in the different States; catastrophes or the obvious failure to reach the envisaged results might tell us what is necessary. As Popper stated (in *The Open Society and its Enemies*, on which the title of the original article was based): ‘(in our social world) many mistakes would be made which could be eliminated only by a long and laborious process of small adjustments; in other words, by that rational method of piecemeal engineering’. The question is, whether the environment has enough time for such a learning process.

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**Predicting the Unpredictable**

My article some twenty years ago, whilst looking at one particular area of environmental regulation, was really a cry for more effective enforcement of environmental law generally and for damage to the environment to be seen, in terms of civil and criminal proceedings and penalties, as an area like any other. In many ways this cry was not heard. Remarkably, in practice, little has changed over the last twenty years. Penalties in UK, and the rest of Europe, and indeed elsewhere (outside the USA), remain very low and contrast starkly with those for, for example, anti-trust violations.

Despite efforts in some jurisdictions to create classical crimes for environmental harms, environmental offences continue to be seen and treated differently and less severely than other types of criminality. Moreover, regulators around the world have not generally adopted the harsh, punitive and arms length approach to regulation characteristic of the US EPA, which many have called for.

Despite this downbeat assessment, few would deny that massive strides have been made in environmental regulation over the last twenty years. So why is this?

Amongst the factors which have led to progress, despite weak enforcement and penalties, have been:

- the tremendous economic changes which have taken place over the last twenty years. In mature industrialised societies, the process of economic renewal has led either to new and less environmentally harmful technologies and/or to the export of manufacturing industry to the Far East and elsewhere in the developing world;
- partly associated with these economic changes, there have also been two shifts in the focus of environmental regulation. First, there has been a change from plant and process based ‘end of pipe’ concerns to the life cycle of products—from cradle to grave.
Second, focus on mainly localised and often immediate environmental impacts has been superseded by concern about the regional and global—and often slower and more insidious, impacts of man’s activities on the environment. These developments have also been accompanied by significant advances in public education and awareness of environmental issues and by changed attitudes. Business and industry have not been immune to these changes, and attitudes both at the senior managerial and operational levels have changed too.

Taken together, these changes have served to weaken the argument that there is an urgent need for tougher command and control-type regulation, and in its place, have come economic and fiscal approaches to regulation—including the growth in tradeable rights and environmental taxes. There has also been a growing emphasis on the need for environmental reporting to enable commercial and reputational pressures to play their part in ensuring environmental protection goals.

Whilst these tools of environmental regulation are still developing, they do appear to offer the prospect of lasting progress which their proponents argue will be more efficient and cost effective than traditional command and control style regulation.

So what of the future? As the last twenty years have showed, it would take a brave person to predict how things will develop over the next twenty years. However, in the developed world, at least for the foreseeable future, it looks as if the focus will continue to be on economic and fiscal measures and that accountability to stakeholders will continue to take the limelight. My hunch, however, is that whilst this may be successful in its own way, it may not be enough and the time for some punitive sanctions (of the type found in the Competition Law of the EU) may yet come as the nature and scale of global and environmental problems mount. I hope to have the opportunity again in another twenty years to reflect, in the pages of the Journal of Environmental Law, on whether this hunch was right!

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Has Environmental Law Become Humdrum?

Perhaps the only noteworthy quality of my contribution to this journal’s first issue, ’Radiological Risks and Civil Liability’, was that it predated Hope v BNF plc (the unsuccessful attempt, in the High Court, to link juvenile leukaemia to