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Regulatory Reform and Reflexive Regulation: Beyond Command and Control

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Regulatory Reform and Reflexive Regulation: Beyond Command and Control

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Introduction

Since the early 1990s, the architecture of environmental regulation in North America, Western Europe and Australasia has changed substantially. In the USA the Clinton-Gore Reinventing Environmental Regulation initiative, in Canada, a version of 'smart regulation', in Europe, negotiated agreements, environmental partnerships and voluntary initiatives and in Australia, Accredited Licencing and Environmental Improvement Plans, are amongst the best known examples (Gunningham and Sinclair 2002, Ch 6). In addition, many developed countries have introduced a plethora of informational regulation initiatives, various forms of industry self-management and a variety of policy instruments built around harnessing third parties as surrogate regulators (Capital University Law Review 2001). These various "next generation" environmental instruments have substantially reconfigured the regulatory landscape.

This re-configuration is still in process, and the next generation instruments that have emerged are 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 first generation environment regulation, seek to encourage and reward enterprises for going beyond compliance with existing regulation. And the large majority exemplify the changing role of the state, which in the domestic environmental arena at least, is engaged in less direct intervention in the affairs of business than previously.

These changes have, in broad terms, been attempts to design more efficient and effective (and occasionally more legitimate) regulation. But they have been developed in an era in which neo liberalism has become the dominant political discourse (particularly in the Anglo-Saxon jurisdictions) and in which there are repeated efforts to "roll back" the regulatory state. In consequence, it is no coincidence that many second generation instruments have favoured "light-handed regulation" and in some cases, the replacement of government intervention by industry self-regulation.

Nor is it surprising that many such instruments have attempted to go beyond, or replace, traditional "command and control" regulation. Indeed, command and control was both the central pillar of "first generation" regulation, and anathema to neo-liberals. Its critics suggest that: (i) regulatory agencies, particularly in the United States, adopted an adversarial stance towards duty holders which often engendered regulatory resistance and proved counterproductive (Bardach and Kagan, 2002); and

(ii) command and control regulation, both in the United States and elsewhere, is often inflexible and excessively costly for business to comply with. Indeed, centralised, bureaucratic standard-setting - the centre piece of traditional forms of command and control - is now routinely castigated by its critics for being "inherently inefficient and cumbersome" (Elliott 1994, p. 1840) and for failing to deliver many of the environmental benefits it promised.

The critique of command and control legislation can be seriously overstated. Criticism is often directed at the relatively unrepresentative adversarial approach adopted in the United States, and fails to acknowledge a significant movement towards more flexible and cost-effective forms of regulation that avoid the worst excesses of highly prescriptive versions. Moreover some critics conveniently overlook the fact that regulatory agencies are often constrained or prevented from performing their mandate by lack of resources or other factors entirely beyond their control. Nor should it be forgotten that, notwithstanding the serious difficulties confronting many regulatory agencies, command and control regulation has achieved some significant victories in halting, or at least slowing, some forms of environmental degradation (Cohen 1986, p. 174; and Ackerman and Steward 1985).

But the relative strengths and weaknesses of command and control vary substantially with the context. In broad terms, the more complex the environmental problem, the more obvious

become the limitations of command and control to address it. For example, it is one thing to regulate point-source pollution caused by large readily identifiable industrial facilities operating within a single jurisdiction – and by and large, command and control has done this reasonably well (Gunningham *et al* 2003, pp. 44-51). But it is quite another to apply the same approach to diffuse source pollution from agriculture, to biodiversity loss on private land, or to numerous natural resource management problems involving public goods - especially those that can only be addressed within a multi-level governance framework.

A particular criticism of command and control is that it lacks reflexivity and the capacity to nurture contextualized learning and mutual adjustment between stakeholders. This is not a particular problem if one simply wants a given industry sector to adopt an established environmental technology to curb its point-source pollution (a typical "first generation" regulatory fix), but it is a large, possibly insurmountable problem when it comes to regulating complex environmental issues such as those described above. Unsurprisingly, much of the literature on reflexive law documents the incapacity of the regulatory state to deal with such issues. As Teubner (1983) and others (Teubner *et al* 1994) 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. Put in more general terms: "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, p. 10).

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 minimize … harms and maximize … benefits" (Orts 1995, p. 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. At its core are participatory procedures for securing regulatory objectives and mechanisms that facilitate and encourage deliberation and mutual learning between organizations (Yeung 2007).

This chapter examines a variety of "next generation" policy instruments, intended to overcome, or at least to mitigate, the considerable problems associated with command and control and better address market failures in the name of the public interest. The second section examines five frameworks, or lenses, through with one might better understand this regulatory reconfiguration, the "next generation" mechanisms that have evolved and their relationship with reflexive law. It shows how, in stark contrast to command and control,

each of these approaches seeks to achieve its environmental goals through stimulating 'second order effects' on the part of actors and increases the possibilities for reflexivity. The third section takes a more critical perspective, noting that not all second generation environmental regulation adopts a reflexive approach, that policy makers do not necessarily adopt reflexive instruments primarily because they incorporate this characteristic, and that reflexive regulation is not necessarily effective in achieving its policy goals. This leads, in the final section, to an exploration of the circumstances where reflexivity is likely to make its greatest contribution, and to a recognition of the limits our existing knowledge as to how best to design reflexive regulation to achieve best results. The chapter concludes: that in situations of complexity (including those involving public goods and multi-level governance challenges) there may be no credible alternative but to invoke reflexive law; that (returning to the five frameworks) different forms of reflexive regulation may be appropriately invoked in different circumstances; and that in some circumstances, complementary combinations of reflexive regulation and other policy instruments may achieve better results that reflexive regulation alone.

