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Environmental Sustainability, Time and Uncertainty

Robin Grove-White

ABSTRACT. The ways in which issues of differential times and time-scales make themselves felt in environmental politics are explored. Official and industrial 'control' of time-scales within environmental regulatory processes is seen to be an important *determinant* of the forms such politics take in countries like the UK. It is argued that the opening up of 'time' debates carries far-reaching and positive implications for 'sustainability' aspirations in the industrial world. **KEY WORDS** • ecology • environment • environmental regulation • sustainability • time and politics

The intention behind this paper is to contribute some observations on what might be called the 'politics' of time in relation to environmental and ecological matters. It is driven by two apparently separate propositions.

The first is that society appears to be developing a growing appreciation of the significance of multiple temporalities, both in nature and in human affairs. Clearly there is now an increasing understanding of the myriad distinctive rhythmicities in nature. But beyond this, in specifically human affairs we are becoming aware, not least through the social tensions and conflicts reflected in new social movements (Melucci, 1989), of the emergence of what sociologists understand as personal phenomenologies of time characteristic of different human identities (Adam, 1990). Overall, the recognition of such multiple temporalities is assuming growing social and political significance in our era of increasing 'individualization' (Beck, 1992).

Second, the world faces mounting ecological problems. Industrial society continues to be locked onto all sorts of trajectories of the most disturbing kinds: ozone depletion, alarming rates of loss of wildlife species and habitat, the mounting prospect of global climate change, a looming fisheries crisis in the

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oceans, and new and insidious forms of pollution now manifesting themselves, whether hormone-disrupting phthalates in substances like PVC, with their likely growing impacts on human (and other) fertility, or, closer to home in the UK, BSE. And so on. Such developments give force to the risk society thesis – the increasingly evident reality that our industrial innovative capacities are making us the unwitting subjects of multiple uncontrolled scientific ‘experiments’. I could more than fill this article with an account of a range of such problems, all of which have their own time frames and implications.

If these two propositions are accepted, then it is not hard to see that society faces immense problems in negotiating and addressing them. To understand how they intersect – that is to say, how issues of time and ‘environment’ help constitute one another – it may be helpful to consider how, *in practice*, the issue of time in the environmental domain has tended to interact with conventional politics in countries like the UK. Though I am now director of a university-based research centre, much of my previous (and indeed continuing) experience has been as a lobbyist/campaigner at the interface between environmental concern and politics – nationally in the UK, and also at EU level over a number of years. So, rather than focusing on the detail of particular physical/biological problems or systems, the concern of this paper is with the human dynamics of ways in which these issues tend to be encountered in the real world of political debate – and with what the experience of these dynamics may suggest about the challenges which are likely to be involved in incorporating a juster, more sophisticated sense of diverse time(s) into our public domains and decisions.

Of course, confronted with problems on the scale suggested above, it is possible – perhaps realistic – to be pessimistic about the human prospect. But that is only one possible reaction. I would argue that ecological concern – what we might call the cultural phenomenon of ‘environmentalism’ over the past two or three decades – is beginning to prove an immensely creative development for humankind. The new forms of understanding it reflects are enlightening us not only about the physical and biological fabric in which we have our being, but also about how we are to understand ourselves, our patterns of value, and our modes of knowing – their limits as well as their strengths. In short, through the medium of the environment and our attempts to come to grips with the full dimensions of what its new discourse implies, we are engaged collectively on a continuing voyage of discovery. Insights about time add new and potentially fruitful dimensions to that voyage.

