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Classical liberalism and ecological rationality: The case for polycentric environmental law

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Drawing on the perspective of classical liberalism, and developing a comparative institutions framework through which to evaluate alternative proposals for environmental improvement, the case is made for a system of polycentric environmental law. Within this context, contemporary theories that favour an extension of state regulation in order to address the trans-boundary nature of environmental goods are challenged. Problems arising from the complexity of social and ecological processes, the collective nature of environmental goods and the distributive consequences of environmental protection are unlikely to be met by a framework that emphasises greater unity in decisions. On the contrary, the principle of ecological rationality is more likely to be met within a classical liberal framework that facilitates market-like processes of competitive spontaneous order at multiple levels.

Introduction

While attacking existing state structures as excessively hierarchical, most green political theorists argue for greater government regulation as the key to environmental improvement. Indeed, far from reducing state power, they argue that state-like conceptions of democratic ‘citizenship’ should be extended in order to cope with environmental issues that transcend national boundaries.

Here the statism of contemporary green thought from the perspective of classical liberalism is challenged. The decapitation of existing structures in favour of a polycentric approach based on institutional competition is proposed. Section one outlines the case for a ‘green state’ subject to the principles of ecological rationality. Section two sets forth the basic principles of classical liberalism with a particular focus on free association and spontaneous

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order. Section three argues that relative to the classical liberal framework, proposals for a 'green state' may be incompatible with the principle of ecological rationality. In conclusion, the likely elements of polycentric environmental law are outlined.

Ecological rationality and the 'green state'

The modern green movement exhibits seemingly contradictory attitudes towards the state's role in environmental issues. On the one hand states are criticised for their hierarchical procedures, held to be incompatible with the complexity of human-ecological relationships. On the other hand, however, states are urged by environmental campaigners to regulate the behaviour of individuals and organisations operating in a market economy. The most frequent attempt to resolve this tension is sought in the claim that it is not state institutions per se that create environmental problems but their failure to reflect the principle of ecological rationality (Eckersley 2004). At issue here is the tendency of centralised hierarchies to emphasise expert forms of knowledge at the expense of the lived experience of people embedded in both human and ecological communities.

While 'critical political ecology' recognises that the state can act in environmentally destructive ways, it maintains, however, that state institutions should not be abandoned because *only* they have the potential to deliver on the goal of a more ecologically rational society. According to Eckersley, this claim arises from,

an understanding that the state is (potentially) the most legitimate, and not just the most powerful, social institution to assume the role of public ecological trustee. ... Such a normative posture towards the state harks back to the European idea of the state as the embodiment of reason, ethics and the collective good, Eckersley 2004, p. 12)

Eckersley's enthusiasm for the state is not, of course, universally shared. Those influenced by the anarchist tradition continue to exhibit suspicion of state structures. Thus Dryzek (1987) expresses concern that the spontaneous institutions of civil society will be 'corrupted' by bureaucratic rationalism. In the final analysis, however, with the possible exception of the bio-regionalist school, the majority of green thinkers rely on a substantial role for the state or state-like structures, subject to the proviso that these are appropriately 'democratised'.

By contrast, the other primary 'steering mechanism' in contemporary society – the market economy – is considered chronically lacking in the potential to 'turn green', because markets are judged not to be amenable to the same degree of citizen control and as at best responsive to consumer sovereignty rather than to any notion of the common good (Eckersley 2004, p. 12). According to this view, the prevalence of collective goods problems

means that market institutions are incapable of reflecting the value of environmental assets. Moreover, ecological rationality requires recognition that 'everything is connected to everything else', where saving the part involves knowing what is happening to other parts of the whole. Seen in this light, *only* a collective institution such as the state has the capacity to enable citizens to analyse how their choices impinge on the environment and lives of others.

A second reason advanced for favouring a state-centred approach is that collective choice processes allow the preferences of social actors to be challenged. Market institutions neglect possibilities for education towards more environmentally sensitive lifestyles given a decision-making context that encourages debate rather than the gratification of 'given' individual wants. The notion of debate and argument is considered particularly important because the questions pertinent to ecological rationality involve conflicts between often incommensurable values. The use of a common denominator such as money to aggregate preferences into an 'efficient' social welfare function is considered inappropriate where incommensurable moral ends are involved and where aggregation is thus impossible.

A still further reason for favouring the state is that commercial exchanges reflect differential access to resources, with money power exercising the greatest influence on decisions (Eckersley 2004). Ecological rationality requires that the distributive consequences of social decisions are taken more fully into account, for unless the distribution of resources is seen to be just then public support for the behavioural changes necessary to avoid further ecological damage will not be forthcoming. According to this perspective, only the state has the capacity to bring about social justice through its widespread powers of redistribution (Eckersley 2004, p. 161).

