Regulatory Reform Beyond Command and Control

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Introduction

Over the last decade, considerable thinking has gone into the issue of how to design more efficient and effective regulation. Much of this thinking has been in field of social regulation and that of environmental regulation in particular. While not all the innovations and insights that have emerged from a radical re-conception of the roles of environmental regulation, have broad application to other fields of regulation, nevertheless, many of them do. This paper draws from the writer's previous work on this area and seeks to identify some broad themes and insights based around the themes of "smart regulation" and regulatory reconfiguration[2].

The paper reviews the changing role of the regulatory state, and the evolution of a number of next generation policy instruments, intended to overcome, or at least to mitigate, the considerable problems associated with previous policy initiatives, and traditional forms of regulation in particular. The goal is, in the words of the USA EPA "to adapt, improve and expand the diversity of our environmental strategies" and to address the circumstances not only of laggards but also of leaders.

However, policy reform has taken place in what is, in many respects, a hostile political and economic environment. The 1980s and 90s saw a resurgence of free-market ideology which, assisted by the economic and political collapse of the former Soviet Union, enabled neo-liberalism to triumph almost unchallenged, for most of that period and beyond. And while public opposition precluded the sort of wholesale deregulation which occurred in some other areas of social regulation, environmental regulatory budgets were substantially cut in almost all jurisdictions. This trend shows little sign of changing under the lower taxation regimes that now characterise the large majority of economically advanced states, irrespective of the party in power.

During the same period, governments have also experienced considerable pressure from industry to reduce the economic burden of complying with environmental regulation. Although on most calculations, the costs of compliance are relatively modest nevertheless, industrial lobby groups have argued strongly, and often successfully, that the imposition of such regulation would put industry at a competitive disadvantage. For example in Australia, Prime Minister John Howard, echoing the views of the fossil fuel industry, rejected many of the arguments contained in the Stern Report (Stern 2006), arguing that it would be ill-advised to adopt policies that threatened economic growth or Australia's competitive advantage.

In an era of globalisation, in which capital flight to low tax, low regulation regimes is increasingly plausible (though far less often demonstrated), governments have listened particularly closely to industry concerns and have frequently responded sympathetically. Thus the confluence of economic and political pressures has often precluded the application of direct regulation.

But while government regulators have has been losing both their power and resources, others have begun to fill the regulatory space they previously occupied. For example, environmental NGOs, aided by advanced techniques for information gathering (from digital cameras to satellite imaging) have become increasingly sophisticated at communicating their message

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[2] See in particular N Gunningham and P Grabosky, Smart Regulation: Designing Environmental Policy, OUP, 1998 and N Gunningham and D Sinclair *Leaders and Laggards: Next Generation Environmental Regulatio*n, Greenleaf, UK, 2002 Chapter 9.

(via global television, international newspapers and the internet) and in using the media (and sometimes the courts) to amplify the impact of their direct action campaigns. They have not only sought to shape public opinion to lobby governments and to pressure industry directly, but also to influence consumers and markets through strategies such orchestrating consumer boycotts or preferences for green products. Indeed, they have commonly by-passed governments altogether where they perceived them to be overly sympathetic to industry or incapable of effective action (Bomberg 2007).

At the same time, a variety of commercial third parties have also begun to take a far considerable interest in environmental issues, especially climate change. Banks seek to minimise their financial risk by scrutinising more closely the environmental credentials of their clients. Insurance companies, alarmed at the anticipated rise in claims resulting from global warming, seek means to mitigate its impact. And financial markets themselves have become responsive to good or bad environmental news, rewarding environmental leaders with a share price increase and discounting the share price of laggards. So too is supply chain pressure increasingly important, with a substantial number of companies seeking accreditation under ISO 14001 – not because regulators require it or because they believe it necessary but rather because their trading partners insist upon it (Gunawardaria 2007).

As part of this reshaping of the regulatory landscape, a number of environmental stakeholders have to some extent departed from their traditional roles. Some business groups, such as the World Business Council for Sustainable Development, have become proactive, arguing that business is part of the solution rather than merely the problem, and sought to develop a variety of voluntary initiatives through which business seeks to shape its own environmental destiny (Australian Business Council on Climate Change 2007). Environmental NGOs, frustrated with their limited impact on governments, or at the ineffectiveness of government in protecting the environment, have redirected their attention towards corporations through strategies ranging from confrontation to partnership. And government policy makers, constrained by diminishing resources, and noting the increasing power of NGOs and financial markets, and the potential for industry self-management, have become increasingly enamored with the possibilities of “steering not rowing” in policy design.