The regulatory reconfiguration which this chapter describes, has taken place primarily at state, regional and local levels rather than in the global context. It is a development closely connected with the nation state. As such this chapter does not engage directly with questions of how best to address the environmental challenges relating to global public goods. Nevertheless, the history it describes, the insights it provides concerning how reflexive approaches play out within the nation state, and the transition it tracks from regulation to governance, enable lessons at the national or local level to be connected to the study of public

goods globally. As such it provides a useful precursor to the broader discussion of those issues later in this volume.

Next Generation Regulation: Five Frameworks

Process based and meta-regulation

One of the most striking changes that have taken place concerns the *type* of standards contained in environmental regulations. Traditionally, under command and control, regulators enforced either prescriptive standards (which tell duty holders precisely what measures to take) or to performance standards (which specify outcomes or the desired level of performance). In contrast, since the early 1990s, there has been an increasing reliance upon what are variously termed 'process', 'systems' and 'management based' standards. These are standards that require firms to develop internal planning and management practices designed to achieve regulatory goals. Such standards have the considerable attractions of providing flexibility to enterprises to devise their own least-cost solutions, of giving them incentives to go beyond compliance with minimum legal standards, and of being applicable to a broad range of circumstances and to heterogeneous enterprises (Coglianese and Nash 2006).

Process based standards identify a particular series of steps (or processes), to be followed in the pursuit of environmental protection. The most important example is the approach to managing hazards by incorporating the steps of hazard

identification, risk assessment and risk control. Other examples include: the requirements for employers to provide information, instruction, training and supervision; to monitor environmental matters, and to keep information and records relating to them. In their more advanced forms, process based standards involve a holistic and *systematic* approach to managing environment across the organisation as a whole – usually through a formal environmental management system such as ISO 14001. Of particular importance will be the setting of objects and targets, the establishment of a management program, procedures for achieving the targets, and measurement techniques to ensure that they are reached. Continuous measurement, benchmarking and the capacity for system self-correction are essential ingredients of such an approach.

Unlike prescriptive and performance based standards, which only require enterprises to achieve minimum standards and do not encourage reflection or provide any incentives or encouragement to go beyond those minima, process based standards encourage both reflection and continuous improvement. Crucially, process based approaches have the capacity to influence the internal self-regulation and norms of organizations, in order to make them more responsive and reflexive (rather than merely reactive) to environmental concerns. For example, environmental management systems generally adopt a 'plan, do, check, act' approach with continuous improvement feedback loops. In doing so they seek to stimulate modes of

self-organisation within the firm in such a way as to encourage internal self-critical reflection and establish processes and procedures that encourage self-reflexive learning and thinking about reducing environmental impact (Orts 1995; Bluff and Gunningham 2004).

While this approach is increasingly embedded in environmental regulation, it is equally to be found in many environmental self-regulatory initiatives. The international chemical industry's Responsible Care program (Gunningham and Grabosky 1998, Ch. 6), the Institute of Nuclear Power Operations self-regulatory initiative (Gunningham and Rees 1997), numerous farm safety plans, environmental management systems and other Voluntary Environment Management Arrangements (Mech and Young 2001) and a number of the negotiated agreements and voluntary initiatives to be found within the European Union (Gunningham and Sinclair 2002, Ch. 6) are equally build around process and systems based strategies and include a variety of mechanisms to generate internal compliance and self-organisation.

Perhaps the most advanced manifestation of this form of regulation (or combination of regulation and self-regulation) is the "safety case", which was first instituted in the UK and later adopted in the European Union with regard to Major Hazard Facilities under the Seveso II Directive. What is distinctive about this approach is that responsibility is placed on the operator of a Major Hazard Facility to submit their

plans to the regulator (or conceivably a third party) for approval (ie to “make their case” that they have addressed all hazards and ensured that the facility is as safe and capable of minimizing its environmental impact, as practicable). Those plans are then audited and, if satisfactory, form the basis for accreditation. The regulator's role is not to prescribe what action should be taken by the operator but to accredit the Safety Case and oversee its implementation. Although there is no single "safety case" model (for example, see Pitblado and Smith 2001; Rasche 2001), this general approach usually includes "some mechanism to ensure that the enterprise adopts a comprehensive and systematic risk analysis, and then adopts controls and develops a management system based on that analysis" (Wilkinson 2002, p. 6).

Such a strategy could be viewed as “enforced self-regulation” (Ayres and Braithwaite 1992) but is more usefully treated as a type of "meta-regulation" or "meta risk management" whereby government, rather than regulating directly, risk-manages the risk management of individual enterprises. Under such an approach, the role of regulation ceases to be primarily about government inspectors checking compliance with rules and becomes more about encouraging the industry to put in place environmental (and safety) management systems which are then scrutinized by regulators. Rather than regulating prescriptively, meta-regulation seeks by law to stimulate modes of self-organisation within the firm in such a way as to encourage internal self-critical reflection about its safety, health and environmental

performance. In so doing, it "forces companies to evaluate and report on their own self-regulation strategies so that regulatory agencies can determine [that] the ultimate objectives of regulation are being met" (Parker 2002, p. 246). As such, it provides "self-regulation standards against which law can judge responsibility, companies can report and stakeholders can debate" (Parker 2000, p. 246). Thus while this approach bears some resemblance to process based regulation, it is distinct from it in that the onus is on the operator to "make their safety case" and the regulator's role, rather than inspecting against process standards prescribed by legislation (such as a safety management system with specified characteristics) is to audit against the operator's own safety case criteria. Indeed, under meta-regulation, the primary role of the inspectorate becomes that of "regulating at a distance", relying upon the organisation itself to put in place appropriate systems and oversight mechanisms, but taking the necessary action to ensure that these mechanisms are working effectively.