Just as green theory challenges excessive 'privatism' and the sovereignty of property owners within the boundaries of nations, so these principles are extended outwards beyond the nation state to encompass communities affected by environmental risks, *irrespective* of their geographical location (Eckersley 2004, chs. 7 and 8). As such, green conceptions of citizenship and social justice depart from the civic republican view of democracy as a principle bounded by a national community of culture and shared identity in favour of a cosmopolitan citizenship unconstrained by territorial borders.

Far from reducing the role of the state, therefore, contemporary greens bemoan the absence of collective, democratic institutions at the international level. Development of the latter is considered imperative in the face of market-driven globalisation. According to this perspective, nations are no longer able to 'steer' an independent trajectory because international capitalism disperses the environmental and social consequences of decisions made by corporations and states across a variety of territorial scales (Eckersley 2004). The completion of an ecologically rational democracy, therefore, requires effective transnational institutions that can exert democratic control over market processes at multiple different scales.

Classical liberalism, freedom of association and spontaneous order

The normative claims for a 'green state' as sketched above are subject to significant tensions. In particular, it is not clear how demands for community autonomy can be squared with the call for greater 'unity' in decisions. Consistently applied, the logic of green theory may imply complete socialisation and the establishment of centralised political structures. It is this logic that comes to the fore in the call for the globalisation of environmental policy at the expense of the decentralised decision rights exercised by nation states.

Although it has often been viewed with hostility by greens, the perspective of classical liberalism may resolve some of the tension between individual and community autonomy and the macro-social requirements of ecological rationality. With its emphasis on 'spontaneous order' classical liberalism aims to show how the autonomy of voluntary associations can be protected while ensuring a degree of rationality at the macro-societal level. This section sets out the principles of classical liberalism. The subsequent sections test their capacity to meet the requirements of ecological rationality relative to proposals for a 'green state'.

Classical liberalism as it is understood in this paper originates in the Scottish enlightenment of Adam Smith and David Hume and more recently is reflected in the work of Friedrich Hayek, Michael Oakeshott and James Buchanan. The fundamental organising principle of classical liberalism is freedom of association and disassociation. People must, according to this view, have the freedom to enter and exit from a variety of human arrangements. This does not exclude the possibility of authoritarian or communitarian organisations that subscribe *internally* to 'illiberal' norms, but requires that social actors may leave any group which they have joined voluntarily or have been 'born into' on an involuntary basis. A liberal society, therefore, is one where there are multiple authorities and jurisdictions, none of which exercises a total, hierarchical form of power over the others (Kukathas 2003).

The ideal of free association in classical liberalism is reflected in support for private or several property. Respect for property is not, on this view, a manifestation of a Lockean natural right but represents the observance of a Humean convention or *modus vivendi*, necessary to cope with the reality of diverse human values. Contrary to communitarian claims, classical liberalism *does not* maintain that preferences are pre-given. Rather, it notes that human values, though fluid, *differ* and that institutions should accommodate these differences rather than risk conflict by attempting to suppress them (Kukathas 2003).

Freedom of association is emphasised by classical liberalism because it may permit what Hayek refers to as spontaneous order (Hayek 1982). Such orders exhibit patterns, but the regularities at issue are not the product of deliberate design by agents pursuing a unitary goal. Communal conventions such as linguistic rules and property rights constitute orders of this type. The

emergence of linguistic rules, for example, may arise as the unintended consequence of multiple communicative acts which are not directed towards the achievement of any particular end.

Social norms of this nature must, on a classical liberal view, be understood as a form of 'civil association' (Oakeshott 1990) or *cosmos* (Hayek 1982). While facilitating *general* purposes such as communication and cooperation, these norms are otherwise *purposeless*. Actors identify with the cultural practices that order their behaviour, but civil rules such as respect for property also provide the liberty to experiment with a wider variety of ends. To speak of a 'communal end' would require that society operate as an 'enterprise association' (Oakeshott 1990) or *taxis* (Hayek 1982) that defines the ends of its citizens and is only appropriate to a closed society defined by a narrow set of goals. As Oakeshott (1990, p. 158) has noted, 'civil freedom is not tied to a choice to be and remain associated in terms of a common purpose: it is neither more nor less than the absence of such a purpose or choice'.

For classical liberalism the advantages of spontaneous orders are threefold and exemplified in a market economy based on dispersed though unequal ownership of property. First, such orders are better placed to cope with complexity because they draw on and adapt to knowledge embedded in the multiple nodes that constitute them. In markets, for example, dispersed individuals and organisations make bids for resources and contribute incrementally to the formation of prices that transmit their particular 'bit' of information to those with whom they trade. The latter may then adapt their behaviour in light of their own preferences and knowledge, and these adaptations affect subsequent transactions with still other agents, and so on in a network of increasing complexity. The resultant price signals prompt 'economising behaviour' and enable a degree of coordination *that may not be achieved by a central coordinating authority*. Such an authority could not be aware of all the relevant margins for adjustment that are scattered across a diversity of social actors (Hayek 1948; 1982).

