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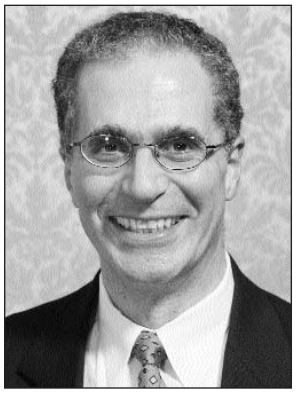
A Message from the Chair



In our day-to-day practice, we environmental lawyers sometimes feel divorced from the larger environmental problems that, after all, led to the passage of those federal and state environmental laws that form the fabric of our daily work lives. The connection seems missing between our work lives, on the one hand, and our concerns as citizens about environmental degradation, including global climate change and the loss of biodiversity, on the other hand. Dealing with "local" issues in general seems disconnected from the overwhelming "global" environmental issues. Those of us who decided to go to law school to help protect and improve the environment are not always sure that what we do impacts, much less accomplishes, that objective.

Two current Section projects remind us of that connection, and show just how the organized Bar can promote better lawyering and a better environment at the same time. The first project is our Section's Fall program (September 19-21, Jiminy Peak, Hancock, Mass.), something I urge you to attend if possible. The topic of the program is how lawyers can promote better decision-making in the local land use review process. The second Section project places us at the heart of developing a regional approach to reducing greenhouse gases that contribute to global climate change.

The Fall Meeting program will have a wide spectrum of panelists from both the private and the not-for-profit sectors and the academic world, from the western part of the state, upstate and downstate. Leading players will address new approaches to environmental review, permitting and planning issues, especially collaborative project planning for community-friendly, environmentally sound development. We think that case study examination of a few such projects by some of the principal actors in those projects (as well as theorists) will spur creative thinking and encourage more such projects. The linkage of such local planning to broader core global environmental issues—how, by preserving open space to the maximum, we minimize loss of biodiversity—will be highlighted by one of the leading scientist/planners in the field, someone I heard speak dynamically on issues whose connection at the local land use planning level I did not think theretofore could be so immediately connected. Panelists will review why and how such projects can accomplish joint development and preservation objectives; they may even review some "failures" for their value in minimizing more of them in the future.

To get down to the "nitty gritty" of what practicing attorneys actually do to accomplish these delicately balanced objectives, the program will review open space preservation techniques, such as farmland protection programs, overlay zoning, conservation easements and land acquisition. The program will also explain how

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comprehensive and collaborative planning and land use law reforms affecting more than a single project can promote a better long-term balance between preservation and development. And panelists will explore the various roles that attorneys play in this process, as counsel for municipalities, or developers, or community groups, and the issues confronting them.

Perhaps nowhere else in our field do there exist such tremendous opportunities for environmental attorneys to use their experience representing one of the players—say, a developer—in an environmentally positive way when representing one of the other players, whether a citizens' group or a municipality. We put the phrase "ethical considerations" in the title of this panel, but the three very distinguished attorneys (active Section members, all) on this panel, who collectively cover the entire state will, we think, demonstrate the real added value that experience in representing all constituencies brings to the table in such collaborative endeavors.

The second Section project is a rather bold and ambitious one: to work with bar leaders in nine Northeastern state counterparts to our Section to encourage our respective state environmental agencies to respond affirmatively to New York's call to develop a variety of strategies to reduce greenhouse gas (GHG) emissions from all sources. Reducing greenhouse gas emissions that contribute to global climate change has emerged as perhaps the most critical environmental effort of the twenty-first century. Designed to reduce the amount of greenhouse gases produced collectively by these ten states, this program would attempt on a regional scale to do what the federal government is not doing on a national scale.

Behind this effort is the belief that state and even local initiatives for achieving GHG reductions have the real potential to effectively reduce GHG emissions from commercial buildings, residences, power plants and even mobile sources, namely, cars and other vehicles. Most of the Northeastern states have undertaken their own programs aimed to achieving GHG reductions, but we are concerned that absent coordination among the states, a patchwork of differing and inconsistent regulatory requirements and programs will result (witness this in vehicle emissions reduction requirements). Moreover, it is likely that some initiatives aimed at facilitating GHG reductions, like emissions reduction credit registries and trading, could best be implemented on a multi-state basis. This project is at an early stage of development; we'll put whatever effort we need to behind it.

What unites these two otherwise dissimilar projects is that they represent one of environmentalism's catchy and also useful watchwords—think globally, but act locally. We practitioners should bear in mind that opportunities exist, whether in our daily practice, such as our representation in the land use review process, or in Bar Association projects, such as the GHG reduction multi-state project, to minimize further loss of biodiversity (by habitat protection) and to ameliorate global climate change.

The Section's leaders know many Section members are most focused on improving their skills as practicing attorneys, while others are as interested in examining the larger public policy issues in order to return to the roots of their original desire to become environmental lawyers. This section is working to join those two desires.

We invite you to join us in participating in these and other projects. You may reach me at *jpericoni@periconi.com.*

James J. Periconi

REQUEST FOR ARTICLES

If you have written an article and would like to have it published in *The New York Environmental Lawyer* please submit to:

Kevin Anthony Reilly, Esq.
Editor, *The New York Environmental Lawyer*
Appellate Division, 1st Dept.
27 Madison Avenue
New York, NY 10010

Articles should be submitted on a 3½" floppy disk, preferably in WordPerfect or Microsoft Word, along with a printed original and biographical information, and should be spell checked and grammar checked.

From the Editor

As this column is being written on the cusp of summer's arrival, as such is measured by the pitch of the earth's rotation, I am actually awaiting the arrival of spring, as such is usually measured by warm sunny days and weekends outdoors. The notion of climatic cycles within larger, but sometimes very different, cycles is being played out, giving some reinforcement to those who argue in favor of the earth's natural historic variability in climate and caution against too many anxieties about the imminent effects of global warming (of course, those who study global warming in more detail might point out that regional abnormalities are actually being modeled as likely consequences of global temperature increases). Last year's desertification of the Northeast has been replaced by saturated ground, flooding and, no doubt, a coming bumper crop of mosquitoes. My anticipated July camping trip to Maine seems imperiled and I fear that I may actually indulge in a chemical substance that I have not touched in decades—DEET. Anyway, from these mundane musings many environmental issues spring . . . (ahem!). . . .

Shorge Sato, of NYU Law School, submits an article that was a second-place finalist in the Section's Environmental Law Essay Competition. This is not an easy read, but it is exceptionally well-written, in a political theory vernacular, and it makes some thoughtful points which are very worth considering as we talk casually about the general efficacy of sustainable development. The author subjects each of the propositions being asserted to scrutiny, and challenges some of our often untested assumptions about sustainable development: sustained for whom? The article projects into the future rather than simply undertaking the traditional scan of looking at the present developed and the present undeveloped worlds. The author tries to get a handle on why present generations should deprive themselves of resource consumption in favor of unknown future generations which, almost by definition, extend indefinitely into the future. While many of us may reach for easy and obvious answers, these answers may, disconcertingly, sometimes rely on shaky assumptions. These assumptions ultimately may have some validity, or not, as predictive factors. But it's probably worth thinking through how our political systems, our notion of "democracy," our seemingly innate urge to find a moral underpinning to policy decisions and choices, our biological need to breed, and various other factors impact on our decisions having to do with resource consumption and resource conservation. The author also undertakes a nuanced inquiry into the equitable variables that may silently govern how we approach the problems of how much do we consume now and how much do we decline to consume in order to ensure the availability of resources for future generations. Many of us, being the descendants of immigrants from resource-starved lives, may have grown up with cultural preferences for conserving more resources than we consume. Certainly, one would think, a good thing. Yet, doesn't it also make sense to think in terms of maximizing the health and happiness of present generations so as to ensure that future generations will actually arrive and be raised in sufficient comfort that they, too, will maximize their opportunities, and so on? I'm not sure what the answer is, but the article at least raises some of the questions. As I said, this is not the traditional approach to the general topic of sustainability, and readers may quibble with the author's views on whether or not future generations should be "discounted" in analytical modeling, but it's an interesting set of problems that is worth thinking through.

One of the author's sources is Richard Revesz, recently appointed Dean of NYU Law School and the general editor of *Foundations of Environmental Law and Policy*, a theoretical sampler that I assign to my students that, also, is different from the more practice-oriented articles usually appearing in this journal. It will be an interesting test of some of the points that the author raises in an environmental context, regarding the transference of costs and benefits among generations, how we as a polity resolve the social security paradox that faces us just a couple of decades hence. Namely, that contributed by the present generation in increasing amounts is being consumed by prior generations in increasing amounts, but what of the future generations which, demographically, will be a smaller working group in comparison to the baby boomer bulge? Will they, from a smaller economic baseline, contribute to compensate us in increasing amounts? Generational discounting in reverse? How we handle that problem which, despite the political and social complexities, really is reduced to fairly easy math, may shed some light on how we resolve the substantially more complicated web of problems that arises as we regard how to shepherd the earth's resources, many nonrenewable, as the population hits the seven-billion mark in the near future. Do we have the quantifiable matrix that some scholars postulate as they factor in

variables and assumptions about resources, consumption, use and population, or do we face a Rubik's cube? A look at the past millennium's history of episodically rampant disease, warfare, pestilence and starvation, but also people's great inventiveness, profound inquisitiveness, determined problem-solving and even occasional altruism as at least some survivors succeeded prior generations, inclines me to expect the unexpected rather than to rely overmuch on mathematical modeling. We have to constantly remind ourselves: history isn't over yet. Responses, anyone?

Wesley O'Brien of St. John's Law School has edited the students' case summaries again. Peter Casper of Whiteman Osterman and Hanna has edited the Administrative Decisions Update.

I am actively looking for well-written articles on a range of topics that are interesting and useful to our readers. I am not shy about co-publishing articles, assuming that permission is obtained from the original publisher; we are also fairly flexible about granting permission should our authors wish to re-publish articles. I also renew my offer to our sister publications in the New York State Bar Association to contact me about articles that are accepted for publication in other State Bar journals, yet would be of interest to our membership.

Finally, please remember the Environmental Law Section's Fall Meeting. A notice appears on page 28.

Kevin Anthony Reilly

Sustainable Development and the Selfish Gene: What Our Genetic Code Tells Us About Discounting Intergenerational Justice

By Shorge Sato

> The genetic code . . . creates a bias toward the future. A wise social system will exploit what nature has given us in an effort to span the generations.[1]

Introduction

What does "sustainable development" mean in practice? Does it merely set the outer bounds for social policy, or does it have practical significance as applied to concrete circumstances and specific facts? How is it distinct from normal development? Many have struggled with putting teeth into the principle of sustainable development but few have come up with any concrete answers. Most environmentalists would agree that sustainable development would emphasize the traditional environmental agenda of conservation, recycling, habitat preservation, mass transportation, and renewable energy; very few have articulated non-prescriptive definitions, and of those that have, few define it with regard to what such principles would cost. This article argues that without such analysis, societies could always be criticized for not being "sustainable" enough. "Sustainable development" would then be fairly criticized as nothing more than "a vague emotional commitment," or a political/rhetorical pose devoid of substance.[2]

The use of cost-benefit analysis and discounting has become commonplace in discussions of finding the appropriate balance between environmental protection and other forms of utility-maximizing investment.[3] The impetus toward the use of cost-benefit analysis is compelling: if we can achieve the same benefit at lower cost, we should. Because the value of money is also a function of time, of "when" as well as "how much," discounting future benefits is an integral part of the process of creating an "apples-to-apples" comparison within the cost-benefit framework.[4] Although the approach itself is simple to understand and apply, its application to the context of health and safety regulation (and the attendant necessity of putting a dollar figure on life-years), and the selection of the appropriate discount rate, is very controversial.[5] Many economists would discount the value of health and welfare benefits accruing to future generations at the market rate of return on financial instruments.[6]

This article joins the many scholars who have critiqued the setting of discount rates at market rates of return,[7] yet offers a new perspective as to why such discount rates undervalue our obligations to future generations.[8] Simply put, this article presupposes that the point of "sustainable development" is, in part, driven by an instinct for self-preservation and self-propagation. Sustainable development is both a commitment to the survival of the present generation and a commitment to maintaining the conditions necessary for the survival of future generations. A growing field of post-Darwinian evolutionary theory provides some crucial insight as to where that human instinct comes from. This paper takes the base desire to reproduce and survive, as explained in simplistic genetic terms, and applies that framework to the problem of how to measure our intergenerational commitments to future generations in the context of sustainable development. The results are surprising. Traditional economic discounting at market rates is revealed to be maladaptive, in evolutionary terms, to the survival of our species. Part I of this article examines the notion of "sustainable development" as an ethical claim and explains why intergenerational environmental issues must be viewed in a utilitarian context, where discounting is traditionally used to measure future costs and benefits in present-day terms. Part II explores the literature to reveal that prominent scholars advocate discount rates between four and ten percent for intergenerational harms, and discusses the implications of such rates. Part III advances the theory of the Selfish Gene, as a model for measuring intergenerational commitments, and discusses reasons why even that model undervalues intergenerational commitments.