Meta regulation is in some respects the quintessential form of reflexive regulation. It recognizes that the capacity to deal with complex organisations and complex environmental of safety problems through rules alone is limited, and that it would be better to design a form of responsive regulation that induces companies themselves to acquire the specialised skills and knowledge to self-regulate, subject to state and third party scrutiny. Indeed some suggest that the only viable means of achieving social goals such as environment protection is for organisations and companies, who

know their own operations and facilities better than anyone, to take on the regulatory tasks themselves subject to government oversight. In this vein, writers variously talk about the need to engage with "organisational or management failure" (Mitchison 1999, p. 32) rather than merely with technical measures, and to encourage and facilitate greater "reflexivity" on the part of the organisation as a whole (Teubner 1993, p. 239; Teubner *et al* 1994), and to encourage companies not only to design their own self-regulatory processes, but also "to engage in self-evaluation of those processes as an integral part of their broader regulatory requirements" (Parker 2000, p. 283). Thus, while mandated management systems and risk assessment are steps in the direction of reflexive regulation, meta-regulation exemplifies it.

Informational regulation

An increasingly important alternative or complement to conventional regulation is what is becoming known as "informational regulation" (Sabel *et al* 2000), which has been defined as "regulation which provides to affected stakeholders information on the operations of regulated entities, usually with the expectation that such stakeholders will then exert pressure on those entities to comply with regulations in a manner which serves the interests of stakeholders" (Kleindorfer and Orts 1996, p. 1). In contrast to command and control, informational regulation involves the state encouraging (as in corporate environmental reporting) or requiring (as with community right to know) the provision of information about environmental impacts

but *without* directly requiring a change in those practices. Rather, this approach relies upon economic markets and public opinion as the mechanisms to bring about improved corporate environmental performance. As such, informational regulation "reinforces and augments direct regulatory monitoring and enforcement through third party monitoring and incentives" (Kleindorfer and Orts 1996, p. 1).

Informational regulation is targeted almost exclusively at large enterprises, and in particular at public companies (which are vulnerable to share price and investor perceptions) and those who are reputation sensitive, because is it essentially these types of enterprise which are most capable of being rewarded or punished by consumers, investors, communities, financial institutions and insurers on the basis of their environmental performance. The overall strategy is to empower these groups to use their community and/or market power in the environmental interest by providing them with a sufficient quality and quantity of information as to enable them to evaluate a company's environmental performance. Such a strategy becomes even more effective as companies recognise the importance of protecting their "social license" and the need to improve their environmental performance in order to do so (Gunningham *et al* 2003, Ch. 3).

Informational regulation can take a number of different forms. Probably the most successful and best known of these is the use of Community Right to Know and

pollution inventories. The basis of these policy instruments is to require individual companies to estimate their emissions of specified hazardous substances. This information is then used to compile a publicly available inventory, which can then be interrogated by communities, the media, individuals, environmental groups and other NGOs who can ascertain, for example, the total emission load in a particular geographical area, or the total emissions of particular companies. The latter information in particular, enables comparison of different firms' emissions and can be used to compile a "league table" which identifies both leaders and laggards in terms of toxic emissions. Such benchmarking exercises, facilitated by easy access to the relevant information, enable the shaming of the worst and rewarding of the best companies. The evidence suggests that well-informed communities use this information both to ensure tight enforcement of regulations and to pressure companies to improve their performance even in the absence of regulations. The foremost example of this approach is the USA Toxic Release Inventory (TRI) which requires industrial enterprises to estimate and disclose their level of releases of over six hundred chemicals.

Informational regulation is growing rapidly both within and outside the nation state, with the Global Reporting Initiative being the most recent and arguably the most important international initiative of this type (Brown *et al* 2007). This growth is partly because the success of some of the early initiatives has generated interest in their

expansion, partly because informational regulation offers a cost effective and less interventionist alternative to command and control in a period of contracting regulatory resources, and partly because of its capacity to empower communities and NGOs.

But beyond all these, a critical element of informational regulation is its capacity to stimulate reflexivity on the part of business. 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 realized that there was a business opportunity to make pollution prevention pay, through reuse, recycling, the substitution of different substances and the use of fewer chemicals. Thus a strategy which involved no requirement to do anything other than estimate discharges and disclose them served to generate internal organisational change which in turn resulted in substantially improved environmental performance.

Similarly a number of other information based initiatives developed by government seek to "encourage corporations to internalize the goal of environment protection

and … promote the internal management practices that are essential in achieving these goals" (Hirsch undated, p. 4) by such means as: informing investors about corporate environmental performance and liability risks; informing consumers about the environmental quality of products; and publicly recognising those who have successfully internalized environmental goals. In all these cases, the internalization of environmental norms and reflexive behaviour is encouraged "because information is the medium of flows within the firm resource allocation system" (Ruhl and Saltzman 2003, p. 843-4). Informational regulation operates not only by encouraging reflexivity on the part of regulated enterprises but also by expanding the reflexive capacity of key actors in civil society, such as NGOs and environmental activists. In all these dimensions, "government's role, in a reflexive perspective, is to ensure that appropriate information is generated, conveyed and exchanged" (Stewart 2001, p. 131).

Ecological modernization

Another paradigm that emerged in the 1990s and has since become increasingly influential is ecological modernization. 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 modernization 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 modernization approach. Beyond this, the main tenets of this perspective are difficult to encapsulate, since writings under the ecological modernization banner are diverse and draw from a number of different schools of thought.

