriously impair their capacity to survive in the long term. As a result, a new emphasis on sustainability has emerged in many regulated systems.
  - In the rapidly changing telecommunications sector, this has meant acknowledging the importance of creating the conditions for innovation and investment in new technologies without trying to ‘pick winners’ or tilt the playing field in favour of any one technology.<sup>41</sup>
  - In financial services, this has meant recognising that the demographic transition to an ageing society cannot be left to chance, and that with the end of the long stock market boom, the financial services industry cannot be expected to manage it effectively without the right kinds of coordination, incentives and political vision from government.
  - In energy, this has meant accepting that mitigating the impact of global climate change requires a radical, long-term shift in energy production and consumption from fossil fuels to low-carbon alternatives; and that this in turn means encouraging major investment in new technology and infrastructure for the generation, supply and use of energy.
- *Risk* – one of the most significant developments over the last decade has been the growing centrality of risk within regulatory systems and a diminishing level of

trust in government, experts and other sources of social authority. Changing perceptions of public risk have been the driver of major regulatory reforms in food safety (after BSE), rail (after a series of serious accidents) and financial services (after a number of high-profile scandals including pensions mis-selling and the collapse of major institutions such as BCCI and Barings). All of the above examples, and many others, served to diminish public trust in government and the institutions designed to protect the public. In a number of areas, concerns about the uncertain impact of technological innovation has led to the imposition of regulatory controls, including biotechnology (especially genetically modified foods) and embryology. Finally, the convergence of information and communication technologies and the rise of the internet have produced divergent fears about risk. On the one hand, the undermining of traditional forms of control over content and how it is accessed has fuelled fears of unsuitable material or unscrupulous users. On the other hand, the combination of the growth in electronic surveillance and the increasing sophistication of systems for accumulating, manipulating and exploiting personal data of various kinds has prompted fears about the threat to personal privacy posed by governments and corporations alike.

What we are arguing, in essence, is that regulation exists to civilise capitalism: to manage the social consequences of private enterprise, and to maintain the conditions necessary for it to function within a particular societal context. These conditions include not just, say, the protection against anti-competitive behaviour necessary for markets to flourish, but also the trust in and legitimacy of the forms of economic activity that they involve. It follows that the kind of regulatory intervention required to maintain these

conditions is subject to considerable variation and change, in terms of the emphasis given to different priorities, and of how they are to be achieved.

Is there a framework that could help us to make sense of this new conception of regulatory purpose, and create a common language for different actors involved in regulation to think through its deeper implications?

### **Introducing public value**

One promising avenue is the concept of ‘public value’.<sup>42</sup> The concept of public value is essentially very simple: it is what the public values. Public value starts from the position that public goods and services – including regulation – are an expression of the power of the state to achieve collective goals. The decision about how and to what ends this power is put is inherently political, however much it may masquerade as a neutral, technical exercise. It represents the collective expression of our will as citizens. That makes it different from the individual preferences we express as consumers. People may agree to public policies which are inconsistent with their private choices because we think and act differently as citizens than we do as consumers. Most obviously, we are concerned not just about how we are treated but how others are treated. In markets such feelings of solidarity with fellow consumers are much less common. So when we think about invoking the power of the state, we need a different way of weighing up the value of different courses of action than simply economic value. Yet this is invariably the terms in which regulatory decisions are couched.

Public value is a multidimensional concept that incorporates the conventional sense of economic value but also takes into account a set of deeper social or communitarian values such as fairness and equity, trust and sustainability, which are relevant when state power is invoked. In a regulatory context, the public does not just value cost-effectiveness but also that goods and services are provided in a socially responsible and ethical way, that the effects of regulatory

decisions are not unfair or do not adversely affect disadvantaged groups, that they can trust the enterprises with which they deal, and so on. It is precisely this combination of different preferences that public value sets out to capture.

So a regulatory decision that was efficient and met clear objectives could still be rejected in a public value framework if it was socially iniquitous in its impact. For example, the setting of substantially stricter emissions reductions targets for sulphur dioxide in the 1990s would have benefited the environment and created cleaner air for many but would have wreaked further devastation on the social fabric of the remaining coalmining communities. Or as the example in box 4.1 shows, a regulatory decision that potentially undermined public trust would need to show that the risks of acting were outweighed by the risks of inaction.

**Box 4.1 Pension post and public value**

If you have a pension, you may have got a shock when you opened your annual statement this year. Each year, firms send out a letter telling pension holders how much their pension is worth. Traditionally, the figure given was what people could expect on retirement. This year, the Department for Work and Pensions insisted that a new approach was required. Alarmed by the under-performance of stock market-based investments, and the growing evidence that people were not saving enough to provide for themselves in their old age, it demanded that the figure be given in today's terms, allowing for inflation.

The aim was to promote greater transparency and, hopefully, to shock people into saving more. Reasonable aims, which few could disagree with. But the way that the change was introduced created the appearance of shrinking the value of every pension. Although many companies, such as Norwich Union, sent letters to all their customers explaining the changes, this may have undermined some people's trust in the pensions

system and caused added confusion and inertia about what they should do. From a public value perspective, the question is whether transparency (and the potential additional impetus to save that this might create) outweighed these downsides in terms of trust, confusion and inertia. A further question is then, had maximising public value been the core aim, would there have been ways in which to minimise this trade-off in the way that the change had been planned and introduced?

In this way public value can provide a framework for mediating between different and often incompatible objectives. Although it is theoretically possible for economics to take into account social and environmental factors, in practice it rarely does so on equal terms. In part this is because these factors are much harder to quantify; they are seen to be politically rather than technically determined. Public value does not make the trade-off between social, environmental and economic goals any simpler, but it does make it easier to resist the seduction of believing that such trade-offs can be established analytically or through some process of technical analysis. The balancing of different interests, different goals over the short- and long-term and the fostering of a particular vision of a fair, equitable and sustainable society is an essentially political process and needs to be addressed in an explicitly political fashion. The forms of public value that matter most cannot be determined by government, nor will they remain stable. What is required instead is arguably a never-ending debate about the priority of different aspects of public value.

Perhaps most importantly public value acknowledges that the quality of public goods and services is highly dependent on the trust between the provider and the user of the service. This has parallels in regulation, when we are thinking about how to make the system more adaptive. In a system characterised by low trust there is a tendency to see the only viable source of adaptation as policy or the rules themselves. Firms then just do what they are

required to do, rather than acting in the spirit of the rules. As a result regulation proves ineffective and the only remedy seems to be to tighten rules still further, eroding trust and dissipating the will to genuinely comply still further. Public value is also destroyed when regulators are seen to violate generally agreed notions of fairness. The re-opening of price reviews in the water industry, and the imposition of price caps on mobile termination rates in the mobile phone industry after the spectrum auction are two prominent examples where a regulator has been accused of breaking its implicit contract with firms,<sup>43</sup> leading to deteriorating relations and an increase in the kind of game playing documented in chapter 2. In other words, a failure to prioritise public value often leads to declining regulatory effectiveness.

### **Investing in adaptive potential to manage complexity**

Once it is accepted that a regulatory system must be reshaped around the twin principles of promoting adaptability to handle complexity and maximising public value, then the directions of change become clearer. They include:

- explicitly recognising that complexity involves unpredictability and uncontrollability (as, for example, the FSA has in its rejection of the possibility and desirability of a ‘zero failure’ regime in financial services)<sup>44</sup>
- distributing the regulatory task as widely as possible to manage complexity more widely
- avoiding positive feedback loops that exacerbate complexity through additional administrative burdens, by looking for alternative ways to create coherence that do not rest on bureaucratic adjustments to existing detailed rules.

The central implication of these changes is a radical shift in the relationship between regulators and firms, for it is in these

interactions that the greatest potential for improving the adaptability of the system, and therefore its capacity to handle complexity, resides. The question is whether it is possible to imagine alternative regulatory models that harness the ingenuity that exists within firms while aligning it with the constantly changing quest for new and deeper forms of public value. Can we replace the positive feedback loop of increasingly detailed rules and creative compliance with ever increasing circles of trust, commitment and capacity to handle complexity?