I. Sustainable Development as an Ethical Claim

"Sustainable development" has long been popular among politicians and policymakers as a neat compromise between the goals of fostering continued economic growth and preventing global environmental change. Conceptually, given two paths of development over time, one "clean" and one "dirty," provided that the rates of growth are equal, a commitment to sustainable development creates a preference for the former. Given that, in the real world, policymakers are not faced with such starkly simple choices, but rather with multiple gradations of wealth and environmental harm over

time, the concept of sustainable development requires more in order to have meaning.

That "something more" may be conceived of as a commitment to intergenerational justice. Sustainable development has been defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[9] The concept of sustainable development purports to measure our present-day obligations to conserve options for future generations to allow them to achieve as decent and healthy life from the natural resource base as present generations enjoy.[10] A commitment or obligation to "intergenerational justice" or "intergenerational equity," if it means anything at all, must serve as a guide for present-day consumption, investment, and savings patterns, even if otherwise they rationally reflect the wealth-maximizing optimum for the present generation. Several rationales serve to justify an intergenerational obligation to preserve the environment. First is the notion that the fact that an individual is born in a present or future generation is an accident of birth, not a morally relevant distinction.[11] Eminent philosopher John Rawls viewed the notion of "pure time preference," or the preference for the present as opposed to the future, as morally arbitrary from his framework of the original position.[12] Even the first economists to endorse discounting as a valuation method rejected its application to the intergenerational context, viewing it as "a polite expression for rapacity and the conquest of reason by passion."[13] Second, the choice of the resource endowment that each generation faces is predetermined by the consumption and investment patterns of their forebears, and is thus involuntary. Each generation creates wealth and knowledge to pass on to future generations, but in doing so, exhausts the natural endowment of resources and creates pollution for future generations. However, the wealth created serves as a substitute for the environmental amenities lost, as substitutes or as compensation. That being said, one generation cannot presume that its preferences concerning the appropriate mix of wealth and environmental risk reflect the preferences of future generations. Today's substitute may be tomorrow's unacceptable sacrifice. Third, since the democratic process, even with universal suffrage, is inadequate to "register the preferences of the unborn,"[14] there is a political process rationale: the notion that an obligation to protect future generations is necessary as a matter of "representational reinforcement."[15]

There are also several critiques of viewing sustainable development as a binding commitment to intergenerational environmental equity. The first criticism is the paradox of infinity. That paradox results when one attempts to divide a finite amount of resources by an infinite succession of generations.[16] An unyielding ethical commitment to future generations would result in no one generation consuming any resources at any time. The paradox would be resolved if some outer limit could be placed on the succession of future generations.[17] However, that raises the important question of how to place such limits without being arbitrary.

The second criticism is that it is a morally relevant distinction that a present generation, in the position to make choices between consumption and savings, is preferential to itself, as opposed to its future descendants. This is the notion of pure time preference, or as Robert Solow candidly confessed, "a concession to human weakness."[18] A more analytical approach would reject the "processional" conception of intergenerational relationships, one which analogizes to the image of a "Saint Patrick's Day Parade in New York City" where one can only interact with those "walking in our immediate vicinity."[19] Those physically ahead in the parade metaphor have, through their actions, exerted control over the speed at which those behind them move, just as our ancestors' actions have created the conditions in which we live. However, no marcher has any claim to moral preference over any other.

The problem with this metaphor is that it conflates notions of time and space, at the expense of the notion of *contingent agency*. Whereas in a parade, each marcher is their own being, in real life, each generation is contingent upon its predecessors in a more literal sense than the analogy can truly convey.[20] As Laslett and Fishkin note, "many of the actions that would produce harms also effect whether a person will come into existence at all."[21] To put it in lay terms, the future owes its very existence to the survival of the present.[22] It is not enough to restrict the present to bare subsistence levels; the future would want the present to consume as much as necessary to ensure its happiness, even at cost to the future.[23] The future has a vested interest in the happiness of the present because its very existence is in part contingent upon that happiness; if the present were unhappy, the future would face threats that the present would self-destruct. Happiness, read broadly, is both dependent upon and a necessary element of survival. In broader terms, the existence of an ethical obligation is *agent-relative*, insofar as an ethical obligation requires *someone* to do or not do something.[24] In this context, an ethical obligation requires the present generation to make choices on behalf of future generations, and because the present generation is in the position of having to meet the obligation, it is not immoral for it to seek the privilege of its own needs first.[25]

The obvious defect in this reasoning is that it proves too much: the future could always be held hostage to the whims of the present.[26] It may be necessary in the intergenerational context to assume away the contingency of identity in order to speak sensibly

about the just allocation of obligations across generations. Another weakness in this line of reasoning is that it presumes that there is a forced choice between the preserving the self-interest of the present and forcing the present to live at bare levels of subsistence. Another limiting principle, which would posit that "[n]o generation is at liberty to ransack the environment, or to overload the earth with more people than can be supported, or even . . . to act in such a way as to ensure that the human race will disappear,"[27] would distinguish between certain types of actions that have permanent or catastrophic impacts on the future from other types of welfare-maximizing activities, and allow for present-day happiness in harmony with future well-being.

A third criticism against the notion that "all citizens are at least as good as one another regardless of their date of birth"[28] is that present generations actually do internalize the welfare of future generations, through the institution of the family and through policy. Richard Epstein questioned the very necessity for any type of obligation toward future generations, observing:

> Individuals do not seek to maximize individual utilities but instead have heavily interdependent utility functions with their offspring. The most powerful source of this interdependence is not disinterested benevolence, although surely that is an important force. It is genetic connection, which induces parents to take into account the utility of their children (and the reverse as well) in making decisions about present and future consumption.[29]

The notion that future generations are inadequately represented by present-day democratic institutions is belied by the ubiquity of generational discourse among philosophers, political theorists, and politicians.[30] One can scarcely imagine a policy decision that consciously chooses to enrich the present at the direct expense of the future without some sort of political outcry.[31] Some even argue that the internalization of future interests is almost complete in present-day utilitarian calculations, an assumption that would entirely remove the necessity of any type of obligation to the future beyond maintaining present-day institutions.[32] A problem with this account is that it does not address instances of "common pool resources" across generations that are vulnerable to aggression and coordination problems.[33] Another problem is that it seems to only apply to overlapping generations (children, grandchildren), but not to far-removed generations (great-great-great grandchildren). Because many environmental hazards have long latency periods that can span multiple generations, such intuitive logic may be highly under-protective of the rights of future persons.

A final criticism is that, inevitably, future generations will be better off than present generations, which in its strong conception would belie any utility of a sustainable development obligation,[34] and in its weak conception would justify some discounting of future benefits because of their relative prosperity compared to the present.[35] Wealth-creating investments could later be used to "cure" environmental hazards when they arise, at a lower cost than up-front prevention.[36] The problem with this criticism is that there's no factual basis to have such faith in technological progress, and even if there were, there's no reason to believe that the costs of clean-up would dwarf the costs of a cure, given the inherent uncertainty of long-term environmental harms such as climate change.[37]

Ultimately, resolution of the ethics of sustainable development rest on answering the following questions: Do future persons have any rights at all owed by the present? Should we be conceiving of them as rights, or can we trust the intuitive internalization of future interests in present-day political discourse, theory, and policy as sufficiently protective of those interests? Presuming that there is some intergenerational obligation owed to future persons, should we adopt a rate of time preference to account for "human weakness" or for contingent agency? Should we privilege the present over the future? Are we to treat all future generations, no matter how remote in the future, as equal? If not, how are we to distinguish between future generations, and if we adopt a time preference, at what rate would it be protective of their interests? The rest of this article puts forth a framework for answering that last question.

II. Current Methods for Arriving at Intergenerational Discount Rates

A. Why Discount Rates Matter

Nature works according to processes that can take thousands of years to complete. Human activities can have profound impacts upon the natural environment. Yet those impacts—such as climate change, nuclear waste disposal, genetic manipulation, overpopulation, desertification, deforestation, ozone depletion—may not manifest themselves for hundreds or even thousands of years into future. The nature of environmental science has forced policy-makers to stretch their traditional models of analysis to cover periods of time much longer than they were designed to accommodate.

Standard cost-benefit analysis in the environmental policy-making context is required by law.[38] Whenever the EPA enacts a major regulation, it must conduct a cost-benefit analysis and submit the regulation for cost-benefit review to the Office of Management and Budget (OMB).[39] Cost-benefit analysis of environmental regulations entails calculating benefits according to a valua-

tion of human lives and comparing those benefits versus the costs of the regulation.[40] In the regulatory context, costs and benefits tend to be spread out over time. Literally, the question becomes: which is bigger? We all know that if two objects were compared for size, a relevant question would be "how far is each from the viewer?" Discount rates standardize the "distance" in time between costs and benefits so that they can be compared. This analysis has engendered a serious debate among regulators, judges, and scholars as to whether to discount those costs and benefits.[41] Economic theory presumes that any given investment is made in the context of preexisting capital markets, creating an internal arbitrage opportunity cost of making that investment.[42] Thus, the stream of future benefits should be compared to the costs in present-value dollars, which is measured by the equation:

Equation (1) $P = U * 1/(1+r)^t$,

where U is the future utility, t is time, and r is the real discount rate. Because the discount factor $[1/(1+r)^t]$ increases over time, discounting reflects the preference most individuals have to receive a benefit sooner rather than later. The equation inverted measures the future value of a present investment at the interest rate, r, which in turn represents the opportunity cost of paying now for a future benefit. If the payout from the proposed financial investment is less than the rate of interest (r), then an individual would be better off simply investing, waiting, and buying the benefit in the future.

Opponents of discounting argue that it is never appropriate to discount benefits when they are measured in terms of human lives, or even life years, finding the exercise and its implications distasteful.[43] Others note that, unlike financial investments, internal arbitrage opportunities are in many cases not available, as "one cannot trade health . . . across time . . . If we value our health at forty-five but do not at twenty-five, then we cannot simply shift health status across time in the same way that we would shift monetary resources."[44] Supporters of discounting answer that individuals regularly make those trade-offs by assuming risks, as shown by willingness-to-pay and wage differential studies. Willingness-to-pay studies of wage differentials needed to compensate an individual for accepting the risk of accidental death, for example, provide an empirical basis for measuring an individual's preferences for safety and risk.[45]

In addition, statistical lives are very different from actual lives. The actual health benefits from health, safety, and environmental regulations are almost always stated in terms of statistical lives, reflecting an overall reduction in societal risk expressed in terms of lives. No one individual could be identified when the benefits accrued as a person who would have otherwise died. Since statistical lives are a shorthand for reduced societal risk, and because people regularly accept the notion that in general, an appropriate amount of compensation can lead people to accept otherwise unacceptable risks, the ethical critique of discounting oversimplifies the issue. The courts have also rejected the ethical critique against discounting in *Corrosion Proof Fittings v. EPA*,[46] noting that discounting was necessary in order to preserve a fair "apples-to-apples" comparison of costs and benefits spread out over time.[47]

Ethical objections to the entire methodology aside, over long periods of time, the choice of the discount rate becomes *the* point of contention when employing the cost-benefit analysis of regulatory costs and benefits.[48] Because the costs of regulation tend to be front-loaded, and the health benefits of regulation delayed for years if not decades, discount rates tend to have the effect of looking the wrong way down a telescope: "the higher the discount rate, the less desirable the regulation will seem."[49] Because the discount factor compounds exponentially, even large initial valuations of the health benefits of environmental protection can be rendered nugatory if spread out over enough years. For example, at a discount rate of 7%, every 100 utiles of benefit can be reduced by over 96% over a span of 50 years. With a discount rate of 5%, one statistical death next year is the equivalent of one billion statistical deaths in 400 years.[50] Graph 1.1 shows a plot of the effect of discounting at rates of 7%, 3%, and 2% over a span of 300 years. Especially in the intergenerational context, selection of the appropriate discount rate can be outcome-determinative in almost all cases.

