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# ABSTRACTION, PRECEDENT, AND ARTICULATE CONSISTENCY: MAKING ENVIRONMENTAL DECISIONS

BRUCE PARDY\*

*[The doctrine of political responsibility] states, in its most general form, that political officials must make only such political decisions as they can justify within a political theory that also justifies the other decisions they propose to make. The doctrine seems innocuous in this general form; but it does, even in this form, condemn a style of political administration that might be called, following Rawls, intuitionistic. It condemns the practice of making decisions that seem right in isolation, but cannot be brought within some comprehensive theory of general principles and policies that is consistent with other decisions also thought right. . . . This doctrine demands, we might say, articulate consistency.<sup>1</sup>*

## I. INTRODUCTION

Environmental law does not operate with articulate consistency. It could, but it does not. The current trend in environmental protection and urban planning is towards “intuitionistic” administration. In the United States, Canada, Australia, and New Zealand, decision makers have yet to establish general rules that stipulate outcomes. The conception of environmental harm often reflected in regulatory action is: “We can’t define it, but we know it when we see it.” There is still no description of the meaning of environmental protection in abstract legal terms.

This state of affairs can be seen in at least five areas: (1) Ecosystem management, which is based upon the proposition that management decisions should be based upon specific scientific evidence about specific envi-

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\* Senior Lecturer, Faculty of Law, Victoria University of Wellington, New Zealand. This paper was completed while spending a semester as a Visiting Professor at California Western School of Law. Ideas in this paper were developed from a talk entitled *Ecology, Law and Urban Planning—Can They Work Together?* given as part of California Western’s Lecture Series in February 1998. See also Bruce Pardy, *Planning for Serfdom: Resource Management and the Rule of Law*, [1997] N.Z.L.J. 69.

1. Ronald Dworkin, *Hard Cases*, 88 HARV. L. REV. 1057, 1064 (1975).

ronmental scenarios; (2) Environmental assessment, which consists of procedural requirements to gather and consider information, rather than a substantive litmus test for environmental impact; (3) Urban planning processes, which lack generally applicable land-use rules, and instead depend upon site specific and project specific evaluations; (4) Environmental protection regimes, in which statutes typically contain vague objectives instead of rules, and regulations prescribe specific standards for specific substances in specific circumstances; and (5) Enforcement of statutes and regulations, which may occur not on the basis of conceptually precise criteria, but upon non-environmental considerations.<sup>2</sup> In each of these areas, there is no articulation in environmental or ecological terms of generally applicable principles by which decisions are to be made.

## II. PROBLEMS WITH INTUITIONISTIC DECISION MAKING

Under the traditional common law model, conflicts are resolved by decision makers such as judges and juries who have no interest in disputes, and indeed know nothing about them. Decisions are made by applying general rules to the facts at hand, rules which are applied without regard for the parties' status, wealth or popularity. Those rules come from a legislative authority, thus preserving a separation of powers; or the rules are created by precedent, thus following the principle that like cases should be decided alike. To a substantial degree, urban planning and environmental management techniques do not follow these legal norms. Instead, they combine rule making and decision making; they create particular rules for particular facts; they allow cases to be decided by authorities who consider themselves to have a great deal of interest in the outcome, and a great deal of discretion in deciding the outcome; they do not require decisions to be bound by previous decisions; and the main criterion applied is a vague concept of the public interest.

At least three troubling symptoms exist in the face of such environ-

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### 2. Howard Latin describes eight "laws" of administrative behavior:

(1) In Conflicts Between Political Considerations and Technocratic Requirements, Politics Usually Prevails; (2) Agencies Avoid Making Regulatory Decisions that Would Create Severe Social or Economic Dislocation; (3) Agencies Avoid Resolving Disputed Issues Unless They Can Render Scientifically Credible Judgments; (4) Agencies Will Not Meet Statutory Deadlines If Budget Appropriations, Personnel, Information, or Other Resources Are Inadequate; (5) Regulators Are Influenced by Disciplinary Norms that May Conflict with Statutory Mandates; (6) Bureaucrats Are Conditioned by Criticism or Other Forms of Negative Feedback; (7) Agency Behavior is Partly Conditioned by Manipulative Tactics of Regulated Parties; and (8) Administrators of Multiple-purpose Statutes Usually "Simplify" the Decisional Process to Emphasize Only One or Two Statutory Goals.