We explore what some of these alternative models might look like in more detail in the next chapter. But their emergence will be an evolutionary not revolutionary process. People will be understandably reluctant to trust or accept new approaches until they can be shown to be at least as effective as the current alternative. So the imperative is to invest now, cultivating new approaches to regulation that can be developed in a systemic fashion over a decade or more, learning what works best in each sector and evolving new ways of working that enable all involved, regulators, firms and consumers, to benefit from innovation in how regulatory objectives are achieved. The overarching principle of these models should be the concept of *regulating self-regulation*.

# 5. Playing the Infinite Game

## *Regulating self-regulation*

Before the Oscar-winning movie *A Beautiful Mind* was released, few people had heard of the mathematician John Nash. But many more had heard of the Prisoner's Dilemma, the textbook illustration of 'game theory' that his work helped to establish. The game goes like this: two prisoners are arrested for a crime and prevented from communicating with each other – should they stay silent or spill the beans? The dilemma is that for both prisoners, confessing is the most logical tactic regardless of what their partner does, but the result is that both are convicted of the more serious offence and spend longer in jail than if both had stayed silent.

Nash's insight was to recognise that the logical equilibrium of both players choosing the best strategy for themselves individually was an outcome less favourable for both than if they had each chosen a worse strategy (provided they could trust their partner to do the same). But the only reason players would trust each other would be if each had an interest in their relationship with the other when this particular game was finished – in other words, if their aim was not to win but to *carry on playing*.

Playing to win versus playing to continue the play is one of the central distinctions that James Carse draws in explaining the difference between 'finite' and 'infinite games'.<sup>45</sup> At first sight, regulation seems as if it ought to be a classic example of what Carse calls a 'finite game': one played within clear rules that do not

change; for which there is a clear beginning and end; and in which there are clear winners and losers. Yet the picture of regulation that has emerged in this pamphlet more closely resembles what Carse calls an ‘infinite game’, in which the rules are constantly changing to fit new contexts, and which has neither a clear end-point nor an easy means of identifying the winners. Above all, regulation is an infinite game because the kind of problems with which it must contend cannot readily be solved and the range of objectives it must accommodate cannot be balanced more than temporarily. As such, players in this game must play *with* the rules, not just within them.

Earlier we argued for a new way of understanding regulation based on complex systems and a new conception of purpose based on promoting adaptability to handle complexity and maximise public value. In this chapter, we argue that this new approach should ultimately be underpinned by a new understanding of regulation as an ‘infinite game’, which has at its heart the creation of a virtuous circle of trust, adaptability and greater public value. Because the rules of an infinite game are always changing there are no winners; the point is to use the winning idea to sustain all the players so that everyone wins and everyone improves.

The institutional expression of this game would be what we call *regulating self-regulation*. Regulating self-regulation provides a way of squaring the circle between harnessing the consent, knowledge and participation of firms and their employees on which effective regulation depends, and the need to steer their behaviour towards the identified goals and priorities of a wider societal whole. It implies combining the best elements of central direction and self-regulation through a system of order that binds regulators and firms together in new, mutually dependent trust relationships.

We outline six strategies through which this approach could be made more concrete. Some are existing or emerging elements of current regulatory practice which we aim simply to place in a wider context. Others remain – for now at least – strictly at the level of theory. But we think that all are emblematic of a distinctly different

approach to handling complexity and maximising public value. While each stands alone, they are not only mutually compatible but mutually reinforcing. The six are:

1. embrace co-production
2. get serious about principles
3. let firms write the rules
4. speak softly but carry big sticks
5. regulate the information commons
6. foster creative destruction.

### **1. Embrace co-production**

Co-production is the new policy buzzword. Don't think about public goods or services as being produced or delivered by the state on behalf of citizens, runs the argument. That implies that citizens are simply the passive recipients of services; in fact their consent and active participation is crucial to the quality of the goods and services they receive. Instead they are best understood as being 'co-produced', citizens and the state working together.<sup>46</sup>

A classic example is the way that secure neighbourhoods depend not just on putting 'bobbies on the beat' but on local residents being prepared to organise neighbourhood watch schemes, report suspicious or criminal behaviour or come forward as witnesses. But examples can be drawn from every sector: there is only so much teachers and schools can do to educate a student who is disruptive or lacks supportive family surroundings; tackling heart disease depends as much on encouraging people to eat healthily and exercise regularly as it does on developing new drug treatments, and so on.

The concept of co-production applies equally to regulation.<sup>47</sup> In practice all regulatory systems depend to a very high degree on the self-regulatory activities of firms themselves as corporate citizens. For example, the behaviour of many firms is driven as much by their wariness of engaging in activities that threaten the integrity of their reputation or brand as it is by formal regulation. Internal

compliance teams, processes and cultures – particularly as they are shaped by board-level leadership – are as crucial to the effectiveness of regulation as the design of specific rules. As Christine Parker has persuasively argued, the effectiveness of this internal self-regulation depends on how deeply it can connect with employee *values*, or whether it is seen merely as an unwelcome afterthought.<sup>48</sup>

Embracing the concept of co-production in regulation means thinking about the sorts of ways in which the effectiveness of this internal self-regulation could be enhanced through external interventions. Increasing formal demands for information disclosure is one very powerful way of generating leverage for internal compliance efforts, hence the importance of ‘regulating the information commons’ (see Five). For example, the Environment Agency publishes an annual report to ‘name-and-shame’ the worst corporate polluters, in the hope that the adverse publicity will encourage them to change their ways. Ofwat publishes detailed reports on the financial performance and levels of service of the water companies, which are well-regarded as a valuable source of information for all those with an interest in the regulation of the water industry.

But acknowledging the potential self-regulating capacity of firms should also lead us to look for ways to incentivise investment in ‘regulatory innovation’ – new and creative ways of meeting regulatory objectives – within firms. There is an opportunity here to connect regulation to the corporate social responsibility (CSR) agenda. The growth of CSR reflects the fact that consumers increasingly expect the companies they deal with to behave as responsible corporate citizens. Yet as Rachel Jupp has argued, the impact of CSR has been patchy because it has often proved little more than a bolt-on to the marketing department – ‘PR gloss with little real substance’ – rather than being embedded in core business strategy.<sup>49</sup> At the same time, firms have expressed unease that any extension of CSR activity might signal an acceptance of a permanent and comprehensive responsibility.

If regulators and firms were to embrace regulatory co-

production, it could be possible to revitalise CSR by re-imagining it as a test-bed or ‘compliance laboratory’. It would offer a safe space for trying out new approaches to meeting regulatory objectives, or allowing firms to demonstrate their underlying commitment to meeting the overall purpose of regulation in new and innovative ways. Both CSR and compliance teams would move from the periphery of organisations to being an integrated part of the core business, with clear incentives in terms of both reputation and efficiency and effectiveness to invest in CSR as a kind of R&D programme for regulation. In time, the meaning of ‘creative compliance’ could shift from a euphemism for avoiding regulation to an expression of the ingenuity employed by firms to meet regulatory objectives in new and better ways.

## **2. Get serious about principles**

The value of increasing regulatory innovation will only become clear if the regulatory system can shift towards a more flexible interpretation of the relationship between means and ends, or process and outcome. A crucial part of this will be a shift towards greater principle- (or outcome-) based regulation.

The case for principle-based regulation is clear, and a number of regulators have already subscribed to it.<sup>50</sup> In a rapidly changing and complex environment, nimbleness and agility are crucial. Simple regulations, setting out the underlying goal or purpose of the measure but flexible about how it is to be achieved, are far more adaptable in light of changing circumstances and far more elastic in how they apply to different firms than a thicket of detailed rules that must be made still more complex to cover all the eventualities that dynamic change and organisational diversity bring into view. To be fit for purpose regulating must, as one executive put it to us, be ‘as much an art as a science, and at the moment we’ve got too much science and not enough art’. Using principles that explicitly encourage firms to innovate in how they are achieved is an important step towards making regulation more ‘artistic’.