For present purposes the focus is on its core, which emphasizes 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 internalization of ecological responsibility" (Cohen 1997, p.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, ecological modernization suggests that 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

decentralized decision-making, which "creates favourable conditions and contexts for environmentally sound practices and behaviour on the part of producers and consumers" (Mol 1995, p.46). 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, p.47 and see also Mol and Sonnenfeld 2000).

In so arguing, many proponents of ecological modernization place considerable emphasis on its reflexive capabilities, suggesting that:

> Rather than dismantling the foundations of industrial societies, the only viable alternative to solve the ecological crises – the continuous burdening of the sustenance base of the planet – is to fully explore the potential of wealth creation. This would be done through the use of one central source of dynamism of modernity: the *reflexivity* of knowledge appropriation. The use of rational capabilities should allow us to install a process of continuous revaluation and redesign of modern institutions. Over time, systems production and consumption

> would be redefined according to ecological requirements, besides economic and technical ones. The intensification of reflexive thinking would, ultimately, allow modern societies to redefine the rules governing the economy, as well as its social extensions (Orsato and Clegg, 2005, p. 262).

Thus far, the ecological modernization literature has resonance with a number of other perspectives described in this chapter. However, on one fundamental issue, ecological modernization departs substantially from other perspectives, namely in its assumption that by following the precepts of ecological modernization 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, p.109).

In arguing that the business community could successfully combine the objectives of environmental protection and economic growth, ecological modernization 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 (Smart 1992; Schmidheiny 1992). 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; Baylis *et al* 1998; and for a more nuanced view, Reinhardt 2000).

A number of next generation instruments are consistent with this general approach. For example, instruments which harness market forces, so as to encourage rather than inhibit commercial drive and innovation (including many economic instruments and performance standards) meet with approval. And 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. In this perspective, government's role includes nudging firms towards cleaner

production, heightening their awareness of environmental issues, providing them with financial incentives (which at the margin may be crucial), and encouraging the reordering of corporate priorities in order to reap the benefits of improved environmental performance.

The proponents of ecological modernization assume that these aspirations will be achieved through a reflexive process whereby enterprises respond strategically to programs and institution building based on the above precepts. This in turn will result "in the construction of new actors and environmental perceptions in the industry, a new technological selection milieu, and the building of new competencies within the enterprises" (Freier 2003, p. xxx). Institutional reflexivity lies at the core of this vision:

> Modern societies conceived their environmental problems and their regulatory and market opportunities by the institutionalization of doubt, Existing practices and problem-solving mechanisms are constantly questioned. The actors in modern society attach specific meaning to environmental problems, reflect on the social conditions of their existence and build specific institutions to change them. The ways problems are perceived as well as the institutions to solve them are reflected" (Freier 2003, p. 7).

Thus modern societies are seen as going through a process of institutional reflexivity and in so doing developing the institutional capacity to handle their ecological crisis (Mol 1995).

Smart regulation

Gunningham and Grabosky (1998) advocate the concept of "Smart Regulation", a term they use to refer to 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 using both commercial interests and NGOs, 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 (see generally Gunningham and Grabosky 1998). It is however, as Scott (2004) points out an approach that privileges state law rather than treating the state as simply one of a number of governance institutions.

To put Smart Regulation 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, p. 7), and that mechanisms of informal social control often prove more important than formal ones. Accordingly, the Smart Regulation perspective suggests that we should focus our attention on such broader regulatory influences as: 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.

This approach seeks to engage regulators to reflect on the most appropriate policy instruments to impose, on the intensively with which those instruments should be enforced, and on the potential to develop new instruments that may be better tailored to achieve their environmental goals (see in particular Gunningham and

Grabosky 1998, ch. 6). It also encourages and rewards reflection on the part of duty holders, both directly and by facilitating a wide range of stakeholders to exchange information and engage in dialogue to achieve their purposes. The example of the Environmental Improvement Plan in Box 1, illustrates these reflexive capabilities of Smart Regulation – in this case in an experiment which seeks to harness the power of the local community as a surrogate regulator, and to use a combination of process based, collaborative and informational regulation to achieve improved environmental outcomes.

Such 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. It resonates with 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 Smart Regulation, 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, reflexive 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, Ch. 6).

A substantial number of next generation instruments are consistent with the precepts of Smart Regulation, including the Canadian government's regulatory reform program under this banner (Government of Canada, 2005). Others, such as the regulatory flexibility initiatives established under the Clinton-Gore "Reinventing Environmental Regulation" initiative, were directly inspired by Osborne and Gaebler's (1992) concept of "steering not rowing". Both incorporate the quintessentially reflexive strategy of seeking to embed environmental values and processes within the corporate culture in such a way that it becomes self-regulating, relying upon oversight from local communities and perhaps third party auditors, to supplement or even replace direct regulation. Similarly, the approach adopted in Victoria under Environment Improvement Plans (Box 1 below) also follows the precepts of Smart Regulation and is reflexive in both conception and execution. More recently the European Community Regulation on chemicals and their safe use (European Community 2006) which deals with the **R**egistration, **E**valuation, **A**uthorisation and Restriction of **Ch**emical substances (REACH) is also built very much in the mode of Smart Regulation.