The coordinative properties of markets should not, on this account, be confused with a narrowly utilitarian procedure for aggregating values into an 'efficient' social outcome. To speak of efficiency is appropriate only in the context of an 'enterprise association' that operates according to a unitary scale of values. The adjustments set in train through the price system, by contrast, increase the chance that any one of a diversity of perhaps conflicting ends may successfully be achieved (Hayek 1982).

A second advantage of spontaneous orders is that they allow for experimental evolution. Decentralised property rights allow competing ideas to be tested simultaneously without approval from any one majority. A polycentric order such as the market may be more effective at facilitating the spread of new ideas and values than a hierarchical or majoritarian system which can at most conduct consecutive experiments where there is only one, or very few, options to which all must subscribe. The latter limitation is particularly significant because the virtues of many innovations may not be

immediately recognised by the majority, but may only come to light when they have been put into practice by a minority of pioneers (Hayek 1982).

The previous points refer to the potential epistemological advantages of spontaneous orders and make no assumptions about human motivations – they *do not*, for example, assume that actors are, or should be, egoistic. A third advantage of such orders, however, is that they may provide safeguards against the abuse of power where people *do* act out of self interest. As David Hume, and more recently James Buchanan have argued, people should be modelled ‘as if they are knaves’ – not because most are egoistic, but because institutional safeguards are needed to constrain the actions of a selfish minority (Buchanan 1986). In the specific case of markets, the ‘exit’ option may allow people to escape from actors who offer inferior terms of cooperation. Although the distribution of wealth in a market economy is uneven, this inequality is dynamic as resources are continually shifted away from those who fail to put their property to the most valued uses. Where property rights are well defined, the costs of decisions are effectively internalised – actors profit from decisions that benefit their fellows but must bear the costs of those that do not (Alchian and Demsetz 1973).

The focus on markets and spontaneous evolution in classical liberalism does not preclude all attempts to achieve coordination via deliberate design. Competition is a process that may occur on multiple levels, including competing rules designed to cope with collective goods problems and competition between different ‘constitutional designs’ that determine the ‘rules of the game’ within which actors such as firms must operate. Classical liberalism, therefore, *does not* advocate ‘leaving it to the market’, as usually understood by this phrase. Rather, it maintains that actors should be able to exit and enter competing institutional designs (Buchanan and Vanberg 2003). The state, therefore, although a particularly powerful association, is just one of many other such organisations that should be constrained in its powers by the existence of competitors. This does not require ‘perfect competition’ where actors can select between multiple homogenous institutional designs. It simply requires that incumbents, at whatever level, are open to challenge from actors offering better opportunities.

If diversity in human arrangements is the hallmark of a liberal society, then such variability may also apply to the notion of justice (Kukathas 2003). A unitary notion of distributive justice is, according to classical liberalism, incompatible with a process of evolutionary learning and the principle of free association. Evolutionary processes necessarily embody an element of inequality because it is unequal results that enable people to discover and to emulate more successful paths. The results of a spontaneous order cannot be considered just or unjust since they are not based on obedience to a unitary structure of commands, but follow from the observance of general rules such as respect for property (Hayek 1982). When people follow diverse ends and where the income they receive results from a more or less random combination of distributive principles such as effort, genetic inheritance, cultural background and the

decisions they take or fail to take in response to market signals, there is no common scale of values against which to evaluate different outcomes. While the distribution of income under a spontaneous order is partly the result of caprice, such orders may reduce conflict because they minimise the power of some to judge on the merits of others.

Classical liberalism or the green state as regulative ideal?

The green emphasis on collective choice and the classical liberal focus on competitive spontaneous order represent alternative regulative ideals with which to approach socio-ecological problems. What is needed, therefore, is a comparative analysis of how closely these alternative ideals come to meeting the requirements of ecological rationality. Three issues are of particular relevance in this regard: (a) the capacity to cope with the complexity of socio-ecological relationships; (b) the capacity to overcome the collective action problems involved in sustaining environmental assets; and (c) the capacity to secure support for the distributive effects of the necessary environmental measures.