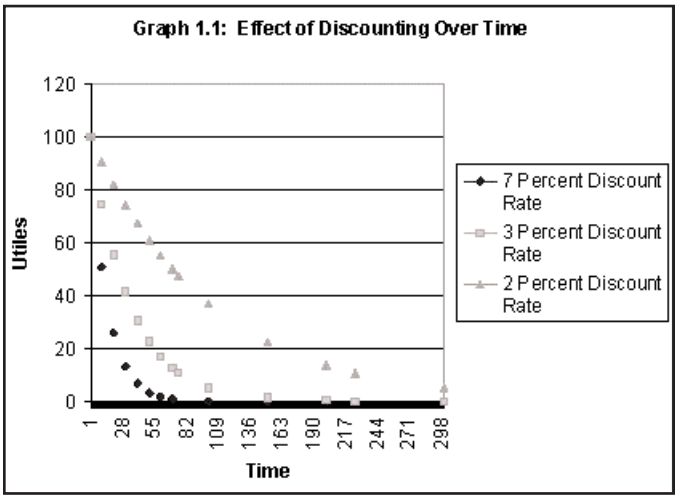
B. Estimates of Discount Rates Based on Capital Markets and Time Preference

The problem of intergenerational ethics has only recently gained currency in the literature as presenting unique dilemmas for standard modes of analysis. Peter Laslett and James Fishkin asserted:

> In defiance of the adage that there is nothing new under the sun, we maintain that in the particular definition we use, justice over time did not exist as a subject of analysis or discussion, or even as a concept, before the 1970s, or before the 1960s at the earliest.[51]

Revesz notes that, in the economics literature, the nonrecognition of the difference between inter- and intragenerational problems is "pervasive."[52] He notes that "economic models that purport to analyze intergenerational problems . . . by reference to an individual who lives forever . . . overlook an important dimension of the problem . . . by mechanically importing to this endeavor the intragenerational framework."[53] In the intragenerational context, Revesz notes that the consen-

sus in the literature suggests that the debate is between choosing a discount rate between 3% and 7%.[54]



Economic theory suggests that the appropriate discount rate to measure future benefits should be placed at the marginal pre-tax rate of return on private investments.[55] Some have calculated the marginal real rate of return on private capital as high as 12.41%.[56] OMB has employed discount rates of up to 10% without making any distinction between health benefits and other types of benefits.[57] In 1992, the OMB amended its policy to 7%, justifying the rate as the "marginal pretax rate of return on an average investment in the private sector in recent years."[58] However, when measuring the cost-effectiveness of a program, OMB employs a discount rate between 3 and 4%—the real return on long-term government debt.[59] Revesz notes that the economics literature has called for a discount rate at between 2 and 3%, which reflects the "consumption" rate of interest when environmental projects are financed through tax revenue.[60] EPA in its final rules has used a discount rate of 3%.[61]

Another method measures the discount rate by estimating a social discount, which presumes a preference for the present generation over future generations. Estimates arrive at a pure rate of time preference using the almost riskless obligations of the U.S. Treasury as a proxy.[62] Kenneth Arrow tentatively accepted a 1% pure rate of time preference and added a rate of growth factor to reflect that "future individuals are going to be better off than we are."[63] According to Arrow's calculation, the pure rate of time preference plus the growth factor led to a social discount rate of between 3 and 4%.[64]

C. Critique of the Arrow Social Discount Rate

Arrow acknowledges that his argument for including time preference as a factor in his estimate of the social discount rate "reflects, in part, a principle of self-regard, of the individual as an end and not merely a means to the welfare of others."[65] In this sense, it represents a normative statement that is "agent-relative," where the operative "agent" in each generation is "that generation, not the set of all generations beginning with that one."[66] As we have seen in Part I, that assumption is not a logically compelled one nor necessarily morally justified.[67] Cowen and Parfit advance and critique five arguments justifying a choice of a pure rate of time preference that discounts future costs and benefits simply because they occur further into the future.[68] Three of their arguments will be discussed herein: the argument from democracy, the argument from probability, and the argument that our successors will be better off.[69] A fourth argument, an argument from contract, is also discussed.

1. Argument from democracy

This argument starts from the notion that most people intuitively "care less about the further future."[70] If the majority therefore wants to allocate more resources to present consumption, a democratic government has no right to override the majority view.[71] Cowen and Parfit rightly point out that even in democracies, actions enacted by a majority can be wholly lacking in moral justification and subject to criticism—for example, even if the majority wanted to commit an atrocity such as genocide or slavery, or engage in a course of action that threatened the existence of future generations, such a policy would be morally bankrupt even if enacted democratically.[72] Moreover, this argument ignores the defects of the democratic process in recognizing the voices of the unborn in the far future, who are in no position to participate in decisions that affect their interests.[73] The argument is also an exercise in question-begging: democratic institutions now mandate that regulatory agencies employ cost-benefit analyses in measuring future costs and benefits; the question remains: how should they set the discount rates to account for future interests? "Whatever they choose" seems beside the point.

2. Argument from probability

There are three variations of the argument from probability. The first, as articulated by Cowen and Parfit, states that discounting is justified on the grounds that predictions become less reliable over larger periods of time, as a general rule.[74] The second variation presumes that even if future predictions of catastrophe have a high degree of certainty, discounting is justified because the future, with technological innovation, may have developed the panacea to the harm.[75] The third variation argues that the social discount rate reflects a background risk that civilization will inevitably become extinct.[76] For example, given the chances of an asteroid collision or thermonuclear war, regardless of how we allocate resources between present and future genera-

tions, discounting is justified because generations in the indefinite future may never exist.

Cowen and Parfit answer the first variation of the argument from probability by distinguishing discounting based upon time from discounting based upon probability.[77] Some environmental harms—such as the disposal of nuclear waste—have a high degree of certainty but may only come about far into the future. Although in many cases, it is likely that discounting for time and discounting for probability will tend to coincide, that doesn't justify the conclusion that we should therefore discount based upon time, and not for probability, and misstates the moral conclusion.[78] Another objection to this argument is that there is only a correlation between time and probability.[79] Some future harms may become *more* probable as time passes. The probability of their occurrence is not strictly a function of time.

The second variation—that justifies time discounting on the likelihood of developing a panacea or cure for the problem over time—has been criticized as being "devoid of any factual basis," or in other words, wishful thinking.[80] Any discounting based upon this approach would have to be counterbalanced by the risk that the predicted harm might be more catastrophic than anticipated.[81]

The third variation argues that future generations may be inevitably doomed to extinction, so present generations are justified in consuming more for themselves. Revesz points out the irony in using this argument as a justification for self-serving present consumption, when that consumption might be the actual cause of human extinction.[82] Regardless, it is impossible to say exactly how that background level of risk should be quantified, or why that level of risk can justify selection of any particular discount rate, in the absence of any certainty about inevitable extinction.

3. Argument that our successors will be better off

As individuals and societies grow wealthier, each extra dollar of consumption becomes less and less valuable. This is the decreasing marginal rate of consumption as stated by economic theory.[83] Because future generations will inevitably be better off (i.e., wealthier) than present generations, discounting for time preference is justified according to this argument because the relatively less well-off generations (i.e., the present) would be justified in being unwilling to sacrifice on behalf of richer future generations.[84] This argument is reflected in Arrow's estimate of the social discount rate as the discount for growth factor. The estimated magnitude of such a discount for growth is 2.4%.[85]

Revesz makes three arguments against this justification. First, he points out that studies reveal that as nations (and future generations) grow wealthier, their preference for environmental amenities increases on a 1:1 basis with the rate of growth, which should cancel out any extra discounting as a result of greater wealth.[86] Second, he questions the assumption that the benefits and costs of environmentally damaging activities will be distributed in a uniform manner. He asserts that it is more likely that the benefits will accrue to individuals who are wealthier than those who bear the costs.[87] For example, the damages caused by rising ocean levels driven by climate change have been predicted to fall disproportionately upon poorer developing countries.[88] If by a course of action, the rich reap the spoils and the poor feel the burdens, because of the decreasing rate of marginal utility of consumption, a policy which reversed that course of action would increase overall social welfare. Third, Revesz questions the fixation of policymakers upon *inter*generational inequalities in the distribution of wealth, when those same policymakers do not also call for *intra*generational wealth redistribution between the rich and the poor.[89]

4. Argument from contract

A final argument is that the goal of wealth redistribution from future generations to present generations is better met by the assumption of long-term debt to compensate for present-day environmental measures taken on behalf of future generations, rather than the imposition of long-term environmental costs on the future.[90] This is a more attractive solution to the problem of how to redistribute wealth across generations, when any trust fund established for that purpose would be subject to raiding by intervening generations.[91] This line of reasoning may very well justify a contractual notion of intergenerational justice. If present-day actions (i.e., costs) are compelled by compliance with principles of sustainable development and intergenerational justice and only serve to benefit future generations, then the present generation is justified in incurring long-term debt to compensate itself for its beneficence to the future to the extent that the benefits, discounted by the rate of return on such riskless bonds,[92] equal or exceed the costs to future generations of meeting the assumed debt burden. Without such discounting, the benefits to future generations of present-day, compensated environmental protection might be outweighed by the debt burden passed on to future generations, reducing their overall welfare. However, such discounting could only be justified if debt-financed compensation were actually provided.

The problem with this approach is that, for all its theoretical elegance, dollar-for-dollar compensation for regulatory costs (financed by long-term debt) would result in reverse inequality between present and future generations. Instead of present generations assuming the burden of environmental protection, the costs would be shifted almost entirely to future generations, including intervening generations who may not realize

any of the gains from the environmental action. Environmental problems often arise as externalities to the market system; polluters over time have thus gained a benefit from the absence of cost-internalization. To fix the externality by incurring long-term debt and buying their compliance would turn the "polluter pays" principle on its head.

Moreover, the approach creates its own pathologies. Not only would such an approach create massive incentives for rent-seeking and cost overestimation, but it would also undermine the very regulatory benefits it seeks to preserve for future generations by removing the incentive effects of market-based regulatory systems, such as those envisioned for the abatement of greenhouse gas emissions. The price for tradable permits should be set at the marginal abatement cost for any industry. To the extent that compensation is provided dollar-for-dollar for cost, the marginal abatement cost would necessarily be zero. This particular failing could be avoided in part through a compensation system that gave tax deductions (which would provide compensation at the marginal income tax rate) to the regulated industry in exchange for environmental controls adopted for the sole benefit of future generations. However, inevitably, the efficacy of such market systems would be distorted by the introduction of a compensation scheme.

Finally, even if compensation was not targeted toward the regulated entities (to avoid diluting the policy benefits), but distributed broadly through tax cuts or other welfare-enhancing programs to the general present public, it would be very difficult to justify politically a scheme of compensation that paid off the present by imposing a debt burden on our children's children, regardless of how much better off future generations may end up. Ethically, it would amount to putting the cart before the horse—if the present generation owes a duty to future generations, then it should perform the duty and pick up the tab. Economist Partha Dasgupta argues that the argument ignores that the present exists "as part of a delegation of generations,"[93] insofar as we stand on the shoulders of giants, our children stand on ours. He intimates that only a hardened, world-weary cynic could deny the existence of an intergenerational obligation:

> Alexander Herzen's remark, that human development is a kind of chronological unfairness, since those who live later profit from the labour of their predecessors without paying the same price, and Kant's view, that it is disconcerting that earlier generations should carry their burdens only for the sake of the later ones, and that only the last should have the good fortune to dwell in the completed building, or in other words that we can do something for posterity but it can do nothing for us (citation omitted), are *a reflection of an extreme form of alienation*: alienation from one's own life.[94]

Simply put, to ask for compensation for sacrifices made on behalf of the future is ahistorical, unprecedented, and disrespectful of the countless uncompensated sacrifices made by our forebears on our behalf. As a cultural, social, and political matter, such a scheme would be dead on arrival. As an ethical matter, it is clear that some obligation exists.

That obligation has been described by Peter Laslett as the "intergenerational tricontract,"[95] where "each generational entity must deliver the world to its successors in the condition in which it was received."[96] Laslett hypothesizes that in the tricontract, future persons have rights from us that are later earned by discharging duties to their children.[97] As a result of this arrangement, where duties bestowed by prior generations create rights in future generations, the tricontract cannot justify "upward" welfare flows, from children to parents.[98] Such upward flows can only be justified through his modification of the tricontract: the intergenerational cohort trust, where during their productive years, each generation supports all those that are dependent upon them, young and old, through the state.[99]

Laslett offers the tricontract as a counterpoint to the "standard version" of intergenerational agreements: the two-generational or procreative contract.[100] The implicit transfer explained above, where the current generation compensates itself through the assumption of long-term debt for the costs of acts that inure only to removed generations, follows along this model. Laslett critiques the two-generational contract as an "absurdity,"[101] noting that the "greatest of the goodies"[102] that the present generation bestows upon its descendants—procreation—goes uncompensated under any arrangement. Laslett argues that this conception of parental beneficence transforms into a right of the offspring what anyone could see is clearly a duty.[103] His tricontract ameliorates that concern by creating a source for the right to parental beneficence: the duty to bestow the same upon one's children (or the children of that same generation).