The problem is that regulations are born principled but die

detailed. ‘It’s like the ISO9000 standards,’ said one interviewee. ‘You start with broad-based guidelines, and they end up being interpreted exactly word for word.’ A key problem was trust, according to one insurance executive: ‘The FSA doesn’t trust providers to interpret things.’ Even regulatory officials themselves were pessimistic, acknowledging that many regulations were built on the shaky foundations of earlier regulations rather than clearing them away and starting afresh. Moreover, defining principles or outcomes sounded straightforward until you tried to do it, and then it became clear that output or process-based measures were much easier to prescribe – and to enforce.

But we’re looking at this problem from the wrong angle. If we’re going to get serious about principles, we need first to acknowledge that the success of a regulation lies not in the clarity of how it is written but in how it is interpreted – as Black argues, a rule is only as good as its interpretation.<sup>51</sup> There is no such thing as a perfectly clear rule or clear-cut case. The success of a rule in fulfilling the purpose for which it is intended ultimately depends on those applying it interpreting it in the *way* that it was intended. In other words, only when what Black calls the ‘interpretive community’ of a regulation is empathetic to the goals of the rule-maker can problems with rules be overcome.<sup>52</sup>

So rather than focus on trying to improve the clarity or precision of the rule or principle itself, we should focus on building the capacity of the community that has to interpret and apply it. We need to invest in building the networks of trust between the many different actors involved in designing and implementing rules. How might this be done? As Karen Stephenson argues, ‘the face of trust is still a human face’,<sup>53</sup> so interpersonal contact remains absolutely critical. For that reason, examples of effective strategies might be to:

- invest in joint education and training programmes for regulatory officials and business executives to create a space for shared learning
- instigate continual dialogue and deliberation around

regulatory processes about how they are working and how they might be improved. This is already a strength of British regulatory institutions: Ofgem's IIP scheme (see chapter 2) is a good example of an initiative that has evolved and adapted in light of constant feedback about how it is working. In so doing, it has produced a very positive unintended consequence – a significant improvement in trust and the quality of the relationship between the regulator and firms

- jointly convene scenario-planning exercises for firms and agencies, as an opportunity for them to map out long-term trends and anticipate likely regulatory developments. Ofcom, for example, could model its perfect regulatory environment for broadcasting in 2020, and 'backcast' to the sorts of changes needed to get us there
- experiment with greater use of secondments and sabbaticals between firms and regulators – in *both* directions – to test whether the risk of 'regulatory capture' is outweighed by the greater mutual understanding that this would engender<sup>54</sup>
- create a network of regulatory agencies and firms from across as many sectors as possible to act as a regulatory 'community of practice', and organise meetings, workshops and conferences and other opportunities to promote more intensive interaction and the sharing of understanding and experience between actors
- target support at the compliance teams whose role is vital in the successful application of principles. For example, an online learning store could be set up operating along 'open source' lines, where compliance personnel could share good practice and collaboratively develop high-quality written materials for explaining and communicating new regulations to staff
- place greater emphasis within regulatory agencies on

how rules and principles are marketed or ‘sold’ to firms, and invest in the necessary people skills and resources to support that.

### **3. Let firms write the rules**

How else might we mitigate the problems created by overly rigid, bureaucratic rules unsuited to the particular circumstances of individual firms? How about by letting firms write their own rules, in line with some generally agreed objectives. The strategy of ‘enforced self-regulation’ has been developed by John Braithwaite in a series of influential books and articles.<sup>55</sup> It has the same starting point of seeking to transcend the limitations of centrally determined rules. But it adopts a different strategy for improving their effectiveness: namely, it involves requiring firms to write their own policies and procedures, in line with some overall regulatory goals, and then have these approved by a regulatory agency. If they are inadequate, they must be revised. For smaller enterprises that lack the internal capacity to develop their own rules, a range of off-the-peg standards produced by the regulator might be available.

The point is not to transfer the existing rulebook to individual firms to maintain. It is that most have an ‘internal’ rulebook about how to behave anyway – as we have argued, if most people did not regulate themselves most of the time then formal regulation would be impossible. The problem rests in the difficulty of aligning a single set of formal regulatory provisions with the internal rulebooks and wider business strategies of potentially very diverse firms. Overly detailed rules are often the result of trying to manage the diversity and complexity of an industry from the centre.

Rather than maintain detailed rules, the enforced self-regulation approach looks to manage complexity lower down the system, by harnessing the internal rulebook and culture which is already embedded in firms. It concentrates on building the capacity of firms to interpret and apply overall regulatory principles in the way that makes most sense for their firm, thus reducing the level of detail that is required from specific regulations. In this way, it seeks

to ensure the best possible alignment or ‘fit’ between the formal and informal rules under which firms operate and their individual business strategy. Bespoke tailoring, not one-size-fits-all, is the ultimate goal. The advantages of this approach include:

- adaptability – rules set by an individual firm would be easier to change and adapt than centrally determined rules that are the reference point for a large number of other firms
- incentives to innovate – in how firms meet the overarching goals, releasing resources that might otherwise have been tied up in compliance and generating a rich seam of knowledge about best practice from which others can draw
- commitment – buy-in from staff would be greater for rules written by the firm than those imposed from without, connecting more deeply with employee values and reducing the likelihood of creative compliance.

This strategy is designed to complement a more flexible approach to enforcement. As well as writing their own policies and procedures firms would be responsible for enforcing them, provided they could meet certain basic criteria (a relatively clean record, clear evidence of effective internal control systems and so on). Firms that did not meet these criteria (again smaller firms would probably be disproportionately included in this category) would continue to be subject to external supervision.

The concept of ‘co-regulation’ – where regulators work alongside sectoral bodies to develop more appropriate frameworks for a particular sector – is relatively familiar. One area where a version of this approach has effectively been adopted is the market in equity release products, which allow homeowners to tap into some of the equity tied in their own houses. In the early 1990s this market was on the verge of collapse after a succession of mis-selling scandals had destroyed consumer confidence. But a ‘new’ equity release

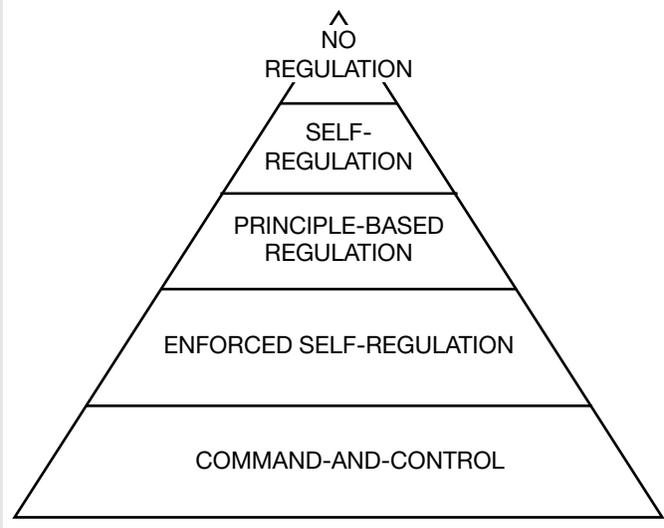
market emerged in the late 1990s with new players who worked together to agree a set of voluntary rules that would prevent the same thing from happening again.<sup>56</sup> Because those standards were designed by the firms that best understood the business, they have been successful in restoring credibility to the market and have provided a clear template for when the market comes under more formal supervision. The market is now flourishing and grew by 49 per cent in 2002 with sales increasing 12-fold over the previous five years.<sup>57</sup> In other areas, Oftel has sought to encourage co-regulation in the telecoms sector<sup>58</sup> and Ofcom is looking to create a new co-regulatory approach to regulating broadcast advertising by delegating considerable autonomy to the Advertising Standards Agency.<sup>59</sup>

#### **4. Speak softly but carry big sticks**

‘Earned autonomy’ – the idea that actors must earn the right to be trusted – has increasingly been embraced by regulators. It is evident for example in the FSA’s ‘risk-based’ approach to regulation, where firms seen to pose less of a risk to the achievement of its statutory objectives can expect a lighter touch approach, and in a recent publication from the Environment Agency.<sup>60</sup> The idea is to reward organisations that demonstrate their ability to deliver required results by granting them greater discretion or freedom from external supervision, and to punish those that betray this trust.