Complexity and socio-ecological interdependence

With regard to the first of these matters, green political theorists contend that 'systematic environmental protection' requires an approach that transcends bargaining between private agents in favour of a democratic consensus that articulates the common good (Eckersley 2004, p. 98). From the perspective of classical liberalism, however, it is the very complexity of socio-ecological problems that *prevents* the constituents of the common good from being articulated in any one forum. The common good cannot be reduced to an aggregation of preferences, for as greens rightly point out aggregation is impossible when values are incommensurable. Neither, however, must the common good be equated with a process of central coordination. On a classical liberal view, what the common good requires is a complex process of behavioural adaptation that takes into account a diversity of values and improves the chances of *all* concerned to achieve their respective ends. That such adjustments may also be required by those committed to 'green values' is apparent in current disputes over wind farms. For their proponents, such farms represent a more sustainable form of energy supply when compared to oil and natural gas. To their opponents, however, the prospect of hundreds of windmills atop previously open moors is an affront to rural integrity. Unless one of these competing 'ideals' is simply imposed on the relevant dissenting group, then some notion of bargaining and marginal adjustments between the holders of different values must be accepted as the basis for decision making.

For classical liberals, the case for such bargaining does not assume that actors are selfish or egoistic. Rather, it recognises that under conditions of

'bounded rationality' the ends about which people know will always be a tiny fraction of the needs of dispersed others. The knowledge necessary to promote social adjustment does not exist as a coherent whole but is widely scattered across hundreds of thousands, and in some circumstances millions, of actors, most of whom are completely unknown to each other. The primary requirement of ecological rationality must, therefore, be to facilitate adjustments to knowledge of which people are not and *cannot* be directly aware. These adjustments may be approximated by the dispersed adaptations to the fluctuating price signals generated in competitive markets. In such markets, the whole acts as one, 'not because any of its members survey the whole field, but because their limited individual fields of vision, sufficiently overlap so that through many intermediaries the relevant information is communicated to all' (Hayek 1948, p. 86). Thus the plumber's knowledge of substitutes for copper piping influences the electrician's choice of materials for home wiring through its effect on the price of copper and in the process increases the chance that either of their respective ends may be achieved. In the specific case of wind farms, dispersed knowledge of ethics, cultural norms and pressures on land use may not be gathered into a single forum. If property rights to land and other assets are specified, however, the relevant 'bits' of information may be communicated by prices which may, for example, shift demand away from more valued and hence relatively more expensive sites. Without such prices social actors are unable to calculate the fine-grained adjustments necessary to know how many wind-farms there should be and where they should be located.

The theoretical importance of markets in encouraging the adjustments necessary to promote resource conservation is supported by empirical evidence on the comparative impact of different economic systems. According to Bernstram (1995), by the late 1980s the emission of air pollutants from transport and stationary sources per unit of GDP in the former socialist countries was between 250 and 580 per cent higher than in developed market economies. Cross-country studies comparing the relative environmental performance of more and less regulated market economies are hard to come by, so their conclusions must be treated with circumspection. Of the available studies, however, there is evidence that secure property rights and market prices are a significant factor in improving environmental performance. Norton (1998), for example, finds systematic correlations between measures of environmental conservation including forest cover and water quality and those pertaining to property rights. Similarly, in their analysis of developing economies, Bate and Montgomery (2006) find that energy efficiency is consistently lower in heavily regulated countries than in those where prices fluctuate more freely. Studies of individual resources meanwhile suggest that in the case of land-based assets such as forests, mineral reserves and wildlife, fresh-water resources such as salmon grounds and inshore assets such as oyster beds, tradable private property rights promote more sustainable management (De Alessi 2003).

Collective goods problems

Mainstream green theory may accept that markets do have *some* role to play in promoting resource conservation. In view of the failings of central planning, few greens propose the abolition of markets. Rather, a majority argue that while market institutions are needed at some level, collective goods and ‘free-riding’ problems are of such an order in the environmental domain that *only* democratic structures have the capacity to provide markets with the necessary ‘discipline’ (Eckersley 2004). Classical liberalism, by contrast, while not denying the significance of collective goods problems contends that there are epistemological and incentive-based reasons to favour a polycentric approach in which ‘exit’ rather than democracy is the dominant organising principle.

Collective action problems arise *wherever* human beings need to cooperate. Groups of shareholders, for example, face ‘free-rider’ problems in controlling managers of the companies they own. From a classical liberal perspective, however, polycentric orders may be better placed to discover solutions to such problems. In markets, a variety of institutional designs compete on their capacity to limit ‘free-riding’ and to build trust between actors. Thus, joint stock companies compete with manager-owned enterprises, worker cooperatives, consumer cooperatives and mutual associations, each of which adopt different rules of governance that may prove more or less effective. As actors exit and enter different institutional designs, the signals generated by such decisions may facilitate a process of institutional learning which ripples through the system as a whole (Ricketts 2000).

Institutional pluralism of this nature may, from a classical liberal perspective, also be suited to the management of environmental collective goods. Very few environmental goods are completely indivisible in supply – most are territorial and their supply can differ within countries and between regions and much smaller localities. In principle, therefore, such goods are suited to a process of ‘parallel adaptation’, where a variety of institutional designs compete simultaneously (Ostrom 2006). Decentralisation of this genre need not equate to a simplistic form of ‘privatisation’. Ostrom’s detailed case studies of the management of common pool resources including forests, irrigation systems and coastal fisheries suggest that institutional diversity is the key to sustainability (Ostrom 2006). Where technological advance allows for evolution in ‘fencing’ technologies, then models of individual private ownership may prove effective (De Alessi 2003), but these may coexist with alternative structures based on variations of cooperative or shared ownership between an identified set of resource users.