Gregory Loken faults Laslett's tricontract theory because of its misappropriation of the language of legal rights[104] and its disturbing implications.[105] He notes that "[I]f we follow his view . . . that parental actions on behalf of children are 'spontaneous' and uncalculating, how can we conceive them as part of a formal transaction based on give-and-take?" The language of legal rights does more to "obscure than to illuminate the content of duty,"[106] since it is absurd to "meaningfully imagine a tricontract not just with a dead party in one

corner and an unborn party in another, but with a *res* that can change radically in a 1929 minute."[107] Moreover, the content of the duty, to "deliver the world to its successors in the condition it was received," would seemingly mandate that past injustices be preserved and evils be compounded.[108] Loken opts for a theory explaining parental duties based on notions of gratitude, "an obligation created by an act of kindness" rooted in natural law.[109] Gratitude, for Loken, is not rooted in cynical consequentalism (where the obligation of gratitude is justified because without it, no one would give),[110] nor as a "sacred" Kantian duty,[111] but as "a moral quality, a duty, that has enjoyed apparently universal acceptance in human societies."[112] Loken believes that the debt of gratitude can be fulfilled even through acts of kindness toward someone other than the benefactor.[113] In the realm of parent-child relationships, he notes that children often are unable to fully repay their parents, "given that the parents' sacrifices for their children are in virtually every case likely to have been greater than the reverse."[114] Children repay their parents, by bestowing benefits upon their own, or as Loken eloquently concludes, "What we begged as children, our children in turn beg of us."[115]

Returning to the argument at hand, it's clear that a contractual justification for discount rates fails either Laslett's tricontract or Loken's debt of gratitude. There is no right to compensation for discharging the duty owed to future generations, and thus there can be no foundation for discounting which duties we owe on that basis. Moreover, there is no ethical foundation for discounting the future merely because we are optimistic that they will be able to afford the consequences of our present-day consumption. However, even under Loken's formulation, it remains unclear exactly when we have fulfilled our debt of gratitude to our children and our children's children. Discount rates are a convenient tool for bringing costs and benefits separated by time into proportion. However, it is unclear that *what* they measure in any way fits into any conceivable articulation of our obligations to the future. The problem is not with discount rates or cost-benefit analyses per se. Those tools are useful within a single generation, where the burden of the costs and the fruits of the benefits fall upon the same agent. In the intergenerational context, however, the interests of the future are an externality, insofar as the cost-benefit calculus presumes time itself is not a morally significant attribute of the balancing process. In the intergenerational context, that presumption proves perilous.

III. The Selfish Gene

Given that the cost-benefit equation requires that a single agent perform the balancing, how are we to internalize benefits that bestow to future generations far into the future? If we were completely self-interested rational actors, what could possibly justify any level of savings that would solely benefit the happiness of total strangers? Putting aside for the moment cultural and social institutions such as the family and social norms, is there any basis for a purely self-interested rational actor to reduce his or her consumption on behalf of future generations? Dasgupta explains that we are interested in the well-being of the future, because in part, the future is us:

> That my neighbour is not as close to me as are my daughters and son is a genetic fact, but that is not quite the point here. Closer to the mark is the fact that my children provide me with a means of self-transcendence, the widest avenue open to me of living through time. Mortality threatens to render the achievements of our life transitory, and this threat is removed by procreation.[116]

Evolutionary biologist Richard Dawkins famously posited an evolutionary explanation for our need to survive, which he dubbed our "selfish genes":

> Now they swarm in huge colonies, safe inside gigantic lumbering robots, sealed off from the outside world, communicating with it by tortuous and indirect routes, manipulating it by remote control. They are in you and in me; they created us, body and mind; and their preservation is the ultimate rationale for our existence.[117]

He later would add that "the true utility function of life, that which is being maximized in the natural world, is DNA survival."[118]

From a self-interested, concededly atomistic rational actor perspective, one can derive a utility function that has a biological foundation for why individuals care about their future descendants. Drawing on basic facts of life, where if one were to "[g]o back g generations and the number of ancestors is 2 multiplied by g times: 2 to the power of g," one could posit that the number of utiles that an individual derives from the happiness of successive generations decreases by half with each generations. In other words, in a simplified world, our self-interest, from the perspective of our selfish genes, is

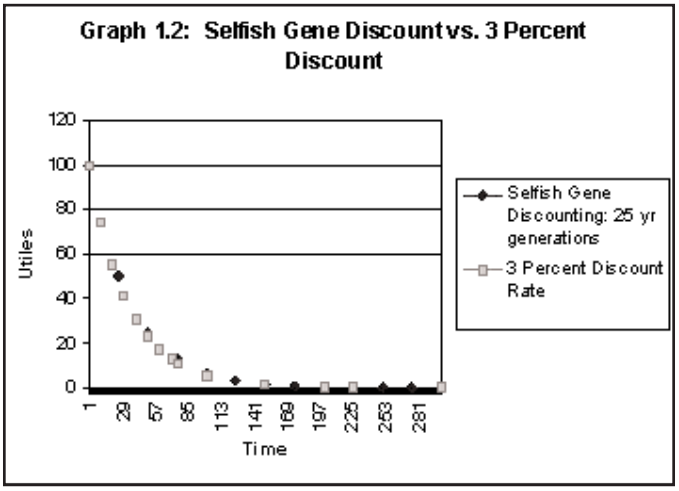
Equation (2) $P = U * (½^g)$

With each passing generation, our interest in their survival and happiness decreases by one-half.

Without relying at all on cultural institutions, social norms, or any notion of altruism, a purely rational utility function can be devised with the aid of evolutionary

theory which explains a present-generation interest in the well-being of the future. This article is not the first to suggest that our relationship to future generations should be tied in some way to our genetic links to our descendants. For example, Richard Epstein expresses his belief that the "most powerful" explanation for the "heavily interdependent utility functions" of parents with their offspring is not disinterested benevolence, but rather their "genetic connection, which induces parents to take into account the utility of their children."[119] Tyler Cowen and Derek Parfit, in their critique of discounting based on time preference, conceded that intergenerational relations could be modeled after "degrees of kinship" in such a way that it might serve to justify discounted interests for the future.[120] Dasgupta observes that the explanation for why we care about the future is motivated in part by our "genetic connection" to our descendants.[121] Laslett further states that "[a] determined attempt to elaborate generational 'justice' on sociobiological lines might be quite successful."[122] The theme of favoritism toward kin as an explanation for pseudo-time preference discounting of future generations has been articulated by many, but never fully explored.

Presuming that the average generation, *g*, is roughly equivalent to the average age of reproduction, which for the purposes of this article will be arbitrarily set at 25 years, discounting utilities across generations according to Equation 2 above results in a discount rate that compares to a 3% discount rate.



Furthermore, if one were to posit that the average generation itself lasts longer than the average age of reproduction, and, as two leading generational ethics scholars posit, should roughly equal the "lifetime of the average member of the current generation,"[123] (for the purposes of this article, 75 years), then the correlate discount rate would be less than 1%. Another interesting feature of this model is that, between each generation, there would be no discounting as a pure function of time. This results in a stepped-down looking graph, as opposed to a sloping curve (see Graph 1.3).

Taking a step back, this model of discounting answers a different question than use of financial valuation. Equation 1 addresses the problem of intertemporal choice by looking explicitly at the opportunity costs of any decision and at the maximization of welfare as the optimal solution. However, Equation 1 not only preferences the deciding generation with regard to the intergenerational distributional issues, by focusing on the well-being of the present as the decision rule, but also openly discriminates against future generations by using time as the yardstick for discounting. Individuals may prefer benefits sooner rather than later, but it takes much more to assert that generations deserve the same treatment.

Equation 2, on the other hand, puts front and center the question that should be the focus of any debate on sustainable development: how do we presently value the utilities of future generations? The choice of the equation serves to approximate that value. The "selfish gene" model, which presupposes that a generation lasts for 25 years, posits that our interest in the utility of future generations only extends to our genetic stake in their existence. It is hard to imagine such a selfish parent, although undoubtedly some exist. It is harder to imagine a normative commitment based on the whims of such a selfish parent, but traditional economic discounting would do worse. Such a conception of intergenerational relations can be clearly questioned by anyone—not just Nobel Prize-winning economists.

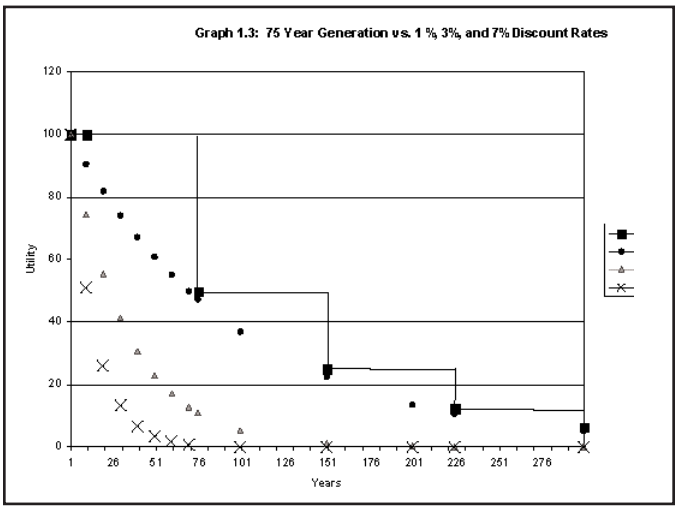
Three major questions remain to be answered: First, how can a generational model of discounting be justified in ethical terms? Second, how is each generation to be defined? Third, what is the significance of these findings?

A. Ethical Justification for Generational Discounting

Evolutionary science has been criticized before for succumbing to the naturalistic fallacy, where claims about what ought to be are derived from factual claims about what is true about biology.[124] Eighteenth century philosopher David Hume drew the distinction between *is-statements* and *ought-statements* in defending his thesis that ought-statements cannot be deducted exclusively from is-statements.[125] Sociobiology, the use of evolutionary theory to explain significant social, psychological, and behavioral characteristics, has been charged with being "ideological"[126] and "defending the political *status quo*."[127] Critics see it as "the latest installment in a long line" of misapplied biological ideas, such as IQ testing and racial biology.[128] However, biological and other facts can inform and serve as limits upon ethical presuppositions. Some ethical imperatives can be criti-

cized as being "utopian" because they violate the *Ought-Implies-Can* principle.[129] If one cannot act to save X, then it must be false that one *ought to have* saved X. Simply put, one cannot be expected to perform miracles.

According to Elliot Sober, evolutionary theory can inform ethics in two ways. First, it might explain why we believe certain ethical statements. For example, if certain ethical beliefs (such as the wrongfulness of incest) are believed across all human cultures, then evolution may serve as the underlying explanation as to why such beliefs are so widespread.[130] Second, evolutionary theory may help explain what our ethical obligations should be.[131] Hume's thesis, that ought-statements cannot be derived exclusively from is-statements, holds as a corollary that "*a deductively valid argument for an ought-conclusion must have at least one ought-premise [sic].*"[132] Although Hume's thesis has been used to justify ethical subjectivism, where no ethical statements are objectively true,[133] Hans Jonas identified one such non-deductive ought premise, when he wrote, "when asked for a single instance . . . where that coincidence of 'is' and 'ought' occurs, we can point at the most familiar sight: the newborn, whose mere breathing uncontradictably addresses an ought to the world around, namely, to take care of him."[134]



Jonas' polemical defense of the inherent defensibility of an intergenerational duty illustrates that there can be no defense of any account of individual utility that is completely self-centered: what joy could anyone take in everyday activities if they knew with certainty that the world was about to end or that humanity was headed for extinction in the future?

The ethical justification for generational discounting relies upon an assumed ought-statement, that our obligations to future generations should at least be measured by our stake in those generations. Note that this ethical assumption is a mere modification of the implied ought-statement used to justify the financial valuation method of discounting, which holds that discount rates should be calculated by listening to our rational self-interest as welfare maximizers. The theory of generational discounting merely requires an expansion of what "rational self-interest" entails.

However, this too contains an ethical assumption—namely, that it is in our rational self-interest to listen to our genes, which presumably "want" to survive. As Dawkins explains, nature ensures that ultimately, self-preservation and survival are hard-wired into our being:

> Doubtless a eugenicist could breed a race of superlatively long-lived humans. You would choose for breeding those individuals who put most of their resources into their own bodies at the expense of their children: individuals, for example, whose bones are massively reinforced and hard to break but who have little calcium left over to make milk. It is easy enough to live a bit longer, if you are cosseted at the expense of the next generation. The eugenicist could do the cosseting and exploit the trade-offs in the desired direction of longevity. Nature will not cosset in this way, because genes for scrimping the next generation will not penetrate the future.[135]

In essence, the criticism that generational discounting lacks an ethical justification is half-right. There is no set of objectively true ethical assumptions that can mandate the setting of a generational discount rate. Restated, however, all that merely says is that evolutionary theory cannot tell us that we *must* discount according to any measure as opposed to not discounting at all. A discount rate based on the after-tax rate of return in capital markets faces the same criticism. Moreover, if articulated as a baseline, the criticism that generational discounting lacks an ethical foundation loses its force. If the theory merely says that we should not value obligations to future generations at a level any less than that dictated by application of a generational discount rate, but that we can value such obligations at a higher level, then there is no "is-implies-ought" problem. Rather, the discount rate operates at a level of an "ought-implies-can" statement by positing that any discount rate higher than the generational discount rate is *evolutionarily maladaptive* (in the same sense as Dawkins' Eugenicist metaphor above) and will fail to safeguard our interests in the survival of our genes through time. Nature will guarantee that those societies which value their obligations to future generations at a rate less than that dictat-

ed by Equation 2 will eventually scrimp their future out of existence.