The granting of earned autonomy implies invoking the familiar idea of ‘enforcement pyramids’. The argument for enforcement pyramids runs that ‘regulators will be able to speak more softly when they carry big sticks’,<sup>61</sup> ie that they can influence behaviour more effectively by having a range of incentives or disincentives at their disposal. Players can be encouraged to move beyond the finite game, by creating a positive feedback loop of good behaviour, trust and greater freedom and discretion.

One way to do this would be to combine the enforcement pyramid idea with the approaches based on principles and enforced self-regulation outlined above, yielding a strategy along the lines of figure 5.1.

**Figure 5.1 An example of an enforcement pyramid**

Source: Adapted from Ayres and Braithwaite, *Responsive Regulation*.

Crucially, movement up or down the pyramid would be determined largely by an assessment of whether a firm's behaviour had harmed public value. There might be greater tolerance of misdemeanours or unintentional breaches around specific provisions – so long as they were accompanied by a credible commitment from the guilty party to put them right. If a firm could demonstrate that it had broken the rules only to enable it to achieve regulatory objectives more successfully in a different way, it could even be rewarded for having the courage to experiment and take risks (eg the officers who were awarded a medal by Empress Maria Theresa if they ignored orders but successfully changed the course of battle).<sup>62</sup>

But a breach that showed contempt for the public value embodied in regulation by deliberately flouting the rules, or which undermined trust between the industry as a whole and its

customers/citizens (as, for example, the mis-selling scandals did) would be dealt with much more severely. This might mean, too, that firms who had been trusted to operate under an enforced self-regulation or principle-based model and then betrayed this autonomy were punished more harshly than those failing to comply under a command-and-control approach. That would send a powerful signal of the value placed on trust in this new regulatory system.

### **Five. Regulate the information commons**

‘Information asymmetries’ are a classic regulatory conundrum. But it is not just a problem for regulators. It is increasingly unrealistic to expect any actor to have all the knowledge they need to know to make effective decisions, given the complexity of the systems in which they operate. Relevant information is dispersed across the system. Even if a system is operating as transparently as possible, no single actor will be able to understand everything about the system because they cannot adopt all the different perspectives that are operating.

Part of the regulatory task is therefore to act as a broker between different perspectives but it is also about finding ways to increase the flow, quality and management of information across all the actors in a network, so that they can base their decisions and actions on the best available knowledge. We need to invest in institutional arrangements that promote transparency and knowledge sharing among all the actors in a regulatory system, and do not automatically assume that this is evidence of collusion or capture.

We do not mean to suggest that this is somehow a new role for regulators – it is something they have always done. But harnessing the indirect, self-disciplining function that information and transparency creates will become increasingly important as a way of distributing the regulatory task and making collective problem-solving across fragmented networks of actors more feasible. Innovative solutions must be identified to allow it to be performed more effectively, by

- facilitating the exchange of information between actors, perhaps by giving some particular rights over others – one regulatory official argued that interest groups might be more influential and effective if they lobbied the regulator rather than firms
- increasing the range of information that has to be statutorily declared in audited accounts (for example by requiring social and environmental audit reports)
- adding to the richness of the information environment. Modern technology permits this to be done in groundbreaking ways. It was suggested to us for example that webcams or more sophisticated sensors could be positioned at key locations in power stations, landfill sites or other regulated locations to capture and make publicly available real-time information about regulatory outcomes or compliance through an online platform
- investing in new modelling techniques that draw on a wider range of disciplines and expertise than just economics. Models based on the study of complex adaptive systems could be developed as an alternative way of understanding market behaviour<sup>63</sup>
- working with academics and industry experts to develop simulations or games based on real-life regulatory problems that could give agencies and firms a better understanding of each other's perspectives
- establishing some kind of data repository where agents can make available any data they think might be of interest to other participants in the system
- setting up some kind of 'regulatory star chamber' for working through particularly knotty problems with representatives of the key players, along the lines of Acas (the Advisory, Conciliation and Arbitration Service)
- creating incentives to draw out data that might remain hidden.

It is this final point that seems promising for future development. During the course of our research we were struck by the number of times that industry insiders admitted that they could help the regulator to do a better job, because the tacit knowledge that resided within firms (often at the ‘coalface’) was in many ways more important than anything that could be extracted through more formal channels. Short of much more attractive protection and inducements for whistleblowers – which is certainly a policy option – it is not clear how this tacit knowledge might be uncovered in a systematic way. A number of executives we spoke to also lamented that despite the mutual dependence of firms within a sector, they lack the means by which to regulate each other. One insurance executive described the double whammy of losing money to Independent Insurance as it somehow undercut premiums, only to lose money again when Independent’s strategy proved wildly unsustainable and the company had to be bailed out by an industry-funded safety net scheme. We asked ourselves what might be done about this.

One eye-catching if provocative approach would be to pilot, initially on a small and controlled scale, a Regulatory Policy Analysis Market. Building on proposals by the US Defense Advanced Research Projects Agency (DARPA), and the successful model of Iowa Electronic Markets,<sup>64</sup> the idea would be to develop a futures market in regulatory ‘events’. Through a secure, online trading system traders would be able to buy and sell options on particular regulatory incidents: a particular insurance company going bankrupt, an energy company suffering a major interruption in supply, a water company committing a particular act of pollution, and so on. Government, regulators and firms themselves would be able to use these prices as an ‘early warning system’, alerting them to unforeseen problems in order to help them manage – though not necessarily to eliminate – risks more effectively. In other words, a regulator might not try to prevent a firm going bust, but it could still benefit from knowing further in advance that this was a danger. The aim would be to extract and

make explicit tacit knowledge held by experts and industry insiders that might otherwise have no channel for expression but which could improve the regulatory decision-making of *all* actors.

Of course major questions about this approach remain, not least in terms of how trades were conducted (would they use real money, and if so would trades be capped to prevent deliberately destabilising bets?), how the information produced by such a market should be treated (would there be a danger of mis-pricing risk, would any warning from movement in the options price happen with a sufficiently long lead-time to improve the flexibility of different agents to act?) and how ‘traders’ were selected (would it be genuinely open or restricted to, say, 1,000 industry insiders and experts in each sector?). These questions would need to be worked out through a careful process of small-scale experimentation. But as an illustration of how to extract and coordinate tacit knowledge from a diverse network of agents in real-time, this approach is worth exploring further.

## **6. Foster creative destruction**

The great Austrian economist and social theorist Joseph Schumpeter used the phrase ‘creative destruction’ to describe the ‘process of industrial mutation that incessantly revolutionises the economic structure from within, incessantly destroying the old one, incessantly creating a new one’. Schumpeter recognised that in capitalism, as in nature, death (of firms or whole industries) releases the energy and resources for the creation of new life. A widely observed problem in government and the public sector is that it lacks the dynamic impulse to innovation which competition creates. As Tom Bentley puts it:

*there is little systematic pressure to integrate innovation decisively into the workings of the rest of the system and clear away old routines which have lost their purpose or value. Too often attempts at innovation build shakily on what is already there.<sup>65</sup>*

Officials we spoke to both in Whitehall and regulatory agencies agreed that rather than clearing away redundant regulations or procedures, the tendency was to build on existing provisions creating an ever more complex and cumbersome framework. As one put it: ‘from time to time regulators should throw everything up in the air, reflect on what they were trying to achieve and start again from scratch with a new set of principles or aims.’