Box 1

Environmental Improvement Plans in Victoria

In 1993 the Australian state of Victoria introduced a new policy instrument, the Environment Improvement Plan (EIP), designed to reduce polluting emissions from major industrial sites. As described by the Victorian Environmental Protection Authority (hereafter 'the EPA') an EIP:

> … [I]s a public commitment by a company to enhance its environmental performance. The plan outlines areas of a company's operations to be improved and is usually negotiated in conjunction with the local community, local government, EPA and other relevant government authorities. Where possible, an EIP contains clear timelines for completion of improvements and details about on-going monitoring of the plan. Improvements may include new works or equipment, or changes in operating practices. Monitoring, assessments and audits are undertaken to plan and support these improvements (VEPA 1993a, p. 1).

This initiative represented a significant departure from conventional command and control regulation in two key respects. First, it emphasised a systematic approach to pollution prevention, intended to influence management practices, to "make industry think" and to encourage greater self-management. Second it involved a significant shift from the traditional bipartite relationship between regulators and regulatees to a tripartite approach involving disclosure of information to, and consultation with, local communities. The assumption was that the active participation of local stakeholders is more likely to be sensitive to the complexities of an environmental problem and its local context than centralised regulatory decision-making.

Studies suggest that EIPs have successfully pooled stakeholder knowledge in ways that produce innovative ideas and facilitate the successful negotiation of EIP actions and targets and provided a framework for enterprises to identify and think through solutions to environmental problems in more strategic and reflective ways. For example, two stakeholders, encapsulating a common view, reported:

> [T]he EIP process puts things on the agenda…it requires you to identify objectives and targets and so forth so the EIP is good for making sure that improvement initiatives are identified and remain on the radar so it gives you a structure in which to improve your environmental performance. – Industry representative.

> [I]ts good for companies…it helps them think about how they can improve by focusing on process rather than outcomes…and once companies start on the path of improvement they realise there are business benefits. – VEPA officer.

The evidence suggests that an industry's long term participation in the EIP process, with its requisite planning, priority setting and risk analysis served to improve the self regulatory capacities of many enterprises. This added value to their overall environmental management process, and encouraged and enabled them to refine their internal approaches to environmental management. For example, according to one industry representative:

> [I]nternally within the industry [EIPs] just make you think so laterally and so broad about the way your business needs to be performing in the future from a social and environmental point of view…I am thinking about things that are going to bite us in 6 or 7 years times if we don't start acting on them now.

Source: Holley and Gunningham (2006).

The new environmental governance

A more recent and far reaching form of "next generation" regulation is what is commonly referred to as the "new environmental governance" (a shift in terminology that recognises the de-centred role of the state). This is an enterprise that involves collaboration between a diversity of private, public and non-government stakeholders who, acting together towards commonly agreed goals, hope to achieve far more collectively, than individually.

"New governance" in this context involves a cluster of characteristics: participatory dialogue and deliberation, devolved decision-making, flexibility rather than uniformity, inclusiveness, transparency, institutionalised consensus-building practices, and a shift from hierarchy to heterarchy. This definition embraces the broad spirit of the new governance literature which recognises that a shift is taking place in the role of the nation state, which has moved substantially away from top-down command and control regulation to a much more decentralized and consensual approach which seeks to co-ordinate at multiple levels, and which is distinctively polycentric (see generally Trubek and Trubek 2007, p. 542). This approach in turn provides greater scope for non-state actors to assume administrative, regulatory, managerial and mediating functions previously undertaken by the state.

Since the "new environmental governance" is still evolving, its precise architecture remains open to debate and numerous versions of "democratic experimentalism" arguably fall under this heading (Dorf and Sabel 1998). In the United States they can be found in Habitat Conservation Plans under the *Endangered Species Act* and in the Chesapeake Bay and San Francisco Bay Delta Programs (Karkkainen 2000; Freeman and Farber 2005). Within the European Union, new collaborative environmental governance is expressed in increased flexibility in the setting of Community norms, accompanied by a "proceduralisation" of Community law, increasingly open-ended environmental standards and an increased role of a range of stakeholders in decision-making processes (Scott and Trubek 2002). The Water Framework Directive, an example of the Open Method of Coordination, is sometimes held up as an exemplar of this approach (Scott and Holder 2006). In New Zealand, this approach can be found in the *Resource Management Act* 1991, which locates decision-making within regional organisations (Frieder 1997).

For illustrative purposes, attention will focus on an ambitious "new governance" experiment that is taking place in the sphere of Natural Resource Management (hereafter NRM) in Australia, which is commonly referred to as the new regional based approach to NRM (hereafter Regional NRM). This involves multiple stakeholders, multiple levels of government, and industry and civil society engagement, on a broad geographical scale. This experiment connects with many of

the central themes of this book, not least that it is an attempt to engage with public goods problems within a multi-level governance framework. It is commonly referred to as the new regional based approach to NRM (hereafter, Regional NRM).

The context for this new development is the twin recognition (i) that NRM in Australia is in crisis – there are massive problems relating to rising water tables, increasing salinity, water scarcity, land clearing, loss of topsoil, diffuse pollution from broad scale rural land use and biodiversity loss. and (ii) that traditional approaches (and indeed some non-traditional approaches such as Landcare) which purported to address this environmental challenge have manifestly failed. In part this failure is attributable to the fact that many natural resources are public in nature and generally available for society at large. Biodiversity, for example, is a public good because we all benefit from it, although we largely rely on others (mostly private landowners) to provide it, and we don't give them much incentive to provide it. This is equally the case with the protection of eco-services and the prevention of widespread land degradation (for example through dry land salinity).