Ostrom’s work indicates that effective solutions to collective action problems arise when resource users may craft their own rules for managing assets via a ‘bottom-up’ process of institution building with the state limiting its role to one of dispute resolution (Ostrom 2006). What matters is that resource rights are *exclusive* to the user groups concerned and are not subject to direct intervention from external actors, democratically elected or otherwise. If actors

are able to establish exclusive rights, they may learn from their own decisions to capture the benefits and face the costs. Such a process does not secure an 'optimum' solution, but may enable trial-and-error learning. Should there be only one rule-making body, then any errors tend to be *systemic*. In a polycentric order, by contrast, mistakes are confined to the resource owners in question. Adaptation is also speedier than in a unitary equivalent – actors can learn from and imitate the results of management models adopted by their neighbours without need for approval from an overarching majority. According to Ostrom, where states have nationalised assets and have subjected *all* common pool resources to a unitary structure, collective action problems have often intensified. In the case of the management of river catchments and water basins, for example, even local and regional governments have underestimated the capacity for more decentralised units to devise rules that can internalise costs (Ostrom 2006). Where people are prevented from crafting exclusive rights, feedback mechanisms are impeded and people may externalise costs for fear that rewards for successful management will be taken by others.

An additional reason for favouring polycentric processes turns more directly on the question of incentives. Many greens invoke notions of 'free-riding' in order to highlight 'market failures', but are less clear how such analyses apply in the context of democratic alternatives. Eckersley (2004, pp. 127–8), for example, while rejecting the Habermasian view that self-interested action is somehow transcended by deliberative democratic structures, maintains that democracy is better placed to expose and discipline examples of selfishness. In making these claims, however, Eckersley is contradicted by contemporary collective action theory which suggests that free-rider problems may be heightened *within* democratic structures (Somin 1998).

One need not, it should be emphasised, invoke a strong conception of self-interested behaviour to reach such conclusions. Even a civic-minded individual may not spend much time acquiring the information necessary for effective democratic deliberation given the infinitesimal chance of influencing the results of such a process. In a large number democracy people may 'free-ride' on the hope that other agents will be appropriately informed. While voter ignorance has previously been explained as a consequence of educational disadvantage, evidence of massive voter ignorance even among educated and high income groups suggests that the structure of incentives may be the dominant factor at play (Somin 1998). On a classical liberal view, it is the resulting lack of transparency that may allow selfishly motivated minorities to externalise costs and which may account for 'democratic failures' such as the persistence of environmentally damaging subsidies in agriculture, logging and coal mining. In polycentric structures such as markets, by contrast, while actors are never perfectly informed, they may have stronger incentives to acquire pertinent information because their decision to enter or exit a structure aimed at managing a particular collective goods problem is *decisive* in determining what they receive (Ricketts 2000).

Distributive justice

A further claim of green political theory is that support for environmentally sound policies is dependent on social justice. From a classical liberal perspective, however, the search for ecological rationality may be impeded by an excessive focus on distributive concerns. Common standards of social justice may be incompatible with the reality of diverse valuations of environmental assets and with the processes of evolutionary learning through which people discover how best to cope with environmental problems.

With regard to the first of these matters a unitary standard of justice is unlikely to find support in the face of cultural diversity. Where some actors, such as for example aboriginal peoples, value resources for spiritual reasons while others believe in conservation to further material advancement, there may be no agreement with regard to the *subject* of distribution, let alone the *pattern* of distribution. A cultural group that rejects technological innovations, as do the Amish in the United States, is unlikely to generate the same opportunities and may not even value such opportunities relative to a group that celebrates technology (Kukathas 2003).

In so far as people *are* motivated by the same values, such as a particular weighting of economic growth and conservation, a unitary standard of social justice may be incompatible with evolutionary learning. The parallel adaptation that enables people to emulate more successful conservation methods depends on inequalities between actors to signal the need for change and to prompt social learning. These inequalities are unlikely to be justified in terms of a common scale of merit, since they may derive from a combination of purposeful effort and accidents of history and cultural background. Thus Ostrom's work suggests that while agreement on distributive norms *within* groups (such as performance-related pay or resource allocation lotteries) may enable them to overcome collective action problems, large-scale redistribution conducted at the national level often promotes *between*-group conflict owing to an absence of shared norms of fairness.