The idea of introducing a ‘sunset clause’ into the provisions for statutory regulations or regulators, whereby they would be terminated after a given period unless a compelling case could be made for why they should be retained, has been mooted as one way to achieve this. Yet at the same time, regulatory agencies have become increasingly professionalised, in the sense of providing long-term career opportunities. Ofcom, in particular, is deliberately presenting itself as an organisation that wishes ‘to become a career destination of choice’.<sup>66</sup> The question is whether there are ways in which smaller-scale forms of creative destruction could help to improve the fluidity and task-focus of regulation. For example, sunset clauses on specific regulations could be supplemented by creating performance incentives for regulatory officials to ensure that the goal of self-destruction was taken seriously. Every official who could show that they had made their position redundant could be entitled to a bonus worth one year’s salary, and given support in looking for a new job.

Alternatively, sunseting could take the form of a regulatory agency being presented with a timetable to force it up the enforcement pyramid unless it could present a compelling case for why this was not possible. It might, for example, be given a target of 1 January 2009 as the date by which to have laid the ground for the introduction of an enforced self-regulation approach in some or all of its sector.

### **Learned advantage**

Regulation must manage the ever-changing tensions and interplay between expressions of human need and the spontaneous patterns

of distribution, creative destruction and endless organisational and industrial reshaping that the restless energy of capitalism generates. The rules of an infinite game are always designed to deal with specific threats to the continuation of play.<sup>67</sup> In the case of regulation, that threat was principally the attempt to impose a steady state in the face of such dynamic change. By enhancing and harnessing the ingenuity of firms, and putting it to wider social use, the regulating self-regulation approach we have outlined in this chapter is a more appropriate framework through which regulatory systems can learn to handle these tensions. ‘The infinite game’, as Charles Hampden-Turner argues, ‘is ultimately about learned advantage.’<sup>68</sup>

# 6. Beyond the Spinning Regulator

## *Investing now for a new future for regulation*

On top of the hissing and puffing hulk of oily black iron that is James Watt's steam engine in Birmingham's science museum, a small but vital part is spinning away. The regulator<sup>69</sup> consists of two heavy metal balls that spin at the speed of the flywheel of the engine. The faster the wheel spins, the farther the two balls separate, closing off the supply of steam to the engine. When the pressure of the steam falls too much, the two balls get closer together and steam is let into the engine more quickly again. In doing so it keeps the steam engine running at a constant speed, never too fast, never too slow. It provides mechanical stability to the system, a simple feedback loop that stops it going out of control.

Regulators sometimes give the impression of trying to spin ever faster to slow down the engine of the market. That's because regulatory paradigms have rested on two enduring myths which become problematic when stretched too far. One is the idea of the invisible hand – perfect self-organisation of markets if the forces of competition are allowed to work themselves through. The other is the idea of perfect mechanical equilibrium, like the regulator in Watt's engine – that you can set an acceptable range of performance and then produce a 'steady state' through technical intervention.

This pamphlet has argued that a stable state is a perfectly reasonable goal for a mechanical system such as a steam engine. But in our interconnected, interdependent, complex world the

regulator, and regulation, must find a new role. Neither the fantasy of free market equilibrium nor the attraction of the steady state can really be the sole basis for economic organisation. Expressions of human need and citizen demand are in a constant and dynamic interplay with the spontaneous patterns of distribution and offer that the restless energy of capitalism generates. Achieving a balance can only ever be temporary.

In part this is because new waves of creative destruction and the endless reshaping of firms and industries will disrupt established forms of order. But more importantly, the process of civilising capitalism through regulation is never resolved because we are inherently insatiable. The existing accommodations between state and market fail to satisfy our expectations, as they eventually always do, and we seek new configurations leading to the familiar swings from public to private concerns and back again.<sup>70</sup> No amount of technical ingenuity will help us here; the task of regulation involves both shaping the rules *and* interpreting the direction of change.

As such, it cannot be completed solely through the specification of functions or through the formal design of organisational structures – it requires that we continually evolve new ways of working, new sets of relationships and new kinds of interaction.

We conclude by considering the key choices facing firms, regulators and government in determining how these challenges might be met, and speculate briefly about how the new approach we have outlined might play out in the context of the newest and one of the most interesting players in the regulatory game, Ofcom (see box 6.1).

### **Firms**

‘Should our regulatory institutions be designed for knaves,’ ask Ayres and Braithwaite, ‘or should they be designed to foster civic virtue?’<sup>71</sup> The answer, we have argued, is that they should be designed for both but not assume that either will spontaneously emerge. We live in an age in which business is simultaneously lauded as a source of dynamism, creativity and prosperity, and

disparaged as over-powerful, irresponsible and unaccountable to the communities on whose lives they impact. At the same time, formal and informal scrutiny of how businesses do conduct themselves – and public expectations of how they *should* conduct themselves – have reached unprecedented levels, a product not merely of greater regulation but of the emergence of the ‘information society’ itself. Firms are still groping for a way to make sense of this landscape, struggling to understand how they can balance responsible corporate citizenship with the need to preserve competitive edge. Corporate social responsibility is a hesitant first step towards a renegotiation of how the power and legitimacy of business is conceived.

Our regulatory systems could do much more to help in this regard. The potential value of an approach based on regulating self-regulation is that it imputes neither inherently good nor inherently bad motives; it explicitly gives firms the opportunity to demonstrate their commitment to civic virtue – or what we have called ‘public value’, but recognises that it is up to them whether they take it up. The choice for firms is whether they become what Christine Parker calls ‘Open Corporations’<sup>72</sup> – permeable to multiple viewpoints and expectations, proactive in aligning these external influences with their internal values, and pioneering in developing new and innovative ways to achieve regulatory goals – or to cling to a narrow calculus of the bottom line, and view regulation as merely an infringement on it.

### **Regulators**

Regulators have an absolutely crucial role to play in shaping which of these alternatives ultimately predominates. Regulators have long sought to present themselves as merely technicians doing the government’s bidding, concerned with the means not the ends. But in reality, how systems of governance operate is a powerful determinant of what it is possible to achieve within them. That’s because they do not simply work with the prevailing values of actors (in this case firms), but help actively to shape them.

Command-and-control tends to treat actors in instrumental ways – in regulation, presuming that firms are ‘knaves’. Unless our regulatory systems can learn to recognise firms and their employees as active participants in and co-producers of regulation, whose best – and worst – instincts are nurtured in the way that they are treated and the types of institutional authority that are invoked, then we cannot expect them to achieve their potential.

The regulatory state has achieved a fundamental transformation of Britain’s economic landscape, but its continued success depends on whether regulators have the courage to embrace new and unfamiliar relationships with firms, and identify approaches or investments that will allow these relationships to flourish. This is not as simple as saying that regulators should simply back off; trust must be earned and takes time to develop. Regulators in any case will retain an important role in enforcement, particularly in terms boundary-policing since this is where the biggest threats to public value reside. But in other respects their role will increasingly shift from supervision to brokerage in:

- mediating between publicly-determined objectives and increasingly devolved ways of achieving them
- defining the terms on which this autonomy is granted; as a starting point, regulators should wherever possible begin to create regulatory opt-outs and rewards for companies who can demonstrate that they have created public value
- enrolling and empowering actors who might perform informal regulatory functions
- identifying and framing conflicts and trade-offs – particularly the ever-present contest between citizen and consumer – not running away from them
- experimenting with social and political processes of deliberation and negotiation as a way through them. This might mean thinking again about the mix of people and skills at the top of agencies, ensuring that

the necessary stakeholders are forcefully represented, that consultative procedures are at the cutting edge of what is possible, and that dialogue with parliament continues to evolve.

The success of Ofcom, the newest addition to the institutional landscape of regulation, will be an important determinant of whether Britain retains its international reputation for leading-edge regulatory policy. Given the novelty of the problems it will face, and its relative room for manoeuvre in terms of existing frameworks, Ofcom has an opportunity to be the ‘lead innovator’ in regulation over the coming years. Box 6.1 presents a short thought experiment that seeks to apply the logic of our overall argument to the specific case of Ofcom and one of the central challenges it faces over the coming years.