The challenge is to successfully engage with complex NRM problems – particularly those involving public goods. In the early years of the new millennium the Australian Federal Government approached this challenge through a far-reaching new approach to NRM. Through $4.4 billion of government funding provided through the National Heritage Trust (NHT) and the National Action Plan on Salinity

and Water (NAP), NRM decision making power is being devolved to the regional level. Fifty six regional NRM bodies have been created across Australia at the initiative of the Federal government. These bodies generally comprise a mix of community, rural and other stakeholders have formal office holders and responsibility for undertaking NRM consultation, planning and priority-setting. They must each develop a regional plan and regional investment strategy and implement these under a collaborative partnership-based decision-making process. These plans and strategies are subject to performance indicators and other controls imposed by the Federal Government.

This collaborative regional approach involves a style of governance that seeks wide ranging "partnerships" between landholders (including Indigenous Australians), regional communities, industry, local, State and Territory and Commonwealth governments and the wider community in which power (in terms of priority setting and how to achieve those priorities, and program delivery) is exercised through multi-stakeholder participation in decision-making (including local land-managers, local communities, NGOs and other ground level stakeholders), coupled with monitoring, evaluation and oversight by the regional bodies by themselves, by State-Commonwealth Steering Committees, the NRM Ministerial Council and (through the relevant Ministers themselves) the State and Federal Government itself. There is an emphasis on "joined –up" institutional arrangements, networks and knowledge

exchange. Crucially, the Federal Government, which is providing the money without which these initiatives could not operate, maintains tight control over the purse strings, and regional bodies are well aware that should they depart substantially from the parameters laid down by the Commonwealth, they risk losing their funding, dissolution and replacement by a new entity.

Central to the architecture of the new regional NRM is recognition that different regions/ecosystems raise very different environmental challenges, that NRM in each of these regions involves multiple stakeholders and that the resources, capacities and institutions necessary to address the NRM challenges can themselves vary significantly. Accordingly, provision is made to enable each region to develop their own mechanisms for addressing NRM challenges within parameters set nationally, thereby combining "the advantages of decentralized local experimentation with those of centralized coordination" (Sabel and Zeitlin 2006, p. 27). Like the Open Method of Coordination (OMC) in the European Union, it is a means of reconciling the pursuit of common objectives while respecting the need for diversity at lower levels, and of fostering collective learning "on the ground" in a manner that is arguably a prerequisite for the advancement of sustainable policies (Dryzek 1997).

This approach assumes that the state has only very limited ability to achieve its NRM objectives directly and that only by enlisting non-state actors with local capacities

and local knowledge are substantial gains likely to be achieved. To borrow Julia Black's description of other versions of the regulation of self-regulation, what is involved is "a process of co-ordination, steering, influencing and balancing interactions between actors/systems., and of creating new patterns of interaction which enable social actors /systems to organize themselves, using such techniques as procedurisation, calibration, feedback loop, redundancy and above, all, countering variety with variety" (Black 2001, p. 111).

New governance encourages reflexivity because deliberation, co-operation and learning at local level may lead to responses which better take account of local circumstances, build on local knowledge and capacities, and result in greater stakeholder ownership and 'buy in'. For example, the collaborative approach encourages the exchange of information and enables stakeholder to develop better knowledge of the consequences of their actions. This in turn leads to policy learning and adaptation. Dialogue similarly facilitates stakeholders to consider the environmental impact of their actions and to learn from shared knowledge and experience. Deliberation, crucially, is seen as a "(self) reflective debate by which participants reason about proposals and are open to changing their initial preferences (Cohen and Sabel 2003, p. 346) –The fundamental assumption is that deliberation will stimulate learning and behavioural change.

This approach can also be thought of in terms of an exchange in which lower-level actors are "granted autonomy to experiment with solutions of their own to common problems, within broadly defined parameters. In return, they furnish 'rich information' concerning solutions to the central bodies (De Schutter and Deakin 2005, p. xx). One positive consequence of this process is that:

> By initiating procedures though which problem perceptions, assessment criteria and action strategies of different actors can be exposed to each other, actors can begin mutually to adapt their perceptions, criteria and strategies before such adaptation is imposed in a much more costly way as a consequence of the external effects of specialised problem-solving processes (Voβ, Bauknecht and Kemp 2006, p. 7).

Another form of reflexivity that is often encouraged by new governance initiatives is the capacity for program learning by sharing experiences. For example, the pooling of information and experience about what generates success may lead to the identification of best practice, (although at this stage at least, this is seriously under-developed in RNRM). How this might be achieved is seen most clearly in the Open Method of Coordination which "is a way of encouraging co-operation, the exchange of best practice and agreeing common targets and guidelines for Member States … It

relies on regulator monitoring of progress to meet those targets, allowing Member States to compare their efforts and learn from the experience of others" (European Commission 2001, p. 21).

In summary, the new regional NRM is a substantial departure from most previous NRM strategies, notwithstanding that some of the changes that have been introduced are less radical than might first appear (in particular, the state retains more substantial control and continues to provide a steering mechanism) it is nevertheless an ambitious experiment in engaging multiple stakeholders through collaborative approaches to address complex, contested and hitherto intractable NRM problems in a reflexive manner.

Reflexive Regulation in Perspective

How should the relationship between "next generation" environmental regulation and reflexivity best be understood? This section examines a number of limitations of reflexive regulation in order to provide a context for the final section which seeks to assess the circumstances in which reflexive regulation and governance are likely to make its greatest contributions.