What has evolved is not a retreat of the regulatory state and a return to free markets but rather a regulatory reconfiguration. The USA EPA’s Reinventing Environmental Regulation program, negotiated agreements in Western Europe, a plethora of informational regulation initiatives, various forms of industry self-management and a variety of enterprises (commonly using supply chain and financial market pressure) built around harnessing third parties as surrogate regulators, nevertheless involve a continuing government role. Even in relation to problems which the state is ill equipped to address directly it almost invariably retains a supporting role, underpinning alternative solutions and providing a backdrop without which other, more flexible options, would lack credibility, and stepping in where they fail. That is, in almost all circumstances the state is still involved in engineering solutions to environmental problems rather than trusting the market, unaided, to provide them.

This re-configuration is still in process, and the next generation instruments that have emerged are very diverse. Some seek out and nurture win-win solutions, some seek to replace conflict with co-operation between major stakeholders, and others seek to mitigate power imbalances, and to increase transparency and accountability, as is the case with informational regulation. Many, in stark contrast to the first generation of command and control, seek to encourage and reward enterprises for going beyond compliance with existing regulation. But neither the precise direction of this reconfiguration nor its results are yet known. Much work remains to be done in mapping progress, identifying what works and what doesn’t, and why, and in providing a better understanding of how to match types of instruments, and institutions, with particular environmental problems. In the following sections, I provide a broader

perspective on this regulatory reconfiguration. First, I examine it through a variety of different lenses and in terms of a number of different conceptual frameworks. Second, I reflect on some broader lessons for the future of regulatory reform.

Conceptualising Regulatory Reconfiguration

Below five different frameworks, or lenses, through with one might better understand regulatory reconfiguration, are examined. None of these lenses offers (or necessarily purports to offer) a complete prescription for what the next generation of policy instruments should involve. However, individually and collectively, they enrich our understanding of individual policy instruments, and what they might achieve. They also provide insights into the challenges facing regulatory reconfiguration and how they might be resolved.

Reflexive Regulation

The literature on reflexive law recognises that the capacity of the regulatory state to deal with increasingly complex social issues has declined dramatically. As Teubner and others have argued, there is a limit to the extent to which it is possible to add more and more specific prescriptions without this resulting in counterproductive regulatory overload. Traditional command and control regulation (a form of "material law") is seen as unresponsive to the demands of the enterprise and unable to generate sufficient knowledge to function efficiently. In sum: "the complexity of society outgrows the possibilities of the legal system to shape the complexity into a form fitting to the goal-seeking direct use of law" (Koch and Nielsen 1996). To give a concrete example, one cause to the TMI nuclear accident and near melt-down, was that operators simply followed rules, without any capacity for strategic thinking, and as events unfolded which were not covered by a rule, they had no capacity to read the situation and respond appropriately.

In contrast, reflexive regulation, which uses *indirect* means to achieve broad social goals, has, according to its proponents, a much greater capacity to come to terms with increasingly complex social arrangements. This is because it: "focuses on enhancing the self-referential capacities of social systems and institutions outside the legal system, rather than direct intervention of the legal system itself through its agencies, highly detailed statutes, or delegation of great powers to the courts…[it] aims to establish self-reflective processes within businesses to encourage creative, critical, and continual thinking about how to minimise…harms and maximise…benefits" (Orts 1995: 1232). Put differently, reflexive regulation is procedure oriented rather than directly focused on a prescribed goal, and seeks to design self-regulating social systems by establishing norms of organisation and procedure.

Such a strategy can also be viewed as a form of "meta risk management" whereby government, rather than regulating directly, risk-manages the risk management of individual enterprises (Parker 2002). This is what happens under the "safety case" regime, instituted on North Sea oil rigs following the Cullen enquiry into the Piper Alpha disaster where 167 lives were lost (Cullen 1990). This involves what is in effect, a safety management system being developed by the rig operator and submitted to the regulator for scrutiny and approval. Similarly, the safety regime established for the nuclear power industry, post Three-Mile Island, ceased to be primarily about government inspectors checking compliance with rules, and more about encouraging the industry to put in place safety management systems which were then scrutinised by regulators, and in this case, by the industry association in the form of the Institute of Nuclear Power.