### ***Box 6.1 Regulating self-regulation and the challenge for Ofcom***

Ofcom has signalled its intention to seize a break with the past and its regulatory inheritance, and potentially embrace new and radical approaches to addressing the many regulatory conundrums that are on the near horizon in the fast-changing communications sector.

One area that might provide fertile ground for regulatory experimentation is the management of radio spectrum. Spectrum may seem a peripheral issue, and in part this is its attraction as a testing ground for new approaches. Yet as Martin Cave has argued, spectrum is a vital and valuable national asset of enormous commercial and public value: ‘an essential raw material for many of the UK’s most promising industries of the future’ as well as being crucial to a number of public services.<sup>73</sup> It also shares certain traits with more familiar areas of regulatory concern: as a common resource, the collective benefits of which must be safeguarded against misuse, it has parallels in the environmental regulation of water quality and atmospheric

emissions. As a national asset, which we wish to allow the private sector much greater freedom to exploit, whose use will increasingly be determined by market forces, and the overall management of which must be shaped by a concern for public value, it is not so different from the privatised utilities.

Its management has many of the characteristics of a regulatory mess:

- the need to balance multiple, competing objectives (economic, technical and political)
- competing, equally valid perspectives on how it should be treated
- massive uncertainty and 'unknowability' in terms of the value of the asset, the uses to which it will be put, the attitude of capital markets, the timely emergence of the right kinds of corporate vehicles and so on
- the potential for a poorly designed or overly intrusive regulatory framework to stifle innovation
- but also a clear need to ensure that this finite resource is managed in a way that maximises public value for the British people to whom it belongs.

So what might a regulatory policy for spectrum based on the approach we have outlined in this pamphlet look like? It would be based on four key principles:

1. the need to shape the framework without predetermining it; to allow it to evolve through a process of experimentation and learning-by-doing
2. the need for adaptability and flexibility in this framework given the uncertainty and unpredictability of the sector
3. the need to incorporate public value not just economic value into regulatory decisions

4. the need to keep the process open to democratic concerns as well as technical ones, and accept that some of the decisions about how to prioritise different forms of public value are inherently political contests.

Based on the recommendations in the Cave Review, Ofcom might therefore develop a three-pronged approach:

1. spectrum trading and auctions to allocate spectrum in commercial use
2. the rationing of some spectrum for public service use with price incentives for it be used more efficiently
3. the creation of an unregulated 'spectrum commons' in several modest slices of spectrum, which could be used for grass-roots collaboration and innovation like that which helped to create WiFi.<sup>74</sup>

The distinguishing feature of this approach would be to experiment with several different regulatory strategies at once, and learn from the successes and failures of each. This would enable the adaptive, evolutionary approach we have advocated. The requirement for spectrum to be redeployed quickly in light of changes in technology or purpose must apply equally to the regulatory framework that governs it – regulation should respond to the changing reality of the sector, not vice versa.

Public value concerns would underpin each strategy in different ways and to varying degrees. They would be least specified in relation to a spectrum commons, on the basis that creating the space for innovation without necessarily a clear commercial application was a public good in itself. In a trading scheme, licences could include responsibilities to promote public value as well as rights for how spectrum could be exploited. Auctions could incorporate a public value dimension,

rather than necessarily being awarded to the highest bidder – a kind of inversion of the ‘Best Value’ model that replaced Compulsory Competitive Tendering in local government. That might avert the risk of repeating the mistake of 3G, taking billions out of a fledgling industry without a multifaceted means of weighing up the impact this would have on citizen-consumers. And a debate about public value would probably be most prominent in relation to reserved spectrum. For example, some spectrum might be considered simply too valuable to be hoarded by the Ministry of Defence. The relative merits of a particular military capability could be seen to be outweighed by the potential for a multibillion-pound windfall that could be invested in bolstering the financial security of an ageing society, or held in trust as an asset for future generations.

Regulated self-regulation would be a feature of each strategy. Under some circumstances firms could write their own specifications for licences, explaining how they would promote both profitability and public value. Firms that could demonstrate they were providing exceptional value to customers or citizens could benefit from earned autonomy, receiving opt-outs or exemptions from certain licence conditions. The time frame of licences would reflect the need to revisit the basis on which they were granted in light of changing economic *and* regulatory priorities. The spectrum commons could be regulated according to broad principles about acceptable uses, with active support for nascent ‘communities of interest’ (such as those that shaped WiFi, or the computer operating system Linux), since those would perform a *de facto* self-regulatory function. Ofcom would play a vital role as an information broker, explaining how and by whom spectrum was being used and the economic and public value that was being generated, generating a level of transparency that would make it hard for owners of spectrum to hoard more than was strictly necessary.

We cannot be certain what the implications of this approach would be. As an investment in learning about new regulatory approaches, though, it has much to commend it. There will be failures – as there would be with any scheme – and appropriate lessons must be drawn from them. But its successes would give political and intellectual covering fire to those in every regulated sector who want to embrace radically new approaches to regulation.

### **Government**

Regulation is an inherently political act. It involves deploying the power of the state to steer markets towards collectively-defined goals. Yet regulation has long been seen as the preserve of independent experts more comfortable dealing with numbers than social values. In large measure that reflects the founding assumption of the regulatory state that a separation between the political process of setting regulatory policy, and the technical process of implementing it, was not only feasible but desirable as a way of creating the stability that had been sorely lacking in economic governance. But as we have argued, that presumption no longer looks tenable. If they are to handle complexity, regulatory systems must be capable of perpetual adaptation, both of methods and in the priority given to different forms of public value. This implies a more or less constant interaction and interplay between the means and ends of regulation. The capacity to shape and reshape means and ends in light of changing circumstances must become a core part of the design of regulatory systems themselves through a continual process of learning-by-doing, not the preserve merely of politicians.

The choice for government is whether it is prepared to let go of the myth of control that the theory, if not the practice, of the regulatory state sustained. Our message throughout this pamphlet has been that as systems become more complex, more unpredictable, and more interconnected to other systems, the

ability of government to control anything becomes less and less plausible. But the stakes here are high: politically it is very difficult to acknowledge this underlying reality. For many politicians and voters alike, to govern *is* to control. Yet so long as this myth retains its grip government will increasingly be tempted to make promises that in a complex world it cannot keep. The question is can we develop an alternative narrative about the future role for government in regulation?

The starting point for this narrative would be the need to let people down gently – ‘to fail their expectations at a rate they could stand’, as the leadership theorist Ronald Heifetz puts it.<sup>75</sup> As such it would be explicitly evolutionary, and would not seek to reject the old paradigm until a credible alternative had begun to take shape. It would authorise experimentation and the taking of risks, since evolution is impossible without trial and error and the adoption of successful innovations. This might mean identifying a regulatory mess that we can see on the horizon in an emerging market or subsector – for example, the regulation of nanotechnology – and treating it as a controlled experiment in the kind of adaptable, holistic regulatory framework that could come to define a whole new paradigm.

Such a narrative would emphasise the capacity for government to shape the overall direction of travel, without necessarily being able to predict how this would play out in practice. Moreover, it would acknowledge that the best way to retain this influence over the direction of travel of regulatory systems would be to give up attempts to control them.

Finally, this new narrative would seek to put the politics back into regulation. Regulation has become much more than a technical practice; it is a mode of governance. Contests about both means and ends are inevitable. We should not pretend that decisions about how we govern markets can be determined solely according to technical criteria any more than decisions about how we educate our children can. In a democracy, the point is to foster the best possible debate around those decisions, and to facilitate an

ongoing conversation about the forms of public value that they ought to prioritise. Democratising regulation, through the creation of new spaces for deliberation and decision, may itself be a key task for government. The process for shaping the emerging regulatory framework for genetically-modified crops and other biotechnological products may be a taste of things to come in this regard.

Above all, we should not be ashamed of regulation, or what it is trying to achieve. We may not like to admit it, but regulation is an expression of our political choices as citizens, and a key weapon in our collective problem-solving armoury. As we look forward to a future of complex and uncertain challenges, it's more important than ever that government reminds us of that.