Not all next generation instruments facilitate reflexivity. Even proponents of reflexive regulation commonly acknowledge that it is it is a substantial component of

some but by no means all viable policy options. Hirsch (2005), for example, provides a threefold classification of environmental policy instruments in terms of negotiated compliance arrangements, market based approaches and reflexive law, while conceding that these categories involve some overlap. Even within a category of policy instruments the degree of reflexivity may vary substantially. Take economic instruments. A financial assurance involves little if any reflexivity. In contrast, marketable permits such as emissions trading and acid rain allowance trading programs in the USA, "induce reflection by specifying a goal and allowing firms to decide how to achieve it, given their circumstances" (Fiorino 1999, p. 450). And in some cases, there is no element of reflexivity whatsoever. Thus regulation by architecture (eg softwear as an instrument of control of information technology, or a traffic bollard) could hardly be less reflexive (Scott 2004, p. 164).

Even when instruments are introduced that are substantively reflexive in nature, they are not necessarily introduced with these reflexive features in mind, and their potential for reflexivity may not be harnessed in practice. For example skeptics argue that the Australian Regional NRM initiative described earlier, was introduced more because it provided a convenient means to for a federal Liberal government to by-pass the states (all of which currently have Labour governments) than because its reflexivity promised better results that the status quo, while other critics argue that the devolution of responsibility to local groups was perceived a mechanism whereby

the federal government could "pass the buck" for what is widely perceived as an intractable problem. Thus Whelan and Lyons (2005, 600) argue that "deliberative governance may entail a sleight of hand whereby government agencies avoid both the cost of and responsibility for environmental protection. Indeed, natural resource management partnerships have been criticized as 'greenwash' to allow governments to shirk their responsibilities by abrogating to civil society and business".

More important, even when policy instruments are introduced with intent to take advantage of their reflexive nature, this reflexivity by no means guarantees success. For example, empirical evaluations of process and meta-regulation (the first of the five frames described earlier), has so far produced very mixed results. There is some evidence to suggest that environmental management systems (which are central to this form of procedural regulation), like other process based tools, are just that — tools — and that they can only be effective when implemented with genuine commitment on the part of management. For example, Gunningham *et al* (2003, Ch. 5) found that management style and motivation are more important in shaping the environmental performance of firms than the system itself. In essence, management matters far more than management systems. Or as Parker and Neilsen (2006) have argued, it is the *quality* of action taken to manage environmental performance that makes a difference to outcomes and not just particular procedures or systems. This suggests that mandatory imposition of process based requirements — systems, plans and risk management more generally — may only have a limited influence on

environmental outcomes and that policy makers are mistaken in their belief that those who are required to jump over various hurdles (developing and implementing plans and systems, adopting a safety case) will necessarily become more reflexive and as a result improve both their attitudes and performance.

Two particular challenges that reflexive regulation needs to overcome to achieve success concern: (i) conflicts of interest and disparities of power and ii) implementation deficits. In terms of the former, some of the literature (particularly that which focuses on voluntary environmental management mechanisms and negotiated agreements, ecological modernisation, and new governance) implicitly relegates conflict of interest and the antagonism between interests groups, to the periphery. Tacitly, it assumes win-win solutions, that most problems can be resolved through deliberation, and/or that the majority of citizens will behave responsibly even in the absent of government intervention (Doyle 2000). But there is little empirical support for such assumptions in the frequently war-torn terrain of environmental protection and NRM. At least on the limited evidence so far available, deliberation and reflexivity has not necessarily led to mutual understanding and consensus solutions as each side comes to better understand the others' position and search for compromises (Whelan and Lyons 2005). Indeed, some environmental groups have concluded that the available modes of reflexive governance are

inadequate and that better outcomes are likely to be achieved by active lobbying for direct government intervention.

In terms of implementation, there is often a substantial gap between theory and practice. For example, the broader literature on environmental partnerships such as Regional NRM suggests that they frequently fail to live up to their promise to work as "non-hierarchical multi-actor governance because in implementation and design, actors and arrangements hang still too strong on conventional ideas of state governance, frustrating a fundamental shift to 'real' environmental partnerships" (Mol 2007 p.xxx). Similarly, although the US Endangered Species Act's Habitat Conservation Plan program is sometimes viewed as a successful example of reflexive governance experimentation, Camacho shows how this regulatory experiment is failing because the agencies charged with administering it have never seriously treated it like an experiment because of resistance at the level of 'on ground' agents (Camacho 2007). Couple this with a dearth of resources to carry through experiments in reflexive regulation, and a failure to redress power imbalances which leads civil society organisations to be rendered ineffective, and the often large gap between aspirations and achievements becomes more readily explicable.

Conclusion

From the above it will be apparent that sometimes "next generation" policy instruments that are not reflexive play an important role in policy making, and that where reflexive policy instruments are invoked, there is no guarantee of success. From here, obvious next questions are: when is it likely that reflexive policy instruments have a comparative advantage? In what circumstances should instruments that fall within one or more of the five frameworks identified earlier, be preferred to other policy instruments? And how can they be designed and implemented to maximize their chances of success?

Certainly there are circumstances in which instruments that involve little or no reflexivity can effectively (and even efficiently) achieve the desired environmental outcomes, as with architectural regulation and some economic instruments referred to above. But there are likely substantial limitations on the circumstances in which such instruments can appropriately be invoked. For example, financial assurances are generally effective, but only where there is just one source of potential environmental damage and where the damage can be reasonably estimated. Again, property rights approaches such as those advocated by free market economists tend to work best where there are only a small number of players and free rider problems are limited. And returning to "first generation" instruments, command and control remains a viable option to deal with large point source polluters, particularly where

"one size fits all" (as for example, where a single appropriate environmental technology is available) but is not well suited to dealing with the cumulative pollution caused by a myriad of small and medium sized enterprises, or with diffuse source pollution.