Consider first some recurrent features of the real-world context in which environmental arguments have tended to take place:

1. Nearly 30 years ago, Kenneth Galbraith pointed to the ineluctable tendency of major industrial bodies, and of the official bureaucracies who are responsible for nurturing and ‘regulating’ them, to seek to do all they can to

make the future as familiar and predictable as the present (Galbraith, 1969). It never works completely of course – but the great challenge for those who survive by investing and making and selling is to hold the world as stable as possible over their planning horizons. To take just one example, the car industry seeks to do all it can to ensure that society's appetite for individual motorized mobility is not constrained over the period of its commitments. This requires the normative shaping not only of the *cultural* environment relevant to its aims (through advertising, PR and similar processes), but also of the assumptions and methodologies used in the *regulatory* environment. For these determine the terms on which their markets can operate in society.

2. Such processes of influence run very deep. Their effect is to shape our ideas of what is 'natural' and 'inevitable', in a thousand and one different ways. They reach into regulatory styles, methodologies and assumptions, at national and international levels. Thus at the core of last year's argument about the Brent Spar oil rig – and the UK government's/Shell's claim that Greenpeace had abused 'sound science' – was the fact that the regulatory processes surrounding rig disposal had been framed to ensure (doubtless for what seemed to be good reasons at the time) that such disposals were evaluated on a simple case by case basis, rather than cumulatively over time. The regulatory science employed, within the 'Best Practicable Environmental Option' framework, reflected this (NERC, 1996). (In UK motorway authorization, such item-by-item processes of licensing are characterized by opponents as 'salami tactics'.)

3. For particular policy communities – embracing industrial actors and regulators – continuing influence over the range of variables deemed 'relevant' to decisions is seen as a crucial element of coherent regulatory control. But such 'boundary' issues are frequently a source of tension. To mention just one topical example, there is currently a burgeoning argument in the UK about the narrow range of considerations built into the regulations surrounding commercial releases of genetically modified organisms (GMOs) (ESRC, 1996).

4. Tendencies of these kinds (and I stress that they are not intrinsically improper – simply ineluctable) have had immense implications for the ways in which environmental politics have evolved in particular countries. Those who have sought to challenge particular embedded orthodoxies or trajectories of industrial development (including the time frames of assessment deemed relevant) have faced stark alternatives: either they must convert their concerns to dovetail with these resulting official framings; or they can stand outside and denounce them in, as it were, prophetic mode. Indeed, in my experience, a defining feature of environmental NGO and 'green' party politics has been the struggle to find ways of dealing with the restrictive embrace of official definitions. This helps account for the inclination (of which I have direct personal experience as a former NGO director) of NGOs and green parties to translate diffuse latent public concerns about impacts of trajectories of

industrial development, into dramatized set-piece disputes about particular cases. To put it crudely, to gain political purchase it is necessary to talk in terms which dominant political institutions and the media understand and cannot avoid. In this way single set-piece causes célèbres – a nuclear reprocessing plant, the activities of particular whaling vessels, the direct health impacts of a specific pollutant – stand for, and come to symbolize *broader* critiques.

Given all these cultural realities, it is hardly surprising that the underlying official representations and categorizations of problems and issues are immensely resilient. Problems are acknowledged, even addressed – but because the ‘framings’ remain intact, any broader corrosive trajectories may escape critical scrutiny, and simply be allowed to continue. We can see this even with the benignly intended concept of ‘sustainable development’. Articulated by the Brundtland Commission in the mid-1980s, endorsed by more than 170 governments at the 1992 Rio Earth Summit, sustainable development provides vitally important pointers towards patterns of development more in harmony with ecological realities. Yet it remains, deliberately, infinitely interpretable, and still potentially consistent with many destructive trends.

I suggest that these general patterns in the politics of the environment have been very pervasive. They have had at least two significant effects. First, they have helped to determine the actual issues which have become emblematic of ecological concern in countries like the UK. For example, in the 1970s and 1980s, particular civil nuclear power plant proposals came to stand for a range of wider NGO (and wider public) concerns about trajectories of energy development – just as, in the UK, specific new motorway construction proposals have served as focal points for much broader concerns about misconceived official transport policies and commitments.