### **Playing the long game**

The invention of Watt's steam engine did not eliminate agriculture overnight. The industrial revolution, like all long-term change, was compositional: it changed the composition of the economic landscape but only gradually over time. The same was true of the regulatory state, which developed through a series of piecemeal, largely uncoordinated steps that only seem truly coherent with the benefit of hindsight. And as we argued at the start of this pamphlet, the same will be true of whatever comes after it. We have hinted at what the shape and core principles of this new institutional landscape might look like, but we cannot know the precise sequence of steps that would take us there, and we can be certain that the regulatory state will not simply be swept away overnight. The necessary conditions and cultures for a new approach based on regulating self-regulation and maximising public value will take time to develop. Rewriting the rules while the game is in progress is a difficult task.

Yet it is not one we can afford to leave to chance. The stakes are simply too high. Our current repertoire of regulatory strategies is proving increasingly unable to cope with the complexity of demands made on it. Its continuing legitimacy and effectiveness

depends on creating systems of regulation that can learn to manage this complexity, not just wish it away. Yet whether or not politicians, firms, regulators and citizens can be persuaded to accept the risks and uncertainty that the transition to a new regulatory paradigm implies will depend on whether there are partly developed alternatives of which they can see the potential. We must identify and begin to make the kinds of investments which, though they may seem small-scale or peripheral today, could come to form the basis of a coherent alternative regulatory model tomorrow. Britain has led the world in innovative regulation. But if it is to retain its world-class reputation in the future, all those involved in regulation need to start playing the long game.

# Appendix

## *Paradigms and regulation*

Throughout this report we have referred to the ‘regulatory state paradigm’. This appendix is designed to explain in more detail what we mean by a ‘paradigm’ in the context of regulation, and also to provide a sense of the historical context for the pamphlet as a whole. In particular, we describe the shift that took place in the governance of many advanced industrial societies in the second half of the twentieth century from the Keynesian welfare state to a new, more disaggregated form of state: the regulatory state. The fact that this shift happened at all undermines the idea that regulation stands still and points instead to the existence at any moment in time of a dominant ‘regulatory paradigm’. Such paradigms, we suggest, are analogous in form and function to the scientific paradigms described by Thomas Kuhn<sup>76</sup> and constitute a way of looking at the world, and a set of concepts, assumptions, institutions and methods based on that worldview. As well as helping us to organise this historical account, Kuhn’s analysis also helps us to understand how the legitimacy of a particular regulatory paradigm can come to be questioned, and how a new paradigm may emerge in its place. But let us begin by charting the emergence of the regulatory state.

### **The rise of the regulatory state**

As Robert Cooper has written, ‘The deconstruction of the modern

state is not yet complete, but it proceeds rapidly.<sup>77</sup> Regulation lies at the heart of this transformation.

The decades immediately after the Second World War were the era of the interventionist or *dirigiste* Keynesian welfare state. This was the era of politically controlled nationalised central banks, public ownership of almost all strategic industries and utilities (coal, gas, steel, electricity, air transport, telecommunications and so on), redistributive taxation and extensive public provision of healthcare, pensions and sickness and unemployment benefits. It was an era where governments believed that they could achieve a range of social and economic outcomes through direct, command-and-control intervention.

But from the early 1970s, governments worldwide began to go cold on such direct forms of control in favour of more indirect interventions. In the UK, the story of the regulatory state begins in 1976, following the UK's humiliating acceptance of fiscal policies dictated by the International Monetary Fund (IMF) and the Labour Prime Minister James Callaghan's pronouncement that

*We used to think that you could spend your way out of a recession, and increase employment by cutting taxes and boosting government spending. I tell you in all candour that that option no longer exists.*<sup>78</sup>

This apparent scaling back of the state's ambitions for economic management paved the way for the transformation of Britain's economic landscape in the 1980s. The instruments for pursuing a macroeconomic policy of demand management, and the goal of full employment, were abandoned.

A vast array of nationalised industries and publicly owned firms and utilities were privatised, including British Telecom (1984); British Gas (1986); British Airways and the British Airports Authority (1987); British Steel (1988); water industry (1989); the electricity industry (1989–90); coal industry (1994) and British Rail (1995). Competitive forces were introduced where firms had previously enjoyed statutory monopolies, with incumbent firms

and new entrants granted licences under which they were to operate. The supervision of these licences and the task of protecting new entrants and consumers from the abuse of market power by incumbents were delegated to the new independent regulatory agencies (the 'Ofs', eg Oftel, Ofgas, Offer and so on), operating at arm's length from government.

This transformation was not simply a British phenomenon. Similar patterns of privatisation, the introduction of competition and the establishment of independent regulatory agencies can be detected in many other European countries. Part of the reason for this is the process of European integration itself. The accelerating pace of integration, particularly after the initiation of the '1992' Single European Market (SEM) initiative in the mid-1980s, was highly significant. As Majone puts it,

*in order to take an active part in the formulation of all these new rules in Brussels, and then to implement them at national level, member states have been forced to develop regulatory capacities on an unprecedented scale.<sup>79</sup>*

But the regulatory state is not just a European phenomenon either; it has roots in the American New Deal.<sup>80</sup> As Moran argues:

*The United States was the great pioneer of the administrative technology of controlling business through law-backed specialized agencies rather than through the technique of public ownership.<sup>81</sup>*

Locating the birth of the regulatory state in this, one of the most active periods in the history of US government helps to dispel the myth that the regulatory state is simply a laissez-faire, neoliberal project to roll back the frontiers of the state. For the US experience reminds us that while the regulatory state may imply a less interventionist state, in the sense that the forms of governance and control employed are less direct, it does not necessarily imply a less active state, in terms of the range of activities that government

seeks to influence. Its reach, in other words, is greater than its depth.

This is clear in three important respects. First, the British regulatory state has transformed systems of self-regulation in the financial services sector, the professions (including medicine, teaching and accountancy), universities and beyond to bring them under statutory regimes. Second, regulatory states have used regulation to address social and environmental problems in areas as diverse as workplace discrimination, occupational health and safety, employment rights, consumer protection, food safety and environmental degradation. In fact, while the US in the postwar period may have adopted a less ambitious approach to macroeconomic management than its European counterparts, its regulation of health, safety and environmental risks was much tougher.<sup>82</sup> Third, greater regulation of the private sector has been accompanied by greater regulation of the public sector – or what Hood<sup>83</sup> has called ‘regulation inside government’. Few public sector employees are not now caught up in audit, inspection and standards regimes as a result of what Power calls ‘the audit explosion’.<sup>84</sup> In short, the ambitions of the regulatory state are different, but not necessarily more limited, than those of the Keynesian welfare state.<sup>85</sup>

The question is: what conceptual framework could help us to make sense of this transition?

### **Regulatory paradigms**

‘Politics finds its sources not only in power but also in uncertainty,’ writes Hugh Hecló. ‘Governments not only “power”. . .they also puzzle. Policy-making is a form of collective puzzlement on society’s behalf.’<sup>86</sup> His point is that ideas matter, and that political contests are decided at least in part by whose ideas seem most convincing as a way of explaining or solving the ‘puzzles’ that policy-making is asked to confront. Dramatic shifts in policy such as those involved in the transition from the Keynesian welfare state to the regulatory state are not just political. They also represent the

displacement of one set of ideas by another that seems both more able to explain what is going on, and to offer more plausible solutions for what should be done to address it. In terms of regulation, we can describe this transition as the shift from one ‘regulatory paradigm’ to another.

Like the scientific paradigms famously described by Thomas Kuhn, regulatory paradigms represent a way of looking at the world, and a set of concepts, assumptions, institutions and methods based on that worldview. For Kuhn, scientific paradigms provided communities of practitioners with the basic agreement on the rules of the game that they needed for routine scientific practice – what he called ‘normal science’ – to be sustained and focused. Without such paradigms, there was no way of determining which facts mattered, or which problems were really important, and progress would be impossible because there was no agreement on the question ‘progress towards what?’.