Howard Latin, *Regulatory Failure, Administrative Incentives, and the New Clean Air Act*, 21 ENVTL. L. 1647, 1651 (1991).

mental management and planning systems:

1. *Environmental Decline*: Environmental management seems to allow continued environmental decline. It is difficult to demonstrate cause and effect in this respect, but it is at least possible to observe that environmental damage does occur under such regulatory regimes. It is also possible to suggest one reason why this might be so: when there is less law and more discretion, there is more room for compromise. In the absence of a bright line rule, decision makers have room to seek a middle ground. Compromise is often a good way to resolve disputes. However, it is less frequently so in environmental matters.<sup>3</sup> The past half century has seen many conflicts between dire environmental consequences of allowing an activity to proceed and apparently dire economic consequences of preventing the activity from occurring. Such conflicts are apt to be resolved by finding a compromise - by scaling back or limiting the activity in some way to reap economic benefits and reduce environmental impacts. It is possible to characterize minor environmental impacts as inconsequential, but significant long term environmental changes can be caused by the accumulation of small impacts. Compromise allows environmental death from a thousand inconsequential cuts.

2. *Serfdom*: Isolated decision making in the urban planning context produces a phenomenon that Professor Robin Molloy of Syracuse University calls "serfdom," in which legal outcomes depend upon personal status in the political sphere. In such a legal environment, what people are allowed to do depends upon who they know, on whether their projects seem politically advantageous, on whether they fit a planner's vision for a particular urban landscape, or on whether they benefit a city's financial interests. Public entrepreneurialism, the participation of the public purse in urban development, is part of this phenomenon. Malloy states:

In today's environment, city planners and politicians are no longer content to map out general restrictions governing land use. Rather, they

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3. Environmental disputes often depend on which side is scientifically correct. In such cases, compromise may obscure the accuracy of the correct party's assertion. Paul Ehrlich illustrates the idea this way:

Laypeople frequently assume that in a political dispute the truth must lie somewhere in the middle, and they are often right. In a scientific dispute, though, such an assumption is usually wrong. Copernicus . . . showed (to the distress of the establishment) that the earth both rotated on its axis and, along with the other planets, revolved around the sun. The controversy about what revolved where was not resolved by a compromise that had the earth stationary on its axis but circling the sun. Pasteur put an end to the debate over whether some organisms could be produced by "spontaneous generation" by showing that bacteria descended from other bacteria. The answer wasn't a compromise in which mice couldn't be spontaneously generated whereas flies and microbes could.

Paul Ehrlich et al., *No Middle Way on the Environment*, ATLANTIC MONTHLY, Dec. 1997, at 98.

seek to actively participate in real estate development—to participate in the entrepreneurial fulfillment of specific city planned projects that they themselves see as essential to the successful development and marketing of their urban identity. Public officials constantly provide ample rhetoric in support of the free marketplace, competition, private enterprise, and rugged individualism. However, in complete contradiction to this rhetoric is an urban development program based on *centralized* urban planning, *public* management, and *government* ownership of almost every major new commercial project in the urban center.<sup>4</sup>

The participation of the public purse in urban development produces conflict of interest, an increased likelihood that decisions will be made for the wrong reasons, and a blurring of public and private domains.

3. *Complicated and Uncertain Law*: When statutes are extremely vague and regulations are extremely specific, many regulations will be required because they are the only source of meaningful rules. This is especially so when the subject matter is as wide and varied as the environment. The volume of environmental regulation, including plans, policies, guidelines, by-laws and other instruments, is immense. It is difficult to comprehend. Its particularized nature means that it is difficult to find a central conceptual thread or set of core principles that explain why it says what it says. It is not a coherent whole, but a collection of isolated rules for isolated circumstances.