To question the principle of environmental justice is not to deny that many inequalities may be the product of historical acts of oppression rather than decentralised evolution.¹ The point is that even in the absence of such factors, substantial inequality may be compatible with ecological rationality and indeed may be a necessary condition of such rationality. Consider the relationship between technological evolution and responses to anthropogenic climate change. High-order goods such as 'low carbon' technologies may not, in their initial stages of development, be provided to more than a relatively few people and countries at considerable expense. It is only the possibility that a small number may have initial access to such goods that allows for cheaper methods of production to be brought subsequently into existence (Wildavsky 1989). More important, it cannot be assumed that the process of industrialisation could have proceeded on a 'low-carbon' basis. The ability to produce effective carbon substitutes today may be dependent on an evolved capital structure of

'high-carbon' technologies necessary to enable sufficient production of the components and equipment now required to bring low-carbon energy into fruition.

Several implications follow from this analysis. First, it may not be possible, *even in principle*, for all countries to simultaneously achieve the highest environmental standards. Second, given the dependence of 'clean' technology on a history of 'dirtier' technology it follows that the most environmentally advanced societies at any given point either will have a history of being the biggest 'polluters' or may have benefited from the technological advances developed by 'polluting' societies. Third, unless the position of different groups in the relevant evolutionary chain is to be determined by the accidents of history and the market process, then a 'green state' would have to consciously determine who the relevant 'winners' and 'losers' are to be. On a classical liberal view, faced with the absence of agreement over the merits of different outcomes, far from securing support for the necessary environmental measures such a process is likely to promote conflict.

Classical liberalism and polycentric environmental law: an outline

The regulative ideal offered by classical liberalism challenges the emphasis on unitary decisions in green thought in favour of a polycentric framework. The question remains, however, as to the institutions that may arise in such a framework to manage the larger-scale collective goods problems that are of such concern to the green movement.

The first point to be emphasised in this context is that while markets play a significant role in classical liberalism this is not to deny the need for appropriate systems of rules *within* which markets operate. The debate between greens and classical liberals is not about the necessity for rules and planning, but centres on the *origin* of the relevant rules. In the green model, the parameters of markets are determined by a democratic unity at the level of the nation state or even at a higher supra-national scale. In the classical liberal model, by contrast, the rules that constrain the operation of markets may themselves emerge via a 'bottom-up' process of 'spontaneous order' at many different levels. 'Regulation' and 'planning', therefore, are as much a feature of a classical liberal system as 'competition' and 'markets'.

Consider by way of analogy the case of sports leagues. Sports teams may subscribe to common rules and regulations in order to enhance the audience for their sport *as a whole*. While teams compete for spectators and acclaim *within* such leagues, they also cooperate on those dimensions that enhance the attractiveness of their particular league vis-à-vis that of rivals within the same sport or indeed of competitor sports. A similar principle applies in 'network industries' such as telecommunications. Rival phone networks compete for market share but simultaneously cooperate by developing common standards that enlarge the total market for which they subsequently compete (Stringham 2006). In each of these cases competition operates within a nested

structure – individuals and organisations compete against one another but, at a higher institutional level, so do the standards and rules subscribed to by different groupings of actors.

Nested structures are of particular relevance to environmental problems that transcend the boundaries of a single property owner and may be a prominent feature of a regime based on polycentric environmental law. One example is the system of land-lease planning advocated by Macallum (1970). In this system property owners contract into a ‘proprietary community’ that limits the rights of all concerned. Communities are either co-owned by residents or witness a division of property rights between a ‘free-holder’ or ‘plan-lord’ who lays down the conditions agreed to by the leaseholders. By submitting to common regulations (e.g. on development rights) and requiring contributions to collective goods such as parks, woodlands, roads and street lighting, owners may increase the value of their holdings relative to those that do not enter such a collective structure. Communities of this nature now account for the majority of new house-building in the United States and range in size from those covering a few streets or blocks to those encompassing entire towns (Webster and Lai, 2003).

While the principle of the proprietary community might be thought relevant only to relatively local environmental problems, there is no reason why this principle could not be applied to larger-scale collective goods. Just as individual property owners may contract into a proprietary structure, so such communities may themselves contract into a meta-system of rules governing inter-community externalities. Ostrom’s work confirms that regional collective action problems such as the management of river catchments are more likely to be solved when the necessary institutions are arrived at via the creation of federated structures ‘from below’ rather than have these imposed ‘from above’ (Ostrom 2006). Networks or ‘leagues’ of communities may develop common standards for the relevant collective goods. From a classical liberal view, there would be strong incentives for such organisations to reach mutual agreements on matters of common concern because a failure to do so may reduce the relative attractiveness of the ‘league’ concerned. Few people would purchase property in a community that insisted its members drive on a different side of the street to those of neighbouring communities, just as few purchase mobile phones from providers who do not recognise calls from rival networks. As such, the competition and freedom of association central to classical liberalism are not incompatible with the emergence of common norms. What matters is that such standards are arrived at by consent rather than enforced coordination and where there is the possibility for dissenters to ‘exit’ at some level and subscribe to an alternate set of practices.