A second consequence of the patterns outlined here is that government and ‘offending’ industries have kept largely secure their control over the ground rules which govern and shape regulatory processes – the real nitty-gritty of government. What is more, control over *time scales* within such systems of regulation has been a crucial dimension of this. Such normative control over time-scale conditions has been exerted in a multitude of ways: through the shaping effects of the time horizons of demand forecasting methodologies (Baumgartner and Midttun, 1987); through the periodicities of knowledge deemed to be relevant or significant in administrative practice; through the choices of discount rates and ‘pay-back’ periods and criteria for particular schemes; through the valuations placed on the time of individuals of different socio-economic classes in relation to specific public sector infrastructure/proposals; and even through the stipulated boundaries and parameters within which scientific evaluation of a potential pollutant is undertaken. The effect of

all of these has been to stipulate what time frames are to be taken as 'natural', within regulatory frameworks.

Consider the fascinating question of scientific 'uncertainty'. As my colleague Brian Wynne has suggested (Wynne, 1994), the apparently innocent term 'uncertainty', when applied to a possibly troublesome pollutant relationship, is paradoxically rather encouraging. It implies a *provisional* state of affairs, likely in principle to be corrected in time; its implication tends to be that knowledge will soon be forthcoming. Compare this with the reality of 'indeterminacy' – with its implication of the more chronically open-ended, deep ignorance which surrounds our understanding in many fields – which is in fact the position with many of our most disturbing pollution problems, where potentially damaging synergies, induced perhaps by the intrinsically unpredictable actions of subsequent social actors, are more generally the rule.

A clear difficulty in addressing all of this is that the various dynamics in question are, as it were, structural rather than deliberate. But they increasingly complicate the process of integrating into our affairs a more appropriate sense of, and respect for, the multiple temporalities in nature and human affairs. Civil nuclear power remains the *locus classicus*. Repeatedly in the 1970s and 1980s, the industry's development in the UK and elsewhere was advanced through regulatory and licensing processes which focused on individual schemes. Again and again, the arguments of those in favour stressed the supposed relatively short-term economic advantages, rather than the cumulative social dangers of generating greater and greater quantities of immensely long-lived toxic wastes, and of accumulations of plutonium and other problematic chemicals requiring safe management over unimaginably long time-scales (e.g. HMSO, 1986). Yet those hoping to influence society's debates on such matters found themselves obliged, in public inquiry contexts for example, to operate within the implicit time-scales normatively imposed through regulatory processes – which were themselves, cultural products of *industrial* time.

We can see similar dynamics now in the field of GMOs. The commercial opportunities claimed for GMOs are such that arguably they 'require' risk assessment processes which appear to make any associated problems manageable. Yet in the UK and a number of other EU countries, there are no outlets in the regulatory frameworks for meaningful discussion of the implications of GMO releases *over the full time-scales* of potential impacts – for example, of the cumulative consequences of the unforeseen ecological difficulties carried by new dominant GMO species within environments more complex than we currently understand them to be. Yet again, those of us with such long-term concerns have been all too frequently inhibited from exploring them within official regulatory frameworks geared to shorter time-scales and a more limited – because more specifiable – range of concerns (ESRC, 1996).

Up to this point, I have implied that the difficulties surrounding time-scales in

ecological politics have concerned *future* time. Certainly that appears to be justified in many fields. But *past* time – and the de facto control of it through official processes of regulation – is also an issue. To cite one example, in the UK the intensification of agriculture has frequently brought with it incremental alterations to familiar landscapes and to patterns of public access in the countryside. The issue has been (I oversimplify) that commercial land management priorities should be primary, with public sentiments about such ‘recreational concerns’ secondary. But it seems to me that this implies a diminution of the importance of cultural continuities which are embedded for all of us in particular landscapes or, for example, long established ‘rights of way’. As Alan Holland and John O’Neill (in press) have pointed out, the network of ‘rights of way’ (public footpaths) in the English countryside is important as much for its cultural links with past generations of users, as for immediate ‘A-to-B’ ‘recreational’ advantages. Thus, an appropriate sense of *past* time, too, may be undervalued by the underlying economic commitments reflected in regulatory processes.

Nevertheless, it is in relation to the unfolding of future time that dominant priorities are most troubling. One further example from the writer’s personal experience as a statutory Forestry Commissioner in the UK, the country’s largest landowner (1.4 m ha), arises from the immense political pressure to discipline the handling of these public assets according to narrowly defined market principles. This encourages the evaluation of felling cycles and new planting regimes on time-scales far shorter than are appropriate for the long-term business of growing trees. It means that the other associated general benefits of forests – their wildlife and cultural significances and ‘non-market benefits’ – are also having to be evaluated within a similarly truncated time-scale. Ironically, this has been occurring *in parallel with* widespread recognition by the government (in the UK as elsewhere) of the immense importance of forests for the community as well as for the planet as a whole.

This paper has pointed to some of the tensions surrounding the handling of time-scales in the environmental domain in industrial societies like that of the UK. It has sought to identify certain *embedded* obstacles to more nuanced appreciations of relevant rhythms and time-scales in public decisions. It is appropriate to conclude with two further observations – one sombre, the other more encouraging.

First, I doubt that we can disassociate the dynamics described above from the increasingly disturbing evidence from research in a number of western countries about public cynicism about, and fatalism towards, government and political institutions. Recent social research at the centre with which I am associated in the UK points to a persuasive, and, I would suggest, a realistic scepticism about the willingness of governments to do anything other than what major economic

actors want them to do. This also applies to having a proper sense of both future and past time. To the extent that environmental groups and green parties have bought into such official ways of looking at things, they too may be attracting scepticism.

However, it would be misleading to conclude on such a pessimistic note. Society is engaged in the complex process of becoming *self-conscious* about dynamics of precisely the kinds discussed in this paper. And there are significant grounds for confidence that we are beginning to translate such insights into practical strategic politics.

The development of new tools and principles at national level – the principle of precautionary action ahead of ‘conclusive’ scientific proof (pioneered in Germany as the Precautionary Principle), albeit more honoured in the breach than in the observance; new methods of life cycle analysis and physical recycling; the proliferation of debate and experiment at local level concerning new forms of public transport and physical land use planning – these are just some of the ways in which a recognition of the relevance of, and urgent need for, longer time-scales is beginning to be reflected incrementally in day-to-day domestic politics. Internationally too, the 1992 Rio Earth Summit marked a new level of commitment by an unprecedented number of governments to begin embedding longer-term ecological priorities within their mainstream political activities. And if it is right to be cautious about the speed at which the aspirations in the various Rio Conventions (e.g. on Sustainable Development, Forestry and Agenda 21) will be implemented, we now have an encouraging example, in the parallel Inter-Governmental Panel on Climate Change (IPCC), of the growing international solidarity of scientists and administrators, with respect to the need to extend the time horizons within which the impacts of industrial activity on the biosphere should be considered. Indeed, the IPCC now routinely requires governments to focus on implications of their actions 50–100 years ahead – a major advance over the situation even 20 years ago.

One final thought. We appear to understand more and more about ecological processes and problems. But to non-scientists, gripped, as it were, by the environmental *weltanschauung*, what is most striking is how *little* we know. Indeed, the more we know, the more we recognize the gaps in our knowledge. Perhaps that recognition is the beginning of wisdom.

Subtler consideration of time-scales – greater respect for their multiplicity, and for their independence from the imposed priorities of industrial society – can be pictured as a means for creating space for ever greater appreciation of the deep indeterminacies, indeed mysteries, in which we are all embedded. It is one of the fascinations of the new debates about time, in this journal and elsewhere, that they too are extending our appreciation of these mysteries – and in the process encouraging the humility and sense of responsibility needed, if we are to have any chance of moving towards sustainability.

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