The clue to the appropriate role of reflexive instruments may be that in all the above examples in which *un*-reflexive approaches seem credible, the environmental challenge they address is a relatively straightforward one. But the more complex the challenge becomes (the greater the number of players, the higher the transactions costs, the larger the asymmetries of information between regulator and regulated etc) the less plausible it is to invoke such un-reflexive policy instruments. As Fiorino (1999, p. 464) puts it: "the increased complexity, dynamism, diversity, and interdependence of contemporary society" requires more flexible, adaptive and reflexive policy technologies and patterns of governance. Indeed, it is partly in response to the perceived shortcomings of many un-reflexive policy options in this more challenging policy environment, that each of these five conceptual frameworks described earlier, evolved.

The greatest contribution of reflexive instruments in their various forms may be their capacity to achieve outcomes in circumstances which are beyond the capacity of other approaches to engage. Thus it is no coincidence that many of the examples

provided in the second section of this chapter (where one or more of the five frames were invoked) concerned such challenging problems as regulating Major Hazard Facilities (where asymmetry of information between regulator and regulate is a major issue), natural resource management (multi-level governance challenges, multiple stakeholders, public goods problems, large geographical scale etc) or achieving shifts in technology and ecological modernization on an ambitious scale. Going further, Voβ, Bauknecht and Kemp (2005, Ch. 1) suggest that system analysis and complexity, heterogeneous interactions, uncertainty and path dependency are particular challenges that perhaps reflexive governance alone can address.

These conclusions raise two further questions: (i) which particular type of reflexive regulation is appropriate to which particular contexts; and (ii) should reflexive regulation be used in combinations with other, non-reflexive instruments, and if so, which ones?

The first question leads us back to the earlier discussion and analysis of five particular forms of reflexive regulation and governance. It will be apparent from the discussion in Part II that each of these frameworks has something valuable to offer and 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. Meta regulation is demonstrably effective in dealing with

complex technologies at individual identifiable enterprises, particularly where there is likely to be a substantial asymmetry of information between regulator and regulatee. Informational regulation has particular attraction in empowering civil society which in turn operates as a surrogate regulator and both the requirement on targeted enterprises to generate information and the subsequent pressure from civil society serve to stimulate reflexivity. New Environmental Governance is particularly geared to deal with problems involving (all or most of) the following: scientific uncertainty, challenges of scale and multi-level governance, public goods problems, multiple stakeholders and uncertain solutions.

In terms of the second question, as an increasing number of commentators are coming to recognise (Stewart 2001, p. 133-134), there is no reason to assume that forms of reflexive regulation work best as "stand alone" policy instruments or as substitutes for other forms of regulation (although in some cases they do). There will certainly be circumstances where, consistent with the precepts of Smart Regulation, complementary combinations of policy instruments are likely to work better than individual policy instruments, with each instrument in the policy mix making a contribution that others cannot.

For example some forms of reflexive regulation are more likely to succeed if they are underpinned by direct regulation. Thus under Process or Meta-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 Informational Regulation does not 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). Equally, emissions trading systems may be implemented in the context of technology requirements, thereby involving a combination of substantive and reflexive law. Having said, this, it must emphasized that not all combinations are complementary. Some indeed are counterproductive (Gunningham and Grabosky 1988, Ch 6).

Unfortunately, much of our knowledge about reflexive policy instruments and their relationship with other policy instruments, and in particular about what works and when, is tentative, contingent and uncertain. Reflexive regulation scholarship has not yet been capable of specifying the conditions under which a reflexive process may succeed and whether such conditions can be affirmatively created. As De Schutter and Deakin (2005) point out, the key challenge for reflexive regulation is to identify exactly how and when law can apply procedural and reflexive mechanisms to catalyse changes in environmental behaviour - and we might add, in what combinations with other policy instruments.

Recognizing that there is still much we do not know, there is particular virtue in one form of reflexivity - adaptive learning, and in treating policies as experiments from which we can learn and which in turn can help shape the next generation of instruments.

But notwithstanding our limited knowledge, it should be emphasized that there may often be little choice but to persevere with forms of reflexive law. For example, "reliance on a firm's internal management controls [meta-regulation] to implement regulatory norms and objectives is inevitable; regulators have to rely on firms' ability to regulate themselves. They do not have the resources to do anything else." (Black 2006, p. 22). The reality may be that, notwithstanding its limitations, reflexive regulation still represents the best way forward, albeit that, where practicable, it should be complemented by other mechanisms.

This chapter has focused on reflexive regulation in the domestic sphere where the state, although in retreat, is far from being entirely 'decentred'. The central argument has been about the strengths and limitations of reflexivity rather than with how best to engage with public goods problems per se. But some at least of the insights provided by the five frameworks discussed earlier resonate with the challenges presented by global public goods in the international sphere - not least because the challenge of engaging with complexity is common to both spheres. There are also a number of other common threads. For example, the arguments that can be made in favour of a network model of decentralized global

governance are in many respects similar to the arguments in favor of the new environmental governance at domestic level. And smart regulation, which recognizes that in dealing with complexity, *context specific* combinations of actors and instruments will work better than stand alone solutions also has application to the context of global public goods. So too, ecological modernization's emphasis on the market rather than the state (think carbon trading) and on harnessing business as part of the solution rather than part of the problem (think the World Business Council on Sustainable Development) is as much or international as domestic application. Again, information regulation's concern with transparency and accountability is equally salient in the international sphere while process and meta regulation are mechanisms that enable us to better think through the options for 'regulating at a distance', particularly in circumstances where, given a disaggregation of power, public goods problems are particularly difficult to engage with. But these, like the related roles of reflexivity, are issues that will be explored in considerably greater depth in subsequent chapters.

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