A number of the second generation instruments could be readily interpreted as examples of reflexive law, whose goal, rather than regulating prescriptively, is to encourage organisations to establish processes of internal self-regulation to monitor, control and replace economic activities injurious to the environment. Take the use of environmental management systems, which form the principal component of regulatory flexibility initiatives and some forms of negotiated agreement. Such systems seek by law to stimulate modes of self-organisation within the firm in such a way as to encourage internal self-critical reflection about its environmental performance. They establish processes and procedures that encourage self-reflexive learning and thinking about reducing environmental impact rather than seeking to influence behaviour directly by proscribing certain activities. . Similar mechanisms are being devised to suit the circumstances of SMEs. These include not only "slimmed down" EMSs but also self-inspection, self-audits, and checklists.

In part, informational regulation can also be viewed in these terms (although it is much else besides). For example, requiring facilities to track and report their emissions (as under the TRI), not only empowers community groups, and enables markets to make more informed judgments, but it also leads to a degree of self-reflection on how things might be done differently. Dow Chemicals is amongst those firms who freely acknowledge that they had not previously measured their wastes and as a result had no idea how much they were discharging. Once they did so, they realised that there was a business opportunity to make pollution prevention pay, through reuse, recycling, the substitution of different substances and the use of less chemicals. Thus a strategy which involved no requirement to do anything other than estimate discharges and disclose them, had a variety of broader consequences, including to generate internal organisational change (and corporate shaming) which in turn resulted in substantially improved environmental performance for many companies. With the increasing sophistication of the Global Reporting Index (Perez 2006) and the capacity to estimate carbon emissions, informational regulation has the potential to influence business decisions with regard to climate change.

On close inspection, a number of other strategies also contain elements of reflexive regulation. Industry self-management initiatives certainly fall within this category, to the extent that they deliberately build in a variety of mechanisms to generate internal compliance and self-organisation. Even economic incentives, on one view, have reflexive elements, though whether their designers would have viewed them in these terms is debatable. Nevertheless, Fiorino (1999: 450) argues that marketable permits such as carbon or emissions trading, "induce reflection by specifying a goal and allowing firms to decide how to achieve it, given their circumstances". However, he also notes that because they are implemented in the context of technology requirements such permits involve a combination of substantive and reflexive law.

Regulatory pluralism

The term 'smart regulation' is used to include an emerging form of regulatory pluralism that embraces flexible, imaginative and innovative forms of social control which seek to harness not just governments but also business and third parties. For example, it is concerned with self-regulation and co-regulation, with utilising both commercial interests and Non-Government Organisations, and with finding surrogates for direct government regulation, as well as with improving the effectiveness and efficiency of more conventional forms of direct government regulation.

The central argument is that, in the majority of circumstances, the use of multiple rather than single policy instruments, and a broader range of regulatory actors, will produce better regulation. Further, that this will allow the implementation of complementary combinations of

instruments and participants tailored to meet the imperatives of specific environmental issues. By implication, this means a far more imaginative, flexible, and pluralistic approach to environmental regulation than has so far been adopted in most jurisdictions.

To put this concept in context, it is important to remember that traditionally, regulation was thought of as a bi-partite process involving government and business, with the former acting in the role of regulator and the latter as regulatee. However, a substantial body of empirical research reveals that the there are a plurality of regulatory forms, that numerous actors influence the behaviour of regulated groups in a variety of complex and subtle ways (Rees 1988: 7), and that mechanisms of informal social control often prove more important than formal ones. In the case of the environment, the regulatory pluralism perspective suggests that we should focus our attention on the influence of: international standards organisations; trading partners and the supply chain; commercial institutions and financial markets; peer pressure and self-regulation through industry associations; internal environmental management systems and culture; and civil society in a myriad of different forms.

These insights have led some policy-makers to investigate how public agencies may harness institutions and resources residing *outside* the public sector to further policy objectives in specific concrete situations. This approach can be seen as part of the broader transition in the role of governments internationally: from "rowing the boat to steering it" (Osborne and Gaebler 1992) or choosing to "regulate at a distance" by acting as facilitators of self-and co-regulation rather than regulating directly. Thus for regulatory pluralists, environmental policy-making involves government harnessing the capacities of markets, civil society and other institutions to accomplish its policy goals more effectively, with greater social acceptance and at less cost to the state (Gunningham *et al* 1999). And since parties and instruments interact with each other and with state regulation in variety of ways, careful regulatory design will be necessary to ensure that pluralistic policy instruments are mutually reinforcing, rather than being duplicative, or worse, conflicting (Gunningham and Grabosky 1998, Chapter 6).