Regulatory paradigms serve a very similar function. Confronted with the richness and diversity of everyday human existence, how else can policy-makers decide which problems they should try to tackle and which they should ignore, what goals they should set for policy and what tools or instruments they should use to achieve them unless it is by reference to some wider conceptual framework that both gives answers to these questions and, more importantly, takes them as given.<sup>87</sup> In this sense it is analogous to JK Galbraith’s definition of the conventional wisdom: ‘the beliefs that are at any time assiduously, solemnly and *mindlessly* traded between the conventionally wise’ (emphasis added).<sup>88</sup>

In particular, regulatory paradigms provide three crucial, inter-related notions:

- an idea about the **purpose** of regulation
- a way of **thinking** about how regulation works
- a set of **institutional** arrangements and **instruments** through which regulation is conducted

Let us illustrate each of these dimensions with reference to the two regulatory paradigms we have explored in this appendix, the Keynesian welfare state and the regulatory state.

### **Purpose**

First, and perhaps most importantly, regulatory paradigms provide regulation with its rationale, purpose and mission. They embody a sense of what regulation is for: the problems it is supposed to tackle, and the ones that are not its concern.

For the Keynesian welfare state, regulation was one among a range of tools deployed to assist in the state's ambitions for economic management. For the regulatory state, on the other hand, the purpose was much more focused: regulation was there simply to correct specific instances of market failure. In particular, it was there to protect consumers from the abuse of market power by incumbents in former publicly-owned monopolies.

A paradigm never addresses all possible problems. On the contrary, it provides a way of screening the range of possible issues it could try to address, and selecting only those that to some extent it already knows how to solve in that they can be tackled using the concepts and tools which the paradigm provides, and ignoring or discounting those which it cannot. For the Keynesian welfare state, improving the efficiency and productivity of the public utilities was not a high priority, nor was delivering low prices for customers. For the regulatory state, both were absolutely crucial problems to be tackled.

Because regulatory paradigms delimit the kind of problems that can be legitimately addressed they help to create considerable stability. The point is not that new problems do not appear during this time; the paradigm will provide an apparently constant stream of new problems that need to be addressed. But very few problems will appear that fundamentally challenge the prevailing paradigm, because the paradigm itself provides a way of identifying as problems only those issues that it already knows how to solve. Following Kuhn, we can call this routine problem-solving activity

‘normal regulation’. As we shall discuss in more detail later, this is one reason for the failure of regulation to ‘wither away’ as its more radical exponents presumed it would: the paradigm itself is self-perpetuating.

### Way of thinking

Underpinning this sense of mission is the second thing that a regulatory paradigm provides: a way of thinking about how things work, and what that means for regulation. This is more than just a certain disciplinary background. It also includes a set of assumptions about, for example, the nature of cause and effect. To some extent it also embodies an epistemological position, and a faith in particular kinds of knowledge and expertise.

The Keynesian welfare state was based on the economic theory developed before the war by John Maynard Keynes in his *General Theory*, which became the framework for British economic policy after 1945. The central thrust of the theory was that governments could promote economic growth and full employment by ‘fine-tuning’ aggregate demand. But implicit in the theory was also a whole set of assumptions about the capacity of central government, and in particular HM Treasury, to comprehend all the relevant variables and tailor its interventions accordingly. The regulatory state draws on a radically different tradition. Its conception of the role of the state is closer to that envisaged by liberal economists in the Adam Smith mould, though the most prominent contemporary exponent of this position was Milton Friedman. Another crucial intellectual forebear is Pareto. The classical case for regulation is still based on Pareto’s version of welfare economics, and the need to correct market failures – including information asymmetries and externalities – created when the conditions for Pareto Optimality are not met.<sup>89</sup>

As well as providing a way of identifying problems, a paradigm also involves rules that limit the nature of acceptable solutions to those problems.<sup>90</sup> One of the reasons the Keynesian welfare state floundered in the face of the turbulent economic conditions of the

1970s was that its range of possible prescriptions was strictly circumscribed by its understanding of the relationship between inflation and unemployment. Similarly, the modern regulatory state could not countenance economically inefficient or cartel-like behaviour among firms, even if this was accepted as a *quid pro quo* for achieving the government's social and environmental objectives.

But there are also some similarities in these ways of thinking. Strikingly, both paradigms share in common a faith in being able to control the system from a single, centralised point within it. Both validated a particular kind of expert knowledge as the basis on which effective decisions could be made, even if the regulatory state paradigm is more suspicious of a *political* institution's capacity to manage and use that knowledge effectively, and so preferred to locate it within supposedly more neutral institutional spaces. Finally, both shared a mental model of the economy or particular industries as mechanical machines, whose response to external intervention would be linear and predictable.

### **Institutions and instruments**

The third thing a regulatory paradigm provides is an idea about the most appropriate institutional framework and instruments through which regulation should be conducted.

For the Keynesian welfare state, this was characterised by a set of highly integrated hierarchies, public ownership, and a close relationship between the operational managers of public utilities and nationalised firms and government ministers. By contrast, the regulatory state is much more disaggregated, involving the privatisation and fragmentation of former public monopolies and the establishment of independent regulatory agencies, operating at arm's length from government, to police the behaviour of firms within them.

In the Keynesian welfare state, public ownership was both an institutional choice and instrumental one. Control over the operational management of large public utilities and nationalised

industries allowed ministers to perform the kinds of regulatory tasks envisaged above, as well as to contribute towards their wider goals for economic management. The use of medium-range indicative planning was also an aspect of this.

For the regulatory state, the instruments were quite different. They involved the setting of rules, standards and price caps by an independent regulatory agency in accordance with their statutory duties. The classic model of this was the 'RPI-X' model first proposed by Professor Stephen Littlechild in his report to the government on the regulation of British Telecom, and subsequently exported to the gas, electricity and water sectors when they were privatised and re-regulated.<sup>91</sup>

### **Crisis and paradigm shift**

What Kuhn's analysis also provides is a way of thinking about the conditions under which paradigms change. As he puts it, 'Paradigms gain their status because they are more successful than their competitors in solving a few problems that the group of practitioners has come to recognize as acute.'<sup>92</sup> Once acquired, paradigms retain that status by providing a conceptual framework that allows practitioners to continue solving the new type of problems they have brought into view. But paradoxically, this also means that paradigms always contain the seeds of their own destruction, because they create the space for the discovery of new problems that the paradigm cannot in fact deal with. This prompts a crisis, and the possibility for a new paradigm to emerge that is better able to address these pressing questions.

This cycle of paradigm emergence and destruction applies equally to governance systems, in the interplay between changing expressions of human need and the capacity of particular institutional frameworks to address them. For western liberal democracies, the explicit promotion of

- technological change, in particular the convergence of an information technology revolution and the creation

- of a global communications infrastructure
- economic change, most notably the internationalisation of trade and finance and the integration (particularly in Europe) of national economies into regional blocs
- social change, specifically growing social and cultural diversity, the breakdown of traditional forms of social authority through greater demands for personal choice and liberty, and the rise of a more individualistic ‘consumer society’

contributed to an unprecedented period of peace and prosperity in the second half of the twentieth century.<sup>93</sup> But in the process this unleashed powerful forces and currents which the Keynesian welfare state could only contain for so long before its capacity to perform some of its core functions – to answer the pressing questions of the age – would be called into question

- by the growing vulnerability of the national economy to international forces
- by the perceived fiscal crisis of the state
- by the apparent ineffectiveness of the prevailing forms of public intervention as manifested in the under-performance of nationalised industries and firms and the economy as a whole
- by the growing sense that government had lost control of events, following a succession of currency and inflation crises, the apparent power of the trade union movement to determine government priorities and the humiliation of having to accept IMF-imposed policies as the condition of its bail-out in 1976.

Understood in this light, the regulatory state paradigm was an explicit response to the challenge to the legitimacy and effectiveness of a governing system that external trends and the weight of its own internal contradictions posed. In particular, it sought to protect the

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governing system by transforming, and in many ways reducing, the role that *government* itself played in the performance of its core functions.

# Notes

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