B. Defining the Length of a Generation

If the generational discount rate equation is based on the transmission of genetic material to our descendants, and our diminishing interest with each successive transmission, then it would seemingly make sense to place the length of the generation equal to the average age of reproduction, or 25 years.[136] That would lead to a discount rate of roughly 3%.

However, there is reason to doubt whether the generational variable should be only 25 years long. Unlike salmon, humans do not spawn and then die, but spend time and energy raising their offspring.[137] This creates the problem of generational overlap. Laslett and Fishkin explain why this justifies a longer-term view of defining a generation:

> Overlapping cohorts are distinct from removed generations, in that reciprocal interaction between them is possible . . . . In practice, however, one-half of a present seems to go by for a given generation while it overlaps with a preceding generation, or set of generations, and the rest of the present seems to elapse while the current generation overlaps with succeeding generations, or set of generations. Under these circumstances, and perhaps generally, a present seems to last about the lifetime of the average member of the current generation.[138]

Because of the existence of generational overlap, each literal generation shares highly interdependent utility functions with its predecessors and immediate descendants, to the point where one could argue that the utilities of a parent's children are factors in the parents' own utility functions, on roughly a one-to-one basis.

Equation 2 was meant to illustrate the extreme example from the perspective of wholly selfish genes. However, genes are not the agents of decision when it comes to implementing sustainable development policies. Even if they were agents concerned solely with their own propogation, they would reject the setting of a discount rate higher than 3% as endangering their sole purpose in life—to replicate. Generational discounting could use the same equation without the literal genetic foundation by reference to the interdependence of overlapping generations. Essentially, the discount rate would posit that our concern for genetic survival extends two descendant lines forward at a constant rate, to one's grandchildren, and afterwards decreases by half. Each successive removed generation would then undertake the same calculus with regard to their immediate descendants two generations forward, until the next removed generation.

All told, the whole exercise is admittedly a bit absurd. Dawkins explains that the simplistic Equation 2 stated above, which assumes a doubling up in every generation, is flawed because "we are *all* distant cousins"[139] because of the inevitability of intermarriage in a society. One can perform simple calculations with the geometric equation and realize that, taken to its extreme, everyone will have trillions of descendants in a matter of centuries.[140] Because of this literal ancestral overlap, the equation grossly underestimates our common interest in the well-being of the future.

C. Significance of Generational Discounting

The significance of this finding is to simply illustrate how much the failure to internalize intergenerational welfare into cost-benefit equations grossly undervalues environmental benefits accruing to removed generations in the far future. Instead of a 10% or 5% discount rate, policymakers should use between at least a 1% and 3% rate (if discounting is used at all) when analyzing intergenerational environmental (and other) impacts.

When crafting the boundaries of a policy whose purported beneficiaries are future generations, we should find a measure that does not openly discriminate against them because of their relative position in time. It makes intuitive sense that, instead of positing an immortal rational actor when measuring which sacrifices unduly threaten well-being and survival far into the future, we should look to how we have survived as a species to date and how those theories can contribute to the calculus.

Some might argue that we have survived thus far without any explicit 1% or 3% discount rate or any real intergenerational compact. However, it is indisputable that in this modern era we have discovered real threats to our future guaranteed existence as a direct consequence of our industrial and political activities. Past generations perhaps were more optimistic because they relied on divine protection and notions of duty and virtue as measures of intergenerational obligation; ours is the first to ask for a hard accounting over such time frames. It is our obligation to make the accounting fair as well.

Conclusion

Discount rates are the lens with which costs and benefits can be compared across generations. Because generations are separated by time, and not space, however, discount rates must not artificially distort the equation by using time as the dependent variable if

they are to be of any use at all. Sustainable development is at its core concerned about measuring the scope of our obligations across time, to future generations. This article is an attempt to treat sustainable development seriously, by asking the hard questions of "how much" and "when" as opposed to merely "what" and "why" we owe. Generational discounting reveals the severe myopia in using analytical tools crafted by us and for our lifetime to measure obligations owed to our posterity.

This article has shown that even the most selfish parents would value the utility of future generations in a more equitable fashion than economists would by applying a traditional discount rate. This article has established that economists have put forth a model of intergenerational relations and sustainable development that, if applied in their own lives, to their own children, might constitute child abuse. Economists have done so with a valuation methodology that is inscrutable and inarticulate about its implied normative values. Instead of asking what the U.S. Treasury or the NASDAQ thinks about our children's future, scholars of sustainable development might make better use of their time asking what everyday people think about their children, and their children's children.

Endnotes

1. Richard Epstein, *Justice across the Generations, in* Justice between Age Groups and Generations 89 (Peter Laslett & James Fishkin eds. 1992).
2. Robert Solow, *An Almost Practical Step Towards Sustainability,* 19 Resources Pol'y 162 (1993), *reprinted in* Richard L. Revesz, Foundations of Environmental Law and Policy 346-47 (2001) ("Revesz, Foundations").
3. Richard Revesz, *Discounting Human Lives*, 99 Colum. L. R. 941, 943 (1999).
4. *See, e.g., Corrosion Proof Fittings v. EPA*, 947 F.2d 1201, 1218 (5th Cir. 1991). *Contra* Lisa Heinzerling, *Regulatory Costs of Mythic Proportions*, 107 Yale L.J. 1981 (1998) (noting that the effort to preserve an "apples-to-apples" comparison presumes that dollars and lives can be equated).
5. Revesz, *supra* note 3, at 953–54 ("[T]he question of discounting the value of human life has continued to be controversial.")
6. *See* Victor Fuchs & Richard Zeckhauser, *Valuing Health—A "Priceless" Commodity*, 77 Am. Econ. Rev. 263, 265 (1987) ("Most policy planning discussions assume *full altruism*—future citizens are given equal weight with present citizens—and discount solely for the time value of money. Given this ethical premise, the value of life years to future generations should be discounted at the time-value-of-money rate.").
7. *See* Revesz, *supra* note 3, at 1015 ("[T]he mechanical importation of discounting for time preference at the rate used intragenerationally is wholly unjustified . . . . Intergenerationally, discounting for time preference unjustifiably undervalues the interests of future generations."); Andrea Beltratti, et al., *Sustainable Growth and the Green Golden Rule*, *in* The Economics of Sustainable Development 147, 149 (Ian Goldin & L. Alan Winters eds., 1995).
8. What this note does not address at length is the very important question of *whether* to use discount rates to weigh intergenerational harms at all. For a critique of the use of the social discount rate in the intergenerational context, see Tyler Cowen & Derek Parfit, *Against the Social Discount Rate, in* Justice Between Age Groups and Generations, *supra* note 1, at 144.
9. Lawrence B. Solow, *To Our Children's Children's Children: The Problem of Intergenerational Equity*, 35 Loy. L.A. L. Rev 163, 190 (2001).
10. Edith Brown Weiss, *A Legal Framework for Global Environmental Change*, *in* Environmental Change and International Law: New Challenges and Dimensions (1991), *reprinted in* Revesz, Foundations, *supra* note 2, at 346–47 (2001).
11. Kenneth Arrow, Intergenerational Equity and the Rate of Discount in Long-Term Social Investment 2 (paper presented at the IEA World Congress, Dec. 1995) (on file with author).
12. John Rawls, A Theory of Justice 294 (1971) ("There is no reason for the parties to give any weight to mere position in time . . . . Although any decision has to be made now, there is no ground for their using today's discount of the future rather than the future's discount of today. The situation is symmetrical and one choice is as arbitrary as the other."
13. Roy F. Harrod, Toward a Dynamic Economics 40 (1948). *See also* Arrow, *supra* note 11, at 11.
14. Epstein, *supra* note 1, at 84.
15. *See generally* John Hart Ely, Democracy and Distrust (1980).
16. Peter Laslett & James S. Fishkin, *Introduction: Processional Justice*, *in* Justice Across Age Groups and Generations, *supra* note 1, at 6.
17. *Id.* ("There seems to be little or nothing in the previous studies of political theorists that could help decide how to limit the series of generations over which justice is to be secured.")
18. Solow, *supra* note 2, at 351. Kenneth Arrow justifies a rate of time preference on the grounds that it reflects "discounting for empathic distance (because we may feel greater affinity for generations closer to us)." Arrow, *supra* note 11, at 131. Richard Revesz rejects such reasoning as making "a descriptive claim rather than a normative judgment." Revesz, *supra* note 3, at 1000.
19. Laslett & Fishkin, *supra* note 16 at 12, *in* Justice Across Age Groups and Generations, *supra* note 1.
20. Laslett and Fishkin, for example, attempt to reclaim agency by "stretching the imagination" by positing a "well-placed observer" who views individuals who "come into view and disappear from view not by entering or leaving to the left or the right, but by being created inside the procession, or disappearing within its body, that is, by being born and dying as it passes through the angular area visible from the chosen point." *Id.* at 13. Even this imaginative attempt denies the *contingent* nature of those individuals being born and dying that is a fact of life in the real world.
21. *Id.* at 4.
22. The popular film, *The Terminator*, set as its main plot device a man who returns to the present from the future to save the mother of a future revolutionary from assassination by a "Terminator" cyborg, sent from the future to prevent the revolutionary's birth.
23. Another popular film, *Back to the Future*, conveys this point through its main plot device of a son traveling back in time to preserve his very conception by ensuring that his future mother and his future father take each other to the prom, with hilarious results.
24. *See* Arrow, *supra* note 11, at 17.

25. *Id*. ("I come to the conclusion that it is not necessarily obligatory to fully comply with impersonally [sic] moral obligation.")

26. George Sher states the case more formally:

> If X cannot deserve compensation for the effects of A unless X would have existed in the absence of A, then not only ancient wrongs, but also the slave trade, the theft of native American land, and many other acts whose effects are often deemed worthy of compensation will turn out to be largely non-compensable.

Ancient Wrongs and Modern Rights, *in* Justice Across Age Groups and Generations, *supra* note 1, at 51.

27. Laslett & Fishkin, *supra* note 16, at 14, *in* Justice Across Age Groups and Generations, *supra* note 1.

28. Bruce Ackerman, Social Justice in the Liberal State 203 (1981).

29. Epstein, *supra* note 1, at 89.

30. Laslett & Fishkin, *supra* note 16, at 9, *in* Justice Across Age Groups and Generations, *supra* note 1 ("Arguing symbolically or analogously from generative links to political links, lateral and vertical is commonplace among contemporary philosophers and political theorists . . . . The habits and the vocabulary are well nigh universal among politicians, administrators, journalists, and the public at large.").

31. One need only look to the debate over Social Security, the "third rail of politics," to see the political power of generational discourse. *See* Laslett, *Is There a Generational Contract?*, *in* Justice Across Age Groups and Generations, *supra* note 1, at 34.

32. Maureen Cropper and Frances Sussman seem to posit this approach to the role of future generations in the utilitarian calculus. Maureen Cropper & Frances Sussman, *Valuing Future Risks to Life*, 19 J. Envtl. Econ. & Mgmt. 160, 170 (1990) ("[E]ach generation receives utility from its own consumption and that of its immediate descendants. Because this is true of all generations, the current generation necessarily takes into account the utilities of all future generations in making its consumption and bequest plans.")

33. Epstein, *supra* note 1, at 85.

34. Revesz notes that if sustainable development is simply an obligation to preserve the same standard of living for future generations, then the inexorable growth in living standards over time would satisfy that obligation, making a commitment to sustainable development essentially meaningless. Revesz, *supra* note 3, at 1013.

35. Arrow, *supra* note 11, at 12–13.

36. *Cf.* Revesz, *supra* note 3, at 1001.

37. *Id.* at 100–102.

38. Exec. Order No. 12,866, 3 C.F.R. 1993, p. 638, *reprinted in* 5 U.S.C. § 601 (1994).

39. *Id.*

40. W. Kip Viscusi, *Equivalent Frames of Reference for Judging Risk Regulation Policies*, 3 N.Y.U. Envtl. L.J. 431, 431 (1995).

41. *See* Revesz, *supra* note 3, at 944. Economic theory suggests that the proper discount rate should be the after-tax market rate of return. Richard H. Thaler, The Winner's Curse: Paradoxes and Anomalies of Economic Life 93 (1992)

42. Thaler, *supra* note 41, at 93.

43. For example, in his Senate confirmation hearings, the then-Acting Deputy Administrator for the EPA commented:

> I have a great deal of ethical difficulty with a concept of applying a discount factor to human life. The lives of my three children are worth every bit as much to me 10 years from now as they are now. I personally reject that notion.