### III. RESULTS VS. REASONS

One of the causes of “intuitionistic” environmental law is the importance placed by planners and regulators upon results rather than upon reasoning. They are not unique in this respect: it is not uncommon for people concerned about societal trends to concentrate on the results of particular decisions rather than on the rationales on which decisions are based. This happens, for example, at both political extremes: the left favors free choice when the issue is marijuana use, but favors compulsion when the issue is union membership. The right favors the reverse. For both, a decision is properly made if the result is proper; to neither is it important that the same reasoning be applied to both questions. The same kind of focus is evident in environmental and urban planning. Their practitioners say that they need to control results. They say that they know what the results ought to be in each particular case, and if the result is right, the process by which the result is achieved is not that important. For example, Daniel Botkin, a biologist at the University of California, writes in his book *Discordant Harmonies: A New Ecology for the Twenty First Century* that the proper approach to environmental stewardship is a system of ecosystem management which:

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4. Robin P. Malloy, *Planning for Serfdom—An Introduction to a New Theory of Law and Economics*, 25 *IND. L. REV.* 621, 626, 628 (1992).

requires specific knowledge because policies must be specific . . . . The task before us is to understand the biological world to the point that we can learn how to live within the discordant harmonies of our biological surroundings, so that they function not only to promote the continuation of life but also to benefit ourselves: our aesthetics, morality, philosophies and material needs.<sup>5</sup>

#### IV. TECHNIQUES FOR ENVIRONMENTAL PROBLEM SOLVING

First year law students learn that “doing law” is about moving from concrete facts to abstract rules and back again. They learn that a judicial decision is not just the declaration of a winner from a set of facts, but that it also reflects a rule or principle that can be found by abstracting the result. That rule or principle can then be applied to new concrete situations. This back-and-forth between concrete and abstract is the heart of the way common law systems work.

When a precedent is said to be applicable to a set of facts, it is so because the new case resembles, in some abstract way, the old one. For example, it is applicable not because both an old case and a new one involved pregnant women slipping on icy sidewalks in front of Target stores, but because both involved personal injury arising from a danger on premises that the occupier failed to rectify and warn against. Similarly, when a case is said to be distinguishable, it is different from previous situations in some abstract respect. If the slip and fall occurred outside KMart instead of Target, that is a factual difference, not an abstract one: it does not affect the applicability of the abstract rule. But if the sidewalk outside the store was public property rather than private, a different kind of factor exists in the new case that did not exist in the old.

Thus, moving between concrete and abstract is an inherent part of following precedent. The role of abstraction is broad; it is not limited to interpretation of judicial decisions. For example, legislatures express their intent in statutory terms which are abstract to some degree. A rule in a statute which provides for equal shares of family property for both spouses upon breakdown of a marriage is an abstraction: it says all people who fall into an abstract category, even if they may be in quite different factual situations, will be subject to the same principle. Regardless of infinitely variable characteristics (whether relationships are nasty or amiable, two years long or twenty years long, with or without children who happen to be boys or girls, and so on), any marriage that comes apart is subject to the same general rule.

Ecologists and geographers insist that environmental decisions cannot be made with abstract, generally applicable rules. They say that the science

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5. DANIEL B. BOTKIN, *DISCORDANT HARMONIES: A NEW ECOLOGY FOR THE TWENTY-FIRST CENTURY* 191, 197 (1990).

is too uncertain, the systems too different, the information too voluminous, and the human factors too important to express ideas in general terms. In order to deal with these difficulties, they say that decisions must be made on an isolated basis. They essentially argue that vague criteria be applied to each proposed action—each development proposal, each rezoning application, each pipeline, each clear cut, and each dam. There is a preference within the planning and environmental management fraternities for making decisions one situation at a time. Scientists would abhor labelling this process “intuitionistic” because it calls for the best scientific evidence available. The point, however, does not concern the kind of evidence to be evaluated, but whether there are general principles to be applied. Practitioners’ objections to abstract rules reflect a misconception about the way law works. Courts frequently decide cases fraught with scientific and evidential uncertainty. Expert evidence on contentious questions frequently conflicts. Such conflicts may produce difficult questions of fact, but they do not necessarily produce difficult questions of law. Evidential uncertainty may make abstract rules difficult to *apply*, but it does not suggest that they should not exist. It is quite true that there are an infinite number of interactions occurring in an infinite number of different ecosystems. The numbers are so vast that they cannot all be documented, much less be understood. That is a reason to favor abstraction, not a reason to avoid it.<sup>6</sup>

The nature of environmental problems does not foreclose abstraction. Consider a hypothetical standard issued under an imaginary statute. Assume that the statute’s objective simply is to “*prohibit pollution that harms the environment and endangers human health.*” The standard restricts the concentration of substance X in effluent to .02 micrograms per litre. There is no general rule other than the vague objective in the statute—no other abstract articulation of the level at which the standard is to be set. How was the standard arrived at? Is it completely dependent on the facts? Or is there an abstract idea that can be extracted from the decision about substance X and used to guide the decision on substance Y? Questioning the regulator might produce the following:

Question: Why is the standard for this permit set at .02 µg/l?

Answer: That is the level that protects the environment and human health.

Question: What do you mean? What happens if we allow concentrations above .02 µg/l?

Answer: Concentration of the substance accumulates in fish and fish die.

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6. Indeed, the concept of the ecosystem is itself an abstraction of an infinite variety of communities of organisms.

Question: At .02  $\mu\text{g/l}$ , there is no accumulated concentration or fish loss?

Answer: Well, yes, there will be some; certainly a risk of some.

Question: Well then, what happens at .03  $\mu\text{g/l}$  that does not happen at .02  $\mu\text{g/l}$ ?

Answer: A greater incidence of fish death and higher biomagnification of the substance in fish tissue.

Question: Could you not say the same between .02  $\mu\text{g/l}$  and .01  $\mu\text{g/l}$ ?

Answer: I beg your pardon?

Question: Would there not be a greater incidence of fish death and higher accumulation of the substance in fish tissue at .02  $\mu\text{g/l}$  than at .01  $\mu\text{g/l}$ ?

Answer: Yes.

Question: Then your description does not explain why the proper standard is located at .02  $\mu\text{g/l}$  rather than .03  $\mu\text{g/l}$  or .01  $\mu\text{g/l}$ . Why did you draw the line at .02  $\mu\text{g/l}$  in this particular case?

Answer: We lose an unacceptable number of fish at .03  $\mu\text{g/l}$ .

Question: How many?

Answer: It is not a question of an absolute number. It is impossible to know exactly how many.

Question: Then the effect you are preventing is not based on an absolute number of fish lost.

Answer: No.

Question: Then what makes the number unacceptable?

Answer: The proportion of the population that the estimated number of deaths represents.

Question: Population of a particular species?

Answer: Yes.

Question: Which species?

Answer: The spotted waddlefish.<sup>7</sup>

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7. As far as the author knows, this is an imaginary species.

Question: Why the spotted waddlefish?

Answer: It is one of the most sensitive species of fish in many of the bodies of water into which substance X is expected to be discharged.

Question: Is it one of the most sensitive species of fish, or one of the most sensitive species of any kind of life in these bodies of water?

Answer: Our best information indicates the latter, although there may be species of which we are not yet aware.

Question: Is it more sensitive generally, or only with respect to substance X?

Answer: It is more sensitive in several respects, but the relevant respect is in relation to exposure to substance X.

Question: What percentage loss of the population is too high?

Answer: We set 10% as the maximum tolerable loss.

Question: Why 10%?

Answer: That is the portion of population from which the spotted waddlefish should be able to recover on an annual basis.

Question: What is that conclusion based on?

Answer: Its reproductive frequency and survival rate is such that young fish that would otherwise naturally die from lack of food will be available to fill in the population that is lost from exposure to substance X.

Question: So the rule you are really applying is that contamination must be kept to a level which will allow the most sensitive species to recover.

Answer: Yes.

Question: Over what period of time are you measuring?

Answer: For the effect on the species?

Question: Yes.

Answer: Forever.

Question: So when you calculate what percentage of fish can be permitted to be lost, is that per year or total?

Answer: Per year.

Question: So there will be the same percentage of that species that are lost each year if that same level of contamination is maintained?

Answer: Yes, but there will be substantial recovery every reproductive cycle also, as I said.

Question: So is your stock getting smaller every year?

Answer: Hopefully, no.

Question: So the standard is based on the loss the species could tolerate and still recover to its original pre-impact population, or simply not die off altogether?

Answer: Return to its original pre-impact population.

Question: So contamination must be kept to a level at which the most sensitive species will maintain its original population level.

Answer: Yes. Such levels are never static, even in the absence of contaminants, but the fluctuations should be unaffected in the long run by the presence of substance X.

Question: And you have factored in the effects of biomagnification, and synergistic and cumulative effects of other toxic substances that might be in the water?

Answer: To the best of our ability.

Question: What do you mean by that?

Answer: It is impossible to know conclusively all the other substances that might be present in all the bodies of water to which the standard applies.

Question: Then how do you draw the line?

Answer: We gather as much information as we can about other suspected hazardous substances.

Question: So you are limited by your investigative technology?

Answer: Yes, and by time.

Question: How do you decide what to look for?

Answer: We mostly rely on previously documented evidence of particular substances.

Question: So you do not actually go and take comprehensive samples every time a new standard is proposed.

Answer: No.

Question: So you are just guessing?

Answer: It is better than a guess. It is based on the best information available to us.

Question: Within the constraints of time and technology?

Answer: And resources.

Question: Of course. And the effects of the contamination on the other organisms in the lake ecosystem that form part of the food web of which your subject species is a part?

Answer: Again, to the best of our ability.

A principle that directs standards to be set at "*contaminant levels which are estimated to prevent permanent change to the population of the most sensitive aquatic species in receiving water*" is more meaningful than one which says "*prohibit pollution that harms the environment and endangers human health.*" It is also more meaningful than having only a standard of .02  $\mu\text{g/l}$  with no articulation of the reason for the number. The abstractions expressed by the regulator in the exchange above may not be a complete description of the information considered in making the decision, or the full extent of the abstraction that is possible. Nor may it express an ideal rule. However, it is a place to start. Furthermore, if that exchange expresses to any extent the abstract idea that has determined the standard for substance X, it should also be the abstract idea that governs the standard to be set for substance Y, unless there are reasons that can be articulated why the first decision can be distinguished and the same reasoning should not apply.

Consider another example of this process. Assume a vague statutory objective of "*protecting ecosystems.*" Consider the first proposal to which that objective must be applied: a proposal to clear cut a section of forest. Assume that the proposal is rejected. The reasoning of the decision maker is that the ecosystem includes the trees and the other plant and animal life that interact, directly or indirectly, with those trees. Therefore, concludes the decision maker, a clear cut would adversely effect this particular ecosystem.

A second application proposes to cut down a single tree from a wooded area. The vague objective, now interpreted in the first application, is applied. Cutting down one tree is allowed. The reasoning of the decision maker is that taking one tree from the forest does not affect the system. It is, taken literally, an effect, but it is not an effect in system terms because it causes no long term change to the way the system functions. The tree is a common species in this area of forest. The remaining population of trees is

unaffected. The loss of the one tree is such a small physical change to the habitat of the other, non-tree plant and animal species that these species are not affected. In addition, the taking of one tree should not affect the rate of tree reproduction: seeds from other trees will grow where seeds from the taken tree might have taken root. Therefore, the result is different from, but consistent with, the rejection of the first proposal.

A third application proposes to cut down twenty trees per acre. This is a more difficult case, and the answer may not be clear. But it is now less difficult and more clear, and therefore less arbitrary, than working with a bald directive of "protecting ecosystems." The articulation of the answer develops the meaning of protecting ecosystems, which will in turn be applied to the next scenario.

There is nothing new or innovative about this method of making decisions. The only remarkable thing about it is that it does not presently have a central role in the development of environmental law. Would it create overwhelming practical difficulties for environmental agencies, city planning departments, and other administrative bodies? How would they proceed with vast numbers of decisions if they cannot make those decisions in isolation? Would they become adjudicators rather than administrators, burdened with the need to produce reasons for every step? Are principles of precedent simply unworkable in the context of any function other than court-like adjudication? No firm answers can be given. There is no doubt that creating a greater role for precedent, taking separation of powers seriously, and providing for the development of abstract rules could not occur within the present practice of environmental management and urban planning. It would not be possible simply to place new requirements on present processes.

## V. CONCLUSION

Environmental decision making could be conducted in a manner which provides for the evolution of general rules. Environmental law could be administered with articulate consistency if its processes separated the function of making rules from the function of applying them; if like cases were expected to be decided alike; if the law was developed by abstracting general rules from particular cases. Starting with vague statutory objectives would be less troubling if each interpretation became a precedent for the one following, if each result clarified the meaning of the objective a little bit more, and if the interpreter was articulately consistent in justifying each new result. Courts interpret and apply statutes in this way, but courts have a relatively minor role in shaping environmental regulation and urban planning. The agencies that have the job of achieving the vague objectives are fulfilling functions more administrative than judicial. Rarely do they consider themselves to be bound by their previous decisions. They do not consider that their primary responsibility is to be articulately consistent, but to

use their powers to fashion the right result, depending on the facts. So many decisions must presently be made for the very reason that they are made in isolation. If decisions were made according to a different set of procedural principles, they could be made in accordance with a common set of abstract ideas.