The emergence of norms to cope with trans-boundary collective goods may also apply at the international scale. Just as proprietary structures may subscribe to common meta-rules, so too may states and even supranational bodies. Classical liberalism, therefore, does not imply support for the so-called Westphalian model of the sovereign state in which nations relate to one

another only as bargainers pursuing their own advantage. Cities and proprietary communities may also be significant actors who can form environmental standards with similar cross-boundary associations. States, meanwhile, may themselves relinquish their sovereignty by signing environmental treaties with their neighbours.

Enforcement mechanisms in such a polycentric order are likely to take one of two forms. On the one hand, a process of ‘vertical integration’ may occur where a ‘superior owner’ lays down and enforces the terms of cooperation between those who contract ‘to enter’ the property concerned – the creation of such a structure may, of course, itself arise from the contractual merging of the rights held by individuals and groups at the relevant institutional level. The latter type of arrangement is typical of the land-lease communities discussed above. Alternatively, both the provision of rules and their enforcement may be arrived at via third-party supervision. Historically, the ‘international law of commerce’ or *lex mercatoria* has proceeded on this basis and is a prime illustration of the spontaneous emergence of legal, regulatory institutions that transcend national borders *without* the supervision of a unitary state (Benson 1989). Potential trading partners name arbitration agencies in the event of a contractual dispute. Failure to agree on such a third party or to submit to an arbiter’s decision (such as payment of a fine) limits the potential gains from trade. Just as sports clubs who do not abide by the rules of their particular league soon find themselves without playing partners, so in the case of the *lex mercatoria* merchants who fail to be bound by arbitration find themselves in the equivalent of ‘outlaw’ status. From a classical liberal view one would expect similar arbitration agencies to negotiate the terms of trans-boundary environmental disputes. Abuses will undoubtedly occur, but in a context where there are multiple authorities needing periodically to cooperate with others there would be incentives for trans-boundary actors to develop a reputation for good conduct.

While recognising the potential for such supra-national structures, classical liberalism *does not*, however, offer uncritical support for *existing* states and supra-national organisations, many of which have sought to eliminate the ‘exit’ option and may have intensified collective goods problems by imposing unitary structures of control. Seen in this light, it is surprising that green theorists are as enthusiastic as they sometimes are for supra-national authorities. Eckersley (2004, pp. 47–8), for example, considers the European Union as a model ‘post-Westphalian’ culture with a ‘green identity’, which has developed common solutions to ecological problems. Whether the citizens of the EU do in fact share a ‘green identity’ is debatable. More important, it is far from clear that EU structures are appropriate to the collective goods problems at hand. Problems involving acid rain and the pollution of the Rhine, for example, involve at most a handful of northern European countries. Far from internalising costs, allowing states not directly affected (such as the Mediterranean countries) to participate in designing the relevant rules is likely to externalise them. Similar issues arise in the case of fisheries and agriculture.

Effective management of North Sea fisheries may require treaties between north-west European states, but is of doubtful relevance to Greece or Italy. In the case of agriculture, meanwhile, European-wide subsidies are widely held to have exacerbated environmental damage and may have *created* a collective goods problem that previously did not exist, or at worst was of only national or, more likely, local concern. It may be significant in this regard that some of the most innovative environmental measures in fisheries and agriculture have been devised by states that are *not* party to supranational authorities. Iceland and New Zealand, for example, have pioneered moves toward a successful system of marketable quotas in fisheries, and Japan has effectively privatised inshore fisheries by recognising the property rights of fishing cooperatives (De Alessi 2003). New Zealand, meanwhile, has abolished agricultural subsidies on a unilateral basis. While there are clearly some issues that could only be dealt with by supranational authorities, in a world of subsidised grain mountains and wine lakes one should be wary of granting additional powers to such entities.

Two important objections to the approach set out above are likely to be raised. First, it might be argued that the processes allowing for the formation of private regulatory standards in the classical liberal system would threaten that system *from within*. If actors can cooperate to solve common environmental problems, would not the same agents also have the capacity to form cartels and monopolies that would undermine the supposed commitment to pluralism and competition (Cowen 1992)? Second, in the case of global environmental problems such as anthropogenic climate change, the very idea of competing standards may be thought misplaced – the global magnitude of such issues *requires* a unitary approach which eliminates ‘exit’.