A substantial number of next generation instruments are pluralistic in conception. Some, such as the regulatory flexibility initiatives established under the Clinton-Gore "Reinventing Environmental Regulation" initiative, were directly inspired by one version of regulatory pluralism (and by Osborne and Gaebler's (1992) concept of "steering not rowing" in particular). Seeking to embed environmental values and processes within the corporate culture in such a way that it becomes self-regulating, and relying upon oversight from local communities and perhaps third party auditors, to supplement or even replace direct regulation, is a quintessential pluralist strategy.

Many informational regulation initiatives can also be understood in pluralist terms. Providing communities and financial markets with greater information about corporate environmental performance, effectively empowers both of these groups. Communities and environmental NGOs respond by using this information to shame bad corporate performers, while the same information apparently influences share prices, thereby indirectly punishing bad performers and rewarding environmental leaders In particular, the powerful impact of the TRI, as a surrogate regulatory tool is well documented (Fung and O'Rourke 2000).

Environmental Partnerships

Environmental partnerships came of age in the 1990s when parts of industry, government and NGOs recognised that conflict and confrontation were not necessarily the best means of achieving either the best economic or environmental results. Governments sought alternatives to direct regulation, and business enterprises, dissatisfied with the cost and inflexibility of command and control regulation, and sometimes seeking win-win outcomes, sought more

flexible and less confrontational alternatives. NGOs too, began to see virtue in "green alliances" with environmentally proactive enterprises. Sometimes these partnerships involve agreements between business and NGOs, or between governments and business, or even between business and business along the supply chain. On other occasions, they may embrace governments, NGOs, business *and* a range of other third parties, who, as we have seen, held out the promise of acting as surrogate regulators and performing many of the functions that government regulation was no longer ready, willing and able to fulfill. Some climate change partnerships (but certainly not others –see AP6 2007) fall within this category.

According to their proponents, environmental partnerships provide an additional policy option which steers a middle course between the two extremes of traditional regulation on the one hand and self-regulation and voluntarism on the other, and in so doing, take advantage of their respective attributes while compensating for their particular weaknesses (for an overview and recent critique see Glasbergen, Biermann and Mol 2007). Environmental partnerships also provide opportunities to replace adversarialism with co-operation, and in doing so, may provide benefits for all sides. For example, through "green alliances" business may obtain the political goodwill and credibility which NGOs bring to the partnership, while in return, environmental groups gain commitments to improved environmental practices on the part of their business partner. In industry-government partnerships, governments can offer resources, expertise, regulatory relief and external legitimacy in return for improved industry environmental performance. Government can also play a broader role in encouraging, facilitating, rewarding and shaping a variety of partnership forms.

In Europe, negotiated agreements between government and individual companies or industry sectors have rapidly become one of the principle environmental management and policy instruments at a national level. The goal here is often to fill in the gaps not covered by regulations, to encourage companies to go beyond compliance or even to find a more politically acceptable alternative to regulation. Public voluntary programs also fit the partnership model, with government offering technical support and public relations benefits in return for industry commitments to improved environmental performance. In the United States they have also become an important component of "Reinventing Environmental Regulation" (Clinton and Gore Jr 1995) under which government seeks to replace the typically adversarial relationship which has existed between business and government in that country with a more co-operative approach based on trust and reciprocity.

Civil regulation and participatory governance

As defined by Murphy and Bendall (1998: 8): "civil regulation is where organisations of civil society, such a NGOs, set the standards for business behaviour. Enterprises then choose to adopt or not to adopt those standards". Those who advocate a greater role for civil regulation argue that the regulatory state is starved of resources, lacking in political will, and incapable of reaching the many businesses who can now operate outside national territorial boundaries. The goal of civil regulation is to fill the vacuum left by the contracting state, and to compensate for "the deficit of democratic governance that we face as a result of economic globalisation" (Bendell, 2000: 201). As such, there is considerable overlap between this perspective and some aspects of regulatory pluralism, discussed above.