Subcomm. On Oversight and Investigations of the House Comm. On Energy and Commerce, "EPA's Asbestos Regulations: Report on a Case Study on OMB Interference in Agency Rulemaking," *reprinted in* Peter S. Menell & Richard B. Stewart, Envtl. L. & Pol'y 111 (1994).

For a detailed discussion of the debate on whether to discount human lives, see Revesz, *supra* note 3, at 950-55.

44. W. Kip Viscusi, *Discounting Health Effects for Medical Decisions*, *in* Valuing Health Care: Costs, Benefits, and Effectiveness of Pharmaceuticals and Other Medical Technologies 131–32 (Frank A. Sloan ed., 1995).

45. *See* Cropper & Sussman, *supra* note 32, at 160 ("The empirical literature on valuing risks to life has focused almost exclusively on valuing mortality risks that occur today—the risk of accidental death a worker faces during the coming year or the risk of dying this month in an auto accident.").

Empirical studies of 1,463 workers revealed a real discount rate of 2%, which was roughly equivalent to financial market interests rates, adjusted for inflation. Michael J. Moore & W. Kip Viscusi, *Discounting Environmental Health Risks: New Evidence and Policy Implications,* 18 J. Envtl. Econ. & Mgmt. S-59, S-61 (1990).

46. 947 F.2d 1201 (5th Cir. 1991).

47. *Id.* at 1218.

48. See Solow, *supra* note 9, at 221 ("Discount rates make all the difference within a utilitarian framework.")

49. Revesz, *supra* note 3, at 977.

50. Cowen & Parfit, *supra* note 8, at 147, *in* Justice Between Age Groups and Generations, *supra* note 1.

51. Laslett & Fishkin, *supra* note 16, at 14, *in* Justice Across Age Groups and Generations, *supra* note 1.

52. Revesz, *supra* note 3, at 999, n.285.

53. *Id.* at 999.

54. Revesz, *supra* note 3, at 949.

55. For criticism of this approach, see Thaler, *supra* note 41, at 92–106.

56. Cowen & Parfit, *supra* note 8, at 144, *in* Justice Across Age Groups and Generations, *supra* note 1.

57. *See* Revesz, *supra* note 3, at 978.

58. Circular No. A-94, 57 Fed. Reg. 53,519, 53,522–523 (1992).

59. *Id.* at 53,528 (3.8%); 61 Fed. Reg. 6397, 6397 (1996) (3.0%); 63 Fed. Reg. 3932, 3933 (1998) (3.8%).

60. *See* Revesz, *supra* note 3, at 979–80 (distinguishing environmental projects financed through borrowing or regulation in a closed economy).

61. 54 Fed. Reg. 29,460, 29,483 (1989). The Fifth Circuit upheld EPA's 3% discount rate in *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201, 1218 (5th Cir. 1991).

62. Cowen & Parfit, *supra* note 8, at 144, *in* Justice Across Age Groups and Generations, *supra* note 1.

63. Arrow, *supra* note 11, at 11.

64. *Id.* at 16.

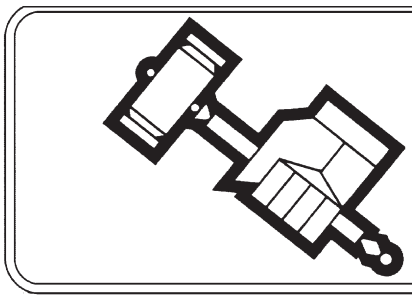
65. *Id.*

66. *Id.* at 17.

67. *See infra* at 7-8.

68. Cowen & Parfit, *supra* note 8, at 145–50, *in* Justice Across Age Groups and Generations, *supra* note 1.
69. The final argument, the argument from special relations, will be discussed *infra* in Part III. That argument—that discounting should occur not because of time itself, but because of degrees of kinship—will serve as the foundation for this article's thesis. *Cf. id.* at 149–50. The argument for excessive sacrifice has been previously discussed in Part I.
70. *Id.* at 145.
71. *Id.* at 145–46.
72. *Id.* at 146.
73. *Id.*
74. *Id.* at 146–47.
75. Derek S. Parfit, Reasons and Persons 482 (1984).
76. Revesz, *supra* note 3, at 1001.
77. Cowen & Parfit, *supra* note 8, at 146–47, *in* Justice Across Age Groups and Generations, *supra* note 1.
78. *Id.* at 147.
79. *Id.* at 148.
80. Revesz, *supra* note 3, at 1001–2.
81. *Id.* at 991.
82. *Id.* at 1001.
83. *Id.* at 997.
84. *See* Arrow, *supra* note 11, at 11.
85. Revesz, *supra* note 3, at 1003.
86. *Id.* at 1003–4.
87. *Id.* at 1004.
88. *Id.*
89. *Id.* at 1005.
90. *Id.* at 1007.
91. *Id.*
92. The estimated rate of return on such "riskless" bonds is between 1 and 2%. Cowen & Parfit, *supra* note 8, at 144.
93. Partha Dasgupta, Human Well-Being and the Natural Environment 229 (2001).
94. *Id.* (emphasis added).
95. Laslett, *supra* note 31, at 25, *in* Justice Across Age Groups and Generations, *supra* note 1, at 25.
96. *Id.* at 29.
97. *Id.* at 31 ("Everyone, therefore has rights to what he or she receives from his precursors or hers, rights that are or will be met by the duties they perform to their successors.")
98. *Id.* at 32.
99. *Id.* at 32–33 ("As time passes, individuals composing the . . . productive-age group make their contributions . . . in the confident expectation—their just expectation under the trust—that those who come after will behave similarly. In due course those successors will expect their own successors to do the same.")
100. *Id.* at 27.
101. *Id.* at 28.
102. *Id.* at 29.
103. *Id.*
104. Gregory A. Loken, *Gratitude and the Map of Moral Duties Toward Children*, 31 Ariz. St. L.J. 1121, 1167 (1999).
105. *Id.*
106. *Id.* at 1168.
107. *Id.* at 1170
108. *Id.* at 1190.
109. *Id.* at 1177.
110. *Id.* at 1178.
111. *Id.* at 1179.
112. *Id.* at 1181.
113. *Id.* at 1188.
114. *Id.* at 1186.
115. *Id.* at 1189.
116. Dasgupta, *supra* note 93, at 229.
117. Richard Dawkins, The Selfish Gene 21 (1976).
118. Richard Dawkins, River Out of Eden 105 (1995).
119. Epstein, *supra* note 1, at 89.
120. Cowen & Parfit, *supra* note 8, at 150, *in* Justice Across Age Groups and Generations, *supra* note 1 (arguing that if such a new discount rate should cease to apply after a certain period of time).
121. Dasgupta, *supra* note 93, at 229.
122. Laslett, *supra* note 31, at 45, *in* Justice Across Age Groups and Generations, *supra* note 1.
123. Laslett & Fishkin, *supra* note 16, at 10, *in* Justice Across Age Groups and Generations, *supra* note 1.
124. *See* Kim Sterelny & Paul E. Griffiths, Sex and Death: An Introduction to Philosophy of Biology 5 (1999); Elliot Sober, Philosophy of Biology 213 (2000).
125. *See* Sober, *supra* note 124, at 208.
126. *Id.* at 198.
127. *Id.* at 199.
128. *Id.* at 198.
129. *Id.* at 199.
130. *Id.* at 206.
131. *Id.* at 207.
132. *Id.* at 209.
133. *Id.*
134. Hans Jonas, The Imperative of Responsibility 131 (1984).
135. Dawkins, River Out of Eden, *supra* note 118, at 127.
136. It should be noted that any average ages stated herein are completely made up for the sake of argument.
137. Dawkins, River Out of Eden, *supra* note 118, at 126–28.
138. Laslett & Fishkin, *supra* note 16, at 10, *in* Justice Across Age Groups and Generations, *supra* note 1.
139. *See* Dawkins, River Out of Eden, *supra* note 118, at 34–35.
140. *Id.* at 35–36.

Shorge Sato is the second-place winner of the Environmental Law Section's 2002 Essay Contest.



Administrative Decisions Update

Prepared by Peter M. Casper

CASE: ***In re the Application of Richard DePierro for a freshwater wetlands permit pursuant to Article 24 of the Environmental Conservation Law (ECL) and Part 663 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York.***

AUTHORITIES: ECL Article 24
(Freshwater Wetlands)

6 N.Y.C.R.R. Part 663
(Freshwater Wetlands Permit Requirements)

DECISION: On March 12, 2003, New York State Department of Environmental Conservation (DEC) Commissioner Erin Crotty (the "Commissioner") issued a decision in which she denied Richard DePierro's (the "Applicant's") freshwater wetlands permit, as recommended by Administrative Law Judge (ALJ) Maria E. Villa. The ALJ recommended denial of the permit because the Applicant failed to show that the Applicant's proposed activities complied with the standards set forth in 6 N.Y.C.R.R. § 663.5(e)(1) & (2). The standards for permit issuance as well as the facts of the instant case are discussed in greater detail below.

A. Facts

In November 1999 the Applicant applied to the DEC for a freshwater wetlands permit pursuant to Article 24 of the ECL to construct a single-family residence, parking area and septic system entirely within the adjacent area of a Class II freshwater wetland located on his property in the town of Southampton, New York.

No interveners filed petitions for party status and at the issues conference the DEC and the Applicant stipulated that the issues to be considered at the hearing would be whether the application satisfied the permit issuance criteria of 6 N.Y.C.R.R. § 663.5(e), which include the three-part compatibility test, and the weighing standards listed at sections 663.5(e)(1) and (2), respectively.

The Applicant proposed to build his house approximately 28 feet from the freshwater wetland. The proposed septic systems' leaching pool would be located about 60 feet from the wetland. Roughly 50 percent of the upland forest canopy and herbaceous and shrub layer of vegetation on the site would be cleared to construct the house, septic system and parking area. According to the DEC's expert, this clearing and construction would substantially impact the adjacent area and wetland. The DEC further argued that the proposed septic system would create a potential human health risk because it could allow pathogens to move through the soil to the surface water and wetlands.

B. Discussion

As indicated above, the Commissioner must apply the standards set forth in section 663.5(e) while evaluating a permit application for a freshwater wetlands permit. This evaluation is done in conjunction with the freshwater wetland's classification as indicated on the official freshwater wetlands map filed by the DEC. In the instant case, a portion of the Applicant's property is in a Class II wetland and its adjacent area. Class II wetlands are those wetlands which "provide important benefits, the loss of which is acceptable only in very limited circumstances." The Commissioner will issue a permit only if it is "determined that the proposed activity satisfies a pressing economic or social need that clearly outweighs the loss of or detriment to the benefit(s) of the Class II wetland." Furthermore, if the proposed activity fails to meet the compatibility requirement pursuant to section 663.5(e)(1), then the Applicant must prove that the proposed activity meets each of the standards set forth in section 663.5(e)(2).

Specifically, for Class II wetlands the proposed activity must be compatible with the public health and welfare, be the only practicable alternative that could accomplish the applicant's objectives and have no practicable alternative on a site that is not a freshwater wetland or adjacent area. The proposed activity must also minimize degradation to, or loss of, any part of the wetland or its adjacent area and must minimize any adverse impacts on the functions and benefits that the wetland provides.

In the instant case, the Applicant argued that there was no other practicable alternative for the construction of a residence on the property, that the area is highly developed, and that the project would not have any adverse effect on the environment, and minimal effect on the wetlands. During the hearings the Applicant's consultant testified that migratory birds using the site during construction would likely be disturbed, but that he had yet to witness any birds using the site during his many visits. He indicated that there would be limited ground disturbance, but did acknowledge that the ground disturbance would come within five or six feet of the wetlands. According to the ALJ, the Applicant failed to offer any persuasive evidence that the proposed project would have been compatible with the preservation, protection and conservation of the wetland and its benefits, or would result in no more than insubstantial degradation to, or loss of any part of the wetland.

The DEC's witness testified that the clearing, filling, and grading at the site, as well as the compaction of the soils attributable to the operation of heavy equipment during construction, would all affect the wetland. He stated that the placement of fill close to the wetland boundary, with associated changes in grade, would run the risk of soil being eroded and washed into the wetland as a result of heavy rains. Moreover, the DEC argued that the construction of one single-family home in the adjacent area of a Class II wetland would per se fail to demonstrate a pressing social or economic need, since such a project would benefit only one individual.

In arriving at her recommendation the ALJ cited several previous Commissioner Decisions. In *In re Novack*, the Commissioner denied a permit for construction of a single-family home in a Class I wetland where the applicant argued that lack of affordable housing was a compelling social or economic need and the applicant would move out of the area if the application was denied.[1] In *In re Grimaldi* the Commissioner also denied a freshwater wetlands permit for the construction of a single-family dwelling in the adjacent area of a Class I wetland.[2] In *Grimaldi*, the ALJ concluded that "given the dimensions of the site and the proximity to the wetland, it is not readily apparent how the applicant could design a project that would meet the regulatory requirements of Part 663. . . . Nevertheless, there was no presentation of any reason why a home must be sited here."[3] In *In re Janssen*, the Commissioner denied the applicant a freshwater wetland permit to construct a single-family house in a Class I wetland stating that "the applicant must show that he must build the house, that it is unavoidable that he build the house, and that his need for the house outweighs the loss it would cause in a manner which is beyond serious debate."[4]

Relying on the above cited Commissioner decisions as precedent, the ALJ in the instant case stated that the Applicant's assertions that he needs to realize a return on his investment in the property is not sufficient to outweigh the potential for contamination, and the likelihood of adverse impacts on the wetland.