With regard to the first of these arguments, it is not the case that voluntary coordination on environmental standards will enable wider practices of collusion. In so called network industries, the value of the network rises with the number of subscribers. Attempts to extend membership requirements to include anti-competitive practices reduce the potential market for the network concerned. Moreover, firms or other actors facing exclusion could set up a rival network exhibiting common standards on those dimensions where cooperation is desirable, but without limiting internal competition on other dimensions such as price (Leibowitz and Margolis 1995; Stringham 2006). If a requirement of subscribing to the grammatical standards of the English language also included an enforceable commitment not to engage in price competition, then the popularity of this particular network would soon diminish. Likewise one can conjecture that proprietary organisations that sought to regulate behaviour beyond genuine environmental externalities would lose out to those that did not. It is for this reason that the regulatory norms emergent in a classical liberal system are likely to be ‘thinner’ than those provided by existing state institutions. While there would be nothing to stop proprietary structures from devising ‘thicker’ rules that limit competition and provide internally for ‘distributive justice’, in the absence of agreement on such dimensions it is

unlikely that these standards would become widespread. From a classical liberal perspective, that existing states and supra-national entities stray well beyond such minimalism is evidence that the principle of subsidiarity (taking decisions at the lowest possible level) may have been breached (Stringham 2006).

Where the classical liberal system *does* face difficulties is in enforcement of those environmental requirements where large-number prisoners' dilemmas are involved. Adherence to common dispute resolution mechanisms is self-enforcing in the same way as is adherence to a common language – there is no benefit to any party from subscribing to norms not recognised by their fellows. Abiding by rules in situations where actors can profit by breaching common environmental standards without fear of detection is *not*, however, self-enforcing. Many issues of trans-boundary air pollution fall into this category especially when the sources are highly dispersed and mobile and where it is difficult to identify the contribution of individual 'polluters'. This problem is, of course, particularly pronounced in the case of anthropogenic climate change.

Prisoners' dilemmas are not, however, unique to a polycentric order. Arguably the most serious prisoner's dilemma of all is that involved in holding to account an elected government and nowhere would this be more problematic than in the case of global environmental institutions, however democratic. Given the infinitesimal chance of any voter or even an individual state affecting the decisions of a global authority, there would be few incentives to monitor and even less capacity to affect its performance. Problems of this nature *would not* be eliminated under the institutions advocated here – as one moves further away from outright individual ownership to the nested structures necessary to internalise larger-scale externalities, so potential free-rider dynamics and principal-agent problems *within* these structures multiply. An advantage of a polycentric system, however, is that by preserving the exit option it may reduce the *relative* significance of collective action per se. Just as shareholders who face free-rider/principal-agent problems in controlling the management of companies are protected by the option of selling shares in poor performers, so the capacity of both individual and corporate actors to exit from poor institutions may provide a check against abuses by the relevant hierarchies.

In the light of the above, one should be wary of arguments for global structures to tackle anthropogenic climate change. A theoretical argument for a global minimal state can be made on grounds that the climate is a unitary system, which cannot be subject to the parallel institutions favoured by the classical liberal approach. In order to offer unequivocal support for a global authority, however, one would have to assume that citizens have the capacity to overcome the enormous free-rider problems involved in monitoring such an authority and that the relevant actors would be able to enforce whatever standards are deemed necessary. One would also have to assume that policy-makers have the epistemological capacity to manage climatic patterns via

adjustments to emissions and that they could, in the face of diverse international incomes and preferences agree on the parameters necessary to determine an appropriate rate of reductions. In view of the implausibility of these assumptions, a not unreasonable case can be made in favour of decentralised adaptation to climate change. Individuals and organisations may have a better chance of influencing their capacity to avoid the worst effects, by for example, investing in flood protection, than they would of exercising influence over a global green state. A reliance on such adaptation would be far from optimal, but from a classical liberal perspective, comparative institutional analysis often reveals the perhaps unpalatable truth that no solution may be preferable to a misguided cure.

Conclusion

Though they are often considered antithetical to the concerns of the environmental movement, the institutions favoured by classical liberals may be better placed to meet the criteria of ecological rationality. The approach set out here does not constitute a 'blueprint' for environmental reform. Rather, it articulates a set of principles against which to evaluate existing institutional practices and alternative proposals for environmental improvement. When judged against these principles, many of today's structures for managing environmental assets are found wanting. So too are contemporary proposals for a 'green state'.

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Note

1. According to Eckersley, domination also stems from 'an international, neo-liberal order that systematically disadvantages the developing world' (2004, p. 252). Nowhere, however, does Eckersley distinguish those elements of the current order that are 'neo-liberal' from those that are not. Is the European Common Agricultural Policy a 'neo-liberal' policy? On a classical liberal view, such policies benefit producers in developed countries at the expense of consumers in the *same* nations *and* low-cost producers in the developing world. Neither does Eckersley consider that inequality between economies most integrated into the 'neo-liberal' order and those of the developed world may have been declining (Lal 2006). Suffice to say, many 'green' arguments are premised on a contentious reading of the theory and practice of international trade.

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