Under civil regulation, the various manifestations of civil society act in a variety of ways to influence corporations, consumers and markets, often by-passing the state and rejecting political lobbying in favour of what they believe to be far more effective strategies. Sometimes NGOs take direct action, usually targeted at large reputation sensitive companies. Greenpeace's campaign against Shell's attempted deep sea disposal of the Brent Spar oil rig,

is one example. Sometimes, they boycott products or producers deemed to be environmentally harmful, as with the effective boycott of Norwegian fish products organised by Greenpeace in protest against that nation's resumption of whaling. Market campaigning, focusing on highly visible branded retailers, is a particularly favoured strategy. Less so, are campaigns which seek to provide a market premium for "environmentally preferred" produce, due largely to the unwillingness of consumers to support such a strategy. More recently certification programs such as the Forest Stewardship Council are "transforming traditional power relationships in the global arena. Linking together diverse and often antagonistic actors from the local, national and international levels…to govern firm behavior in a global space that has eluded the control of states and international organizations" (Gereffi *et al* 2001).

However, the evolving role of civil regulation has not taken place entirely divorced from state intervention. On the contrary, either in response to pressure from the institutions of civil society or in recognition of the limits of state regulation, governments are gradually providing greater roles for communities, environmental NGOs and the public more generally. Thus a number of next generation policy instruments are geared to empower various institutions of civil society to play a more effective role in shaping business behaviour. In effect, they facilitate civil regulation (and regulatory pluralism). These include public participation provisions under the various USA Reinventing Environmental Regulation initiatives, CRTK legislation, some second generation voluntary agreements which contemplate a significant role for third parties, and some forms of environmental partnership in which the public, or public interest groups, are major players.

Arguably, the most powerful forms of civil regulation are those in which environmental NGOs or communities have the capacity to threaten the social licence and reputation capital of large corporations. Sometimes they do so independent of government, but more commonly government, and next generation instruments, play a crucial facilitative role.

Ecological Modernisation and the "greengold thesis"

Another emerging paradigm is what has become known as ecological modernisation. In contrast to many analyses which suggest that a radical reorientation of our current economic and social arrangements will be necessary to avert ecological disaster, ecological modernisation suggests that ecologically sound capitalism is not only possible, but worth working towards. This good news message may indeed be a substantial part of the attraction of the ecological modernisation approach. Beyond this, the main tenets of this perspective are difficult to encapsulate, since writings under the ecological modernisation banner are diverse and draw from a number of different schools of thought.

For present purposes I focus on its core, which emphasises how strategies such as eco-efficiency can facilitate environmental improvements in the private sector (particularly in relation to manufacturing) by simultaneously increasing efficiency and minimising pollution and waste. This will require switching to the use of cleaner, more efficient and less resource-intensive technologies, shifting away from energy and resource-intense industries to those which are value and knowledge-intensive, anticipatory planning processes, and the "organisational internalisation of ecological responsibility" (Cohen 1997: 109).

However, this is not to suggest that markets unaided, or past environmental policy, will provide the appropriate messages and incentives to enable industry to achieve these goals. On the contrary, such an outcome requires action on a number of fronts, and government regulation in particular will need to promote innovation in environmental technology. In terms of public policy prescriptions, Mol (one of the most influential proponents of this perspective) suggests two directions that should be pursued. First, state environmental policy must focus not on prescription but rather on prevention and participatory decentralised decision-making,

which “creates favourable conditions and contexts for environmentally sound practices and behaviour on the part of producers and consumers” (Mol 1995: 46, see also Mol 2001). The second option includes a transfer of responsibilities, incentives and tasks from the state to the market, which provides the flexibility and incentives to enable more efficient and effective outcomes. Under this approach “the state provides the conditions and stimulates social ‘self-regulation’, either via economic mechanisms and dynamics or via the public sphere of citizen groups, environmental NGOs and consumer organisations” (Mol 1995: 47).

In these respects, the ecological modernisation literature has resonance with a number of other perspectives described in this chapter, especially civil society, regulatory pluralism and to some extent, reflexive regulation. However, on one fundamental issue, ecological modernisation departs substantially from these other perspectives, namely in its assumption that by following the precepts of ecological modernisation there will be a “dissolution of the conflict between economic progress and responsible environmental management because it will be possible to achieve both objectives simultaneously” (Cohen 1997: 109).

In arguing that the business community could successfully combine the objectives of environmental protection and economic growth, ecological modernisation resonates with the views of a variety of business strategists, environmental commentators and corporations who subscribe to what has become known as the “greengold thesis”. This group argues that by preventing pollution and thereby cutting costs and avoiding waste directly, by more effective risk management, by gaining an increasing share of expanding “green markets” or price premiums within them, and by developing the environmental technology to compete effectively in the global environmental market businesses can achieve win-win outcomes, gaining economically from environmental improvements (Schmidheiny 1992, Porter and Kramer 2006). In the context of climate change, for example, this may involve a focus on in “win-win” approaches that reduce greenhouse-gas emissions at the same time as they address other societal objectives.

Of particular influence have been the views of Porter (1991), who has argued that in a highly regulated world, innovative companies can acquire competitive advantages or cut costs by developing novel methods of reducing environmental problems. Notwithstanding some differences of emphasis, a common refrain has been that going beyond compliance was both good for business and good for the environment. However, both Porter and the ecological modernization theorists acknowledge that there may be more scope for win-win outcomes in some sectors and circumstances than in others (Porter 1998; and Baylis *et al* 1998).

A number of next generation instruments might facilitate win-win outcomes. For example, instruments which harness market forces, so as to encourage rather than inhibit commercial drive and innovation (including many economic instruments such as carbon trading and performance standards) meet with approval. Various other flexible and arguably cost-efficient mechanisms for curbing environmental degradation such as self-regulation, information-based strategies, the use of liability rules and other financial instruments, are consistent with Mol’s two directions summarised above. Government’s role includes nudging firms towards cleaner production, for example short term subsidies to ‘kick start’ new, environmentally benign technologies, heightening their awareness of environmental issues, and encouraging the reordering of corporate priorities in order to reap the benefits of improved environmental performance.

The question of whether in a particular set of circumstances, there are opportunities for win-win outcomes or not, is both highly contentious and important, because in the absence of such opportunities, it cannot be assumed that organisations will voluntarily become greener, or that they have any incentive to pursue beyond compliance environmental strategies in the absence of external pressure to do so. As regards the latter issue, Reinhardt (2000) has demonstrated that it makes sense to pursue beyond compliance policies if they increase the enterprise’s

expected value, or if they appropriately manage business risk, but in a substantial number of circumstances, they do neither (see also Vogel 2005).

Regulatory Reform: The Never Ending Journey

While each of the perspectives described above provides insights concerning how best to approach the task of regulatory reconfiguration, there are considerable disparities between them, and none provides unproblematic or comprehensive answers as to what next generation environmental regulation should involve, or to the normative question: what should be the implications of "non-state law" (or in the language of this paper, "surrogate regulators") for the legislature?

Nevertheless, both the commonalities and the differences between these perspectives provide insights as to how best to approach the journey ahead. To begin, there is general agreement that returning to the policies of the past is not an option. A common theme is that traditional State regulation is not suited to meet many contemporary policy needs (although as we emphasise below, it still has a role to play), and indeed it is partly in response to the perceived shortcomings of the regulatory *status quo*, that each of these conceptual frameworks evolved. As Fiorino (1999: 464) puts it: "underlying each strand in the literature is the belief that the increased complexity, dynamism, diversity, and interdependence of contemporary society makes old policy technologies and patterns of governance obsolete".

There is also recognition that regulated enterprises have a diversity of motivations and that it cannot be assumed (as in some versions of command and control regulation) that deterrence (a traditional tool of the State) is the principal weapon available to regulators and policy makers. Notwithstanding differences of emphasis, there is a shared awareness of the complexity of motivational forces influencing environmental behaviour, and of the need to develop instruments and strategies to take account of this. In particular, they recognise that the state is only one source of law creation (broadly defined) and that its role may be, in Osborne and Gaebler's terms, more about steering than rowing.

For example, each of these perspectives to a greater or lesser extent, recognises the importance of such broader motivational drivers as the effects of negative publicity, informal sanctions and shaming, incentives provided by various third parties, the significance for private enterprise of maintaining legitimacy, and the necessity to maintain co-operation and trust. As a result, they all recognise that changing motivation is not something that can be achieved by the state alone.

Again, some instruments and approaches are common to almost all of these perspectives. For example, informational regulation (which empowers third parties) is important to reflexive regulation, civil regulation, and regulatory pluralism, is supportive of environmental partnerships and at least consistent with the goals of ecological modernisation. Similarly, process based strategies such as EMS (which places greater emphasis on self-regulation with state oversight) are central to reflexive regulation, many environmental partnerships, and ecological modernisation and, as a form of industry self-management, to some variants of regulatory pluralism. And none of these perspectives would deny that there is a role for public interest groups, although their role is conceived as more central in the case of environmental partnerships, regulatory pluralism and civil regulation, than it is for reflexive regulation or ecological modernisation.

And in contrast to traditional forms of environmental regulation, each of the perspectives examined above, sees virtue in engaging with environmental leaders and in encouraging or rewarding their further improvement rather than focusing only on bringing laggards up to

compliance. This is perhaps most obvious in the case of environmental partnerships (which often only the best firms are willing to join) but regulatory pluralism and civil regulation also reward environmental leaders (for example in terms of reputation, or market advantage, or share price premium), as well as seeking to shame or otherwise provide negative incentives to laggards. Reflexive regulation, while less explicit, builds in processes which often lead to continuous improvement, while ecological modernisation, with its emphasis on win-win outcomes and cleaner production, also seeks to encourage best practice rather than merely minimum standards and compliance.

However, when it comes to identifying where the focus of regulatory reconfiguration should be, there is much less agreement, and very different policy prescriptions flow from different perspectives. In terms of reflexive regulation, the perceived role of the state is to establish regulatory structures that strengthen the capability of individual institutions or enterprises for internal reflection and self-control. For regulatory pluralism, it is a plethora of instruments which enable the state to steer not row, and to harness the capacities of second and third parties to more effectively fill the space vacated by the contracting regulatory state. From a civil regulation perspective, the state's principal role is to provide mechanisms that will empower the institutions of civil society to make corporations more accountable. A partnership perspective would seek out opportunities to build reciprocal gains from co-operation with the state playing an additional role as facilitator. For ecological modernisation, the aspiration is to create incentives which will facilitate industry moving towards sustainability using new technologies and techniques of production, with economic and environmental considerations being mutually reinforcing.

My own perspective is that each of the above frameworks has something valuable to offer and that none of them is "right" or "wrong" in the abstract. Rather, they make differing contributions depending upon the nature and context of the environmental policy issue to be addressed. For example, ecological modernisation has most to offer where industry can demonstrably benefit economically from environmental improvements (the so called win-win scenario) but is far less persuasive in the variety of contexts where this is not the case. Civil regulation has considerable power when it comes to changing the behaviour of large reputation-sensitive companies, who are vulnerable not only to shaming, but also to market forces and consumer pressure, but has far less to offer when dealing with the environmental excesses of many SMEs and firms which are not vulnerable to such pressures. Reflexive regulation is demonstrably effective in dealing with complex and sophisticated environmental issues such as regulating major hazardous facilities, but may be redundant when it comes to more traditional challenges. Environmental partnerships have attractions where both partners can see common ground and mutual benefits from constructive engagement, but not where there are irreconcilable philosophical differences between stakeholders (Poncelet 1999; and Poncelet 2001).

The limitations of each of the major policy innovations, and of the conceptual frameworks that drive next generation regulation, lead to a plea for pragmatism and regulatory pluralism. None of the policy instruments or perspectives we have examined work well in relation to all sectors, contexts or enterprise types. Each has weaknesses as well as strengths, and none can be applied as an effective stand alone approach across the environmental spectrum. In part, such a conclusion suggests the value of designing complementary combinations of instruments, compensating for the weaknesses of each, with the strengths of others, whilst avoiding combinations of instruments deemed to be counterproductive or at least duplicative. This indeed was the central message of my previous work with Sinclair, embedded within the pluralist perspective (Gunningham and Sinclair 1999; and Gunningham and Sinclair 1999a). From this perspective, no particular instrument or approach is privileged, whether it be reflexive regulation, civil regulation, or the tenets of ecological modernisation. Rather, the

goal is to accomplish substantive compliance with regulatory goals by any viable means using whatever regulatory or quasi-regulatory tools that might be available, including any or all of the next generation instruments. As Parker (2000) points out: “the objective is to steer corporate conduct towards public policy objectives in the most effective and efficient way, without interfering too greatly with corporate autonomy and profit, rather than fruitless expenditure of government and business resources on traditional styles of regulation that ignore the effects of indigenous regulatory orderings”.

However, even in circumstances where one particular perspective (or combination of perspectives), and one set of policy tools seem well suited to apply to a particular problem, there may still be a substantial gap between theory and practice. Indeed, some of the policies at the very heart of next generation regulation are largely untested and their efficacy is uncertain. This is certainly the case with environmental management systems, which play an important role under a number of the frameworks we reviewed above. There is only very limited evidence available of how they work in practice (mainly in relation to major hazard facilities) and there remains a risk that they will produce the trappings of self-reflection and internal control without achieving more than business as usual. Moreover, it has proved very difficult to develop incentives sufficient to persuade substantial numbers of organisations to participate in an EMS-based alternative regulatory track. And we know even less about whether or to what extent a “slimmed down” version of this approach might be applied to SMEs.