The Applicant also argued without avail that two neighbors were previously granted permit approvals in 1988 and 1995 to construct in the wetland and adjacent area, and that these approvals have significant precedential value in the instant case. The DEC countered that in 1988 the wetland at issue was not yet mapped and therefore received a non-jurisdiction letter. As mentioned above, jurisdiction was not at issue in the instant case.

The ALJ stated that although the wetland was mapped and the DEC had jurisdiction over the neighbor's 1995 application, the current Applicant maintained a burden to establish a "nexus" between the prior approval and the application under consideration. The Applicant's consultant failed to supply sufficient information to show the similarities between the neighbor's earlier project and the Applicant's project and the ALJ recommended that the Applicant's permit be denied.

C. Conclusion

For the reasons discussed above, the Commissioner denied the Applicant's freshwater wetland permit as recommended by the ALJ.

Endnotes

1. *Matter of Novack*, Decision, 2001 WL 980474, *6 (July 25, 2001). For an in-depth summary of this case refer to "Administrative Decision Update" in the Fall 2001 (Vol. 21, No. 4) issue of *The New York Environmental Lawyer.*
2. *Matter of Grimaldi*, Decision, 2000 WL 1207730, *8 (Aug. 8, 2000).
3. *Id.*
4. *Matter of Jenssen*, Decision, 1996 WL 368831 * 12 (May 14, 1996).

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Recent Decisions in Environmental Law

Student Editor: Wesley O'Brien

Prepared by students from the Environmental Law Society of St. John's University School of Law

National Petrochemical & Refiners Ass'n v. Environmental Protection Agency, 287 F.3d 1130 (D.C. Cir. 2002).

Facts: The Environmental Protection Agency (EPA) adopted a new rule to drastically reduce diesel exhaust emissions: Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements, 66 Fed. Reg. 5002 (2001). The EPA enacted this order, referred to as the 2007 Rule, in its authority under the Clean Air Act to set emission standards that "reflect the greatest degree of emission reduction achievable"[1] using cost-effective technology to avoid harmful effects to the environment and human health. The rule targets the reduction of nitrous oxides (NOx), non-methane hydrocarbons, and particulate matter (PM) in the emissions of diesel engines. The new standard would require output of NOx and PM to be at least 90 percent lower than current acceptable levels. These new standards would be phased in, requiring only 50 percent of engines to be in compliance for the first three years of implementation starting in 2007, and reaching 100 percent compliance by 2010.

To accomplish this goal, the EPA has directed the modification of diesel engines as well as diesel fuel. Engines will require a system similar to a catalytic converter on the gasoline engine of a car, taking into consideration unique difficulties inherent to controlling relatively cool, oxygen-rich diesel emissions. In order to comply, engine manufacturers will need to develop new technology. Two devices tested and recommended by the EPA are the catalyzed diesel particulate filter and the NOx adsorber. The particulate filter captures soot and other PM which, after significant buildup, must be burned off through a regeneration process. The NOx adsorber stores and converts the NOx until the accumulation similarly needs to be regenerated. Additionally, the 2007 Rule eliminated a pre-existing exception, now raising the standard to include crankcase emissions from turbocharged heavy-duty diesel engines in the total emissions count. Finally, under the EPA's authority to regulate fuel content that significantly impairs the performance of an emissions control device, diesel fuel will be required to achieve a 97 percent reduction in sulfur content.

To evaluate compliance with the 2007 Rule, Federal Test Procedures will be conducted with an Averaging, Banking and Trade (ABT) program and nonconformance penalties used to accommodate and enforce the standard. The ABT program allows companies to earn credits from engines that run cleaner than the regulation requirement during the initial phase-in years. These credits may be applied to other engines with emissions that test higher than the requirement (averaging), be saved for future use (banking), or be sold to other manufactures (trading). Manufacturers may use credits in any of these ways within a distinct service class: light, medium, or heavy heavy-duty trucks. Cross-subclass (between different service classes) ABT is usually prohibited, but during the first three years of implementation the EPA will allow cross-subclass averaging while discounting the value of those credits by 20 percent. The 2007 Rule was challenged by engine manufacturers, automobile makers, and fuel refiners, including Cummins, Inc., National Petrochemical & Refiners Association, and Mack Truck. The United States Court of Appeals for the District of Columbia Circuit reviewed the EPA's rule.

Issue: Whether the EPA acted arbitrarily and capriciously in predicting that new technologies would enable engine manufacturers to achieve significant emissions reductions by 2007.

Analysis: The United States Court of Appeals for the District of Columbia Circuit noted that the review standard for all challenges to the EPA rule is whether it was arbitrary and capricious, allowing "great deference"[2] where complex scientific or technical analysis was used as a basis for the EPA's decision. The court reiterates that in order to satisfy this standard, the EPA need only present one solution accompanied by a reasoned explanation of their belief that the industry will be able to comply with the new standards by the deadline. Where the EPA has identified the major steps, it is

not additionally necessary that they provide detailed solutions for industry compliance. In accordance with this standard, the court held that the EPA had at least satisfied these minimum requirements, often providing additional explanations, research and details.

The opening series of challenges were directed at the new engine emission regulation including the feasibility and availability of NOx adsorbers, the availability of NOx sensors, and practicability of eliminating the crankcase emission exception. The court considered three important parts of Cummins' claim that the "EPA failed to make reasonable extrapolations or to provide a reasoned explanation for believing that its projection is reliable."[3] First, on the claim that rapid degeneration would contribute to a short life-span of NOx adsorbers, the court found the argument was based on a mischaracterization of the reports and research correctly relied upon by the EPA. Second, the court found that although there was a risk of melting the emissions control device during the regeneration cycle, the EPA's suggestions of several steps to correct this problem were sufficient. Third, the court considered the concern that since NOx adsorbers were not effective during the engine's initial cold cycle, manufacturers could still receive a poor emissions score. The court found that similar tests regularly conducted on gasoline engines counted the time it took for the engine to warm up as a trivial percentage of the total weighted score; this procedure could be similarly adapted for tests on diesel engines. The court also found that the EPA's prediction regarding the future development and effectiveness of the NOx adsorber was supported by the reports and test results cited by the EPA, industry commentary on availability, and Cummin's own research.

The court next considered the contested availability of NOx sensors. This sensor is the critical device that triggers the adsorber's regeneration cycle. In two studies that the EPA used to test adsorber performance, NOx sensors were not used. In these tests the regeneration cycle was either manually controlled or NOx detection was focused on ranges other than what would be practically expected from heavy-duty diesel engines. The court held that these EPA studies were not intended to be focused on the sensor function, and that the EPA adequately asserted that satisfactory sensors have already been developed.

The court also considered the practicality of eliminating the crankcase emissions exception. The court found that although manufacturers will need to develop their own solution to reduce crankcase emissions on applicable engines, the EPA noted that this requirement already existed in Europe and is a standard already met by Mercedes heavy-duty diesel engines in the United States. Since neither of these model systems were shown to be ineffective, the court found that it was feasible to expect crankcase emissions to be included in future compliance.

The next set of challenges, directed toward the reduction of the percentage of sulfur contained in diesel fuel, were chiefly asserted by the National Petrochemical & Refiners Association (NPRA). First, the court considered whether the EPA showed that emission-control technology requiring lower sulfur levels in diesel fuel was "in or near general use."[4] The court found that since the success of NOx adsorbers in emissions control systems would be inhibited by high levels of sulfur in diesel fuel, the EPA's prediction of the future availability of these devices was a sufficient prerequisite to require accommodating fuel modification. Second, the court found that the EPA's reliance on technology still in the testing stage as a basis for future fuel regulation standards provided adequate guidance. The court held that the EPA provided a course of action for the engineering necessary to adapt adsorbers for present use, and thus provided the course of action necessary to make diesel engines ready to use low sulfur fuel. Third, the court considered whether sulfur-resistant technology was a possible alternative to devices that required sulfur reduction. They found that the EPA had considered and discussed the obstacles to this type of technology, namely that those systems required drivers to refill urea, a chemical necessary for operation of the alternative system. The fact that urea was not readily available at truck stops and would likely not be used by drivers other than before emissions tests, rendered low-sulfur fuel a more viable option.

Finally, the ABT program in the 2007 Rule was challenged by Mack Truck, a manufacturer of only the heavy heavy-duty class of engines. Mack contended that since it only manufactures heavy-duty engines, already particularly sensitive to the cost increases indicative of decreased fuel economy, the new rule would force them to purchase credits from other manufacturers. While the purchase of credits from another engine manufacturer could create a competitive disadvantage, the court held that EPA had fully explained its decision, emphasizing that the goal of the ABT program was to provide flexibility and assistance to the industry during this transition. The court emphasized that the ABT program was only temporary, and that the EPA had specifically attempted to prevent competitive disadvantages in this program, although it was not possible to consider it as a top priority.

The petitions for review on the engine modification, sulfur reduction in fuel, and ABT program options were denied. All other petitions were also denied or summarily dismissed. The court found there were no grounds, according to the standard of review, to reverse the EPA's rule.

Endnotes

1. *Nat'l Petrochemical & Refiners Ass'n v. Envtl. Prot. Agency*, 287 F.3d 1130, 1134 (D.C. Cir. 2002).
2. *Id.* at 1135.
3. *Id.* at 1136.
4. *Id.* at 1144.

Natalie Friedenthal '05

* * *

***Connecticut v. Crotty*,** 180 F. Supp. 2d 392 (N.D.N.Y. 2001).

Facts: The New York Department of Environmental Conservation (NYDEC) adopted regulations that restricted commercial lobstering around Fishers Island, to protect and maintain the surrounding lobster population. These regulations contained a provision that commercial lobstermen who fished lobster pots around the island were required to obtain a Fishers Island Special Management Area (FISMA) permit and were prohibited from taking lobsters from any other waters. Furthermore, the provision restricted the number of pots each permit holder could set in the waters around Fishers Island, and restricted the granting of permits to only parties who held them during the preceding year.

Plaintiff State of Connecticut and Plaintiff Volovar, a Connecticut resident engaged in commercial lobstering in the waters adjacent to Fishers Island in New York, argued that the provision in these regulations, which restricted lobstermen from taking lobsters from any other waters, was a restriction of interstate commerce and therefore a violation of the Commerce Clause of the United States Constitution. Defendants New York Commissioner of Environmental Conservation and the Director of the Division of Law Enforcement for the NYDEC argued that despite the restrictive burden of these provisions on non-New York resident lobsterers, the provision was not discriminatory since both New York resident or non-resident lobsterers, holding commercial lobster permits are able to obtain FISMA permits. In other words, defendants argued this provision was not unconstitutional because it applied uniformly to all lobsterers.

Plaintiff Connecticut sued defendants alleging that the restrictive provision in New York law violated the Commerce Clause of the U.S. Constitution. After this, plaintiff lobsterer sued on grounds that this provision violated the Privileges and Immunities Clause of Article IV, Section 2 of the U.S. Constitution, the Privileges or Immunities Clause of the Fourteenth Amendment to the U.S. Constitution, and the Equal Protection Clause of the Fourteenth Amendment to the U.S. Constitution. The District Court combined these two cases because both sought preliminary injunctions to prevent the enforcement of these provisions.

Issue: Whether New York Environmental Conservation Law § 13-0329(2)(a) violated the Commerce Clause of the U.S. Constitution.

Analysis: The United States District Court for the Northern District of New York (District Court) held that enforcement of New York Environmental Conservation Law § 13-0329(2)(a) violated the Commerce Clause of the U.S. Constitution.

To determine whether or not to grant the plaintiffs' motion for a preliminary injunction, the District Court required the plaintiffs to demonstrate "irreparable harm" that was imminent, actual and unable to be compensated through monetary damages. The District Court further required plaintiffs to demonstrate either the "likelihood of success on the merits" or "sufficiently serious questions going to the merits to make them a fair ground for litigation and a balance of the hardships tipping decidedly towards the party requesting the preliminary relief."[1]

The District Court found plaintiff lobsterer would suffer irreparable harm if she decided to obtain a FISMA permit. Not only would she be forced to relinquish her right to lobster in any other waterways while holding a FISMA permit, but she would also be forever prohibited from setting lobster pots in both New York and non-New York waters, as she currently does to earn a living. Furthermore, Connecticut's interest to protect its citizens from injury due to discriminatory effect of the New York Environmental Conservation Law could not have been protected or compensated through monetary damages, but only by preventing the enforceability of such a law that negatively impacts Connecticut's citizens.