Some second generation agreements are much better designed but we still have incomplete evidence as to whether, or under what circumstances, they will be successful. Indeed, there still remain considerable risks of wrong turnings and of re-enacting the mistakes of previous decades. Much the same can be said for many environmental partnerships (Gunningham and Sinclair forthcoming). Even informational regulation, which has been generally hailed as a success story, has been challenged by its critics as not demonstrably achieving many of its objectives, at least in some jurisdictions (Antweiler and Harrison 1999). The limitations of our current experience is even greater in the case of SMEs, where the empirical picture remains extremely unclear.

Thus much of our knowledge about policy instruments and in particular about what works and when, is tentative, contingent and uncertain. This suggests the virtue of adaptive learning, and for treating policies as experiments from which we can learn and which in turn can help shape the next generation of instruments. From this perspective, following Fiorino (1999: 468), it is important to ask: “how may mechanisms that promote policy-learning …be strengthened? To what extent do policy-making institutions provide mechanisms for learning from experience and altering behavior based on that experience?”. This might imply, for example, monitoring, ex post evaluation and revision mechanisms and “building reliable feedback mechanisms into policy-making, strengthening learning networks, creating conditions that would lead to more trust and more productive dialogue and building enough flexibility into the policy system so that it is possible to respond to lessons drawn from one’s on experience or that of others” (Fiorino 1999: 468).

In particular, adaptive learning is heavily dependent on the depth and accuracy of an agency’s statistical database and other information sources. Only with adequate data collection and interpretation, can one know how effective or otherwise a particular regulatory strategy has been. There will be a need to establish databases which provide more accurate profiles of individual firms, hazards and industries. Environmental Information Systems have the potential to play a key role here. Work in this area is still in its embryonic stage, but recent initiatives suggest it is developing quite rapidly. Of particular note is the Finnish compliance monitoring system (VAHTI), which comprises a database for the input and storage of

information on the environmental permits of industry and their discharges into water, emission to air and solid wastes.

Finally, I return to the role of direct state regulation under a next generation approach. I do so because it is important not to lose sight of the residual but nevertheless important role that command and control regulation can and should continue to play in environmental policy. It is only the state which can impose criminal sanctions and the full weight of the law, and only the state which, under statute, may have power of entry into private property to inspect, take samples and gather evidence of illegality more generally. While there may be some circumstances where, as advocates of civil regulation, reflexive regulation and regulatory pluralism would argue, far more can be achieved by various other forms of state and non-state action, this if certainly not the case across the board.

For example, there remain situations where SMEs in particular, need the highly specific and concrete guidance that specification standards can provide. And in the case of large companies the most important "step" changes in environmental performance in industries such as pulp and paper, have been achieved through mandated technological change (Gunningham *et al* 2002). Nor should it be forgotten that, according to various surveys, the single most important motivator of improved environmental performance is regulation. The more general conclusion, as the USA EPA (2000: 4) has recognised, is that: "in some cases, nationwide laws and regulations will continue to be the best way to reduce risk. But in others, tailored strategies that involve market based approaches, partnerships, or performance incentives may offer better results at lower costs".

The broader point is that many less interventionist strategies are far less likely to succeed if they are not underpinned by direct regulation. For example, under reflexive regulation, some enterprises may be tempted to develop "paper systems" and tokenistic responses which "independent" third party auditors may fail to detect (O'Rourke 2000). However, the threat of sanctions if they fail to deliver on performance targets set by the state will substantially reduce the risk of free riding. Again there is evidence that information based strategies cannot necessarily replace traditional regulation and enforcement practices but rather that the two instruments work best when they are used in a complementary combination (Foulon *et al* 1999). So too in the case of small business, the fear of regulation or its enforcement can be used to good effect to complement other more innovative approaches.

Once again, what we are witnessing is not the demise of the regulatory state but a regulatory reconfiguration, in which command and control retains a place, albeit no longer at centre stage but rather as a complement to a range of next generation policies. But this reconfiguration remains a work in progress. Certainly, our knowledge of what works and why is much greater than it was a decade ago,. Nevertheless, the journey to best practice environmental regulation is far from complete. Notwithstanding the considerable promise of the new generation of environmental policy tools, the road to regulatory reform is long and tortuous, and the journey is far from over.

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