To determine the "likelihood of success on the merits," the District Court examined whether the provision violated the Commerce Clause. First, the District Court determined that under *Healy v. Beer Institute*,[2] a state law regulating commerce beyond its borders is invalid under the Commerce Clause because it exceeds a state's limit of authority over another state. *Healy* also established that a state statute requiring a merchant to seek approval from the state before conducting business in another state "directly regulates interstate commerce" and is therefore invalid. Thus, since this New York provision would ultimately regulate a non-resident permit holder's right and ability to do business outside the state of New York, it therefore violated the Commerce Clause.

Second, the District Court used the a test from *Pike v. Bruce Church*,[3] which determines whether a plaintiff is

likely to succeed on the merits of a claim, depending on whether a state statute directly or indirectly affects interstate commerce. According to *Pike,* if a state statute directly and negatively affects interstate commerce, or favors in-state commerce interest over the out-of-state's interest, the state statute is invalid. Conversely, if a state statute indirectly affects interstate commerce, and the burden on interstate commerce greatly exceeds the local benefit, the statute is invalid. Although the defendants assert the provision aimed to promote a local benefit by preserving the local lobster population, the provision's indirect burden on interstate commerce exceeded the local conservation benefit. Furthermore, although the defendants argued the lobster population would suffer without this provision, they did not provide evidence to demonstrate the greater necessity of this specific provision over any alternative. The District Court determined the defendants' same goal could have been accomplished through alternatives that would not have burdened interstate commerce as much as this provision.

As a result, the District Court determined that the plaintiffs demonstrated they would have suffered irreparable, imminent and actual harm if the enforcement of this provision is not restrained, and that the burden on interstate commerce greatly exceeded the local conservation benefit. Consequently, the United States District Court for the Northern District of New York granted the plaintiffs' motions for a preliminary injunction and prohibited the defendants from enforcing New York Environmental Conservation Law § 13-0329(2)(a).

Endnotes

1. *Tri-State Video Corp. v. Town of Stephentown*, 1998 U.S. Dist. LEXIS 1899 (1998).
2. 491 U.S. 324 (1989).
3. 397 U.S. 137 (1970).

Gina M. Lupino '05

* * *

***United States v. Rapanos*,** 190 F. Supp. 1011 (E.D.Mich. 2002).

Facts: Defendant, John A. Rapanos, owned a 175-acre plot of land in Williams Township, Michigan, of which one-third or less was occupied by wetlands. Defendant's property was located roughly 20 miles from the two nearest navigable waterways—the Saginaw Bay and the Kawkawlin River. While in the process of selling his land to a developer, defendant cleared a heavily wooded plot and filled in the wetlands with sand. Thereafter, he was prosecuted by the government for having filled the wetlands with sand without obtaining a proper permit.

The defendant went to trial in February 1995 and was convicted by a jury on two counts of "knowingly discharging pollutants into waters of the United States without a permit," in violation of section 301(a) of the Clean Water Act (CWA) in March of 1995.[1] The defendant motioned and the court granted a review of the course of the trial. The Court of Appeals reversed the prior decision on the basis that the court had abused its discretion.[2] On remand, the defendant was sentenced to three years of probation and to pay a fine of $185,000 on remand. The Court dismissed further appeals by the defendant, who in turn sought a writ of certiorari from the United States Supreme Court. The writ was granted, the Court of Appeals order was vacated, and the case was remanded to the United States District Court for the Eastern District of Michigan (District Court), for reconsideration in light of *Solid Waste Agency*.[3]

Issue: Whether the wetlands located on the defendant's property were adjacent to navigable waters within the meaning of the CWA.

Analysis: The conviction of the defendant for violating the CWA, which was passed by Congress for the purpose of "restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters,"[4] was set aside by the United States District Court for the Eastern District of Michigan. The enactment of the CWA took place when Congress determined that the Federal Water Pollution Control Act was ineffective due to a misplacement of focus on the effects rather than on the prevention of water pollution. Congress approached this problem by attempting to broadly define the term "navigable waters."

The phrase "navigable waters," defined as "the waters of the United States"[5] in the CWA, which made unlawful the "discharge of any pollutant, by any person," not in compliance with the CWA. In order to be in compliance with the CWA, a permit must be obtained from the Army Corps of Engineers. According to the publications of the Army Corps of Engineers, "waters of the United States" include waters such as wetlands, tributaries of navigable waters, and wetlands adjacent to navigable waters.[6]

The government claimed wetlands on the defendant's property were "waters of the United States" because they constituted a "tributary" and that they were "hydrologically connected and 'directly adjacent to navigable waters.'"[7] The facts showed that the wetlands on the defendant's property drain into a ditch, which eventually empties into the Kawkawlin River and then into the Saginaw Bay. In fact, the defendant's

property was roughly twenty linear miles from the nearest body of navigable water.

In deciding that the wetlands on the defendant's property were not adjacent to navigable waters, the court looked to *Solid Waste Agency* and *Riverside Bayview Homes*.[8] In *Solid Waste Agency*, the plaintiffs, a group of cities in suburban Chicago, wanted to dispose of solid waste into an abandoned sand and gravel mining pit.[9] The defendants, the Army Corps of Engineers, determined that they had jurisdiction over the property because migratory birds had been seen at the site. Despite the plaintiffs' efforts to comply with all of the requirements for a permit, defendants refused to grant it. Upon plaintiffs' attack of the defendant's jurisdiction the Court examined the "migratory bird rule,"[10] which was a regulation that defendants promulgated pursuant to section 404 of the CWA. The Court analyzed an interpretation of the same statute that is involved in the present case, holding that "navigable waters" include those non-navigable waters that are adjacent to a navigable body of water.

The District Court then looked at the decision in *Riverside Bayview Homes.* In *Riverside Bayview Homes*, a developer began to fill in a wetland area, which was a non-navigable body of water located directly adjacent to a navigable body of water. At issue in *Riverside Bayview Homes* was whether a wetland that was immediately adjacent to a body of navigable water could be regulated under section 404 of the CWA, despite the fact that the wetland itself was not navigable. The Supreme Court answered that query in the affirmative, relying on regulations promulgated by the Army Corps of Engineers. The outcome in *Riverside Bayview Homes* was the Court holding that "the landward limit of Federal jurisdiction under section 404 [of the CWA] must include adjacent wetlands that form the border of or are in reasonable proximity to other waters of the United States."[11]

In the present case, the District Court was not willing to further extend the definition of "navigable waters" to include the property, such as the defendant's, which is not direct adjacent to the navigable waters. The statute instructs that navigable waters must be affected by the defendants' activities, and the court found that as a matter of law, the defendant's property was not adjacent to navigable waters and the government failed to prove that any navigable waters have been or would be affected by the defendant's activities. The United States District Court for the Eastern District of Michigan concluded that the government did not have the authority to regulate defendant's property. The defendant's conviction was set aside and the case dismissed.

Endnotes

1. *United States v. Rapanos*, 190 F. Supp. 2d 1011, 1012 (E.D.Mich. 2002).
2. *Id.* at 1012–1013.
3. *Solid Waste Agency of North Cook City v. Army Corps of Engineers*, 531 U.S. 159 (2001).
4. *Rapanos*, 190 F. Supp. 2d at 1013.
5. 33 U.S.C. § 1251(a).
6. 33 C.F.R. § 328.2.
7. *Rapanos*, 190 F. Supp. 2d at 1014.
8. *United States v. Riverside Bayview Homes,* 474 U.S. 121 (1985).
9. *Solid Waste Agency,* 531 U.S. at 162–3.
10. *Rapanos* 190 F. Supp. 2d at 1015.
11. *Riverside Bayview,* 474 U.S. at 134.

Silvia M. Metrena '03

* * *

Niagara Mohawk Power Corp. v. Jones Chemical, Inc., 315 F.3d 171 (2d Cir. 2003).

Facts: Niagara Mohawk Power Corporation (NMPC) owned two adjoining parcels of industrial land on a peninsula in the Mohawk River, where it had operated a gas manufacturing and power generation business for more than a hundred years. On this peninsula, Mohawk Valley Oil (MVO) purchased a parcel known as the "Niagara Flats" from NMPC and began using NMPC's former gasoline storage tanks. NMPC leased its remaining land on the peninsula to Tar Asphalt Services (TAS). MVO then purchased another parcel of land on the peninsula from Texaco, leaving the TAS property sandwiched between MVO's two properties. MVO then built a separator device between the Niagara Flats and the TAS property to intercept hazardous runoff from TAS's truck-washing operations, which flowed across the Niagara Flats into the Utica Terminal Harbor. After sixteen years, MVO ceased operations at these locations and sold its parcels.

An environmental study later found shallow soil and groundwater samples on the former MVO properties to be contaminated with BTEX and polyaromatic hydrocarbons. These substances were byproducts of NMPC's manufactured gas plant operations and constituent elements of the fuel stored by both MVO and NMPC. NMPC thereafter entered into four consent agreements with the state of New York requiring environmental remediation of the peninsula and harbor.

NMPC sued multiple state agencies, MVO, and other companies who had previously owned or operated facilities on the peninsula for contribution under New York Navigation Law § 181 (Navigation Law) and the Comprehensive Environmental Response, Compen-

sation, and Liability Act (CERCLA). NMPC entered settlement agreements with the other defendants; however, the United States District Court for the Northern District of New York granted summary judgment to MVO, finding that NMPC failed to satisfy its burden on the Navigation Law claim and that MVO successfully established an affirmative defense under CERCLA. NMPC appealed to the United States Court of Appeals for the Second Circuit.

Issue: Whether the evidence presented by NMPC created a genuine issue of material fact under either New York Navigation Law § 181 or CERCLA.

Application: The United States Court of Appeals for the Second Circuit held that although probable that there was some seepage or leakage in sixteen years of operation on the peninsula, when MVO was storing and shipping millions of gallons of fuel annually, NMPC did not meet its burden to show such a discharge to be a result of MVO's operations.

The Navigation Law holds strictly liable for the costs of clean-up and remediation "any person who has discharged petroleum" onto the lands or into the waters of the state.[1] At trial MVO offered the undisputed testimony of two former employees, who both emphatically stated there was never seepage from the storage tanks nor were there any spills while loading tanker trucks for shipping. However, when pressed in cross-examination, the witnesses conceded to the possibility of "a little [seepage] along the side, [which] the wind would dry off," and the possibility of "fugitive drops from the loading pipeline or from loaded trucks as they pulled away,"[2] which were cleaned from the blacktop driveway. The court held that a "metaphysical possibility" conceded by an honest witness in testimony does not create a genuine issue of material fact.

The court additionally held that the evidence presented by NMPC that the contaminating substances found had been kept in the Niagara Flats storage tanks by MVO did not create a genuine issue of material fact because NMPC itself was a potential source of these contaminants, having used these contaminants in its manufacturing operations and these same storage tanks prior to MVO. Because NMPC failed to trace even a drop of MVO petroleum onto the soil or into the water, the court refused to permit an inference that MVO was the source of the contamination for the fact finder to resolve. The court stated that because "there is no evidence that points to one party rather than the other, the only basis for such a jury finding would be impermissible speculation."

The court declined to answer the question of whether MVO made out a successful affirmative defense as provided under the CERCLA statute, instead holding that because the evidence was insufficient to show that MVO was a responsible party, NMPC failed to establish a prima facie case. Under CERCLA, liability may be imposed on "any person who at the time of disposal of any hazardous substances owned or operated any facility at which such hazardous materials were disposed of[.]"[3] The statute further defines "disposal" as, *inter alia*, the spilling or leaking of contaminants into the surrounding environment.[4]

The facts showed that the actual spilling of hazardous substances occurred when NMPC's tenant, TAS, rinsed kerosene and tar from its trucks, which flowed across the Niagara Flats and into the harbor. Because "spilling" or "leaking" requires the "passage of a substance into or out of a containment," and because a property line is not a containment for liquids, the court held that the passive flow of contaminants over MVO's land is legally insufficient to convey liability on MVO for these contaminants. The Court of Appeals for the Second Circuit affirmed the judgment of the district court and dismissed NMPC's CERCLA and Navigation law claims.

Endnotes

1. N.Y. Nav. Law § 181(1).
2. *Niagara Mohawk Power Corp. v. Jones Chemical, Inc.*, 315 F.3d 171, 176 (2d Cir. 2003).
3. 42 U.S.C. § 9607(a)(2).
4. 42 U.S.C. § 9601(29).

Wesley O'Brien '05

* * *

Salvador v. Adirondack Park Agency of New York State, 2002 U.S. App. LEXIS 10244 (2d Cir. Apr. 26, 2002), *cert. denied* 2002 U.S. LEXIS 8114.

Facts: Appellants John and Kathleen Salvador operated a commercial marina on Lake George in Queensbury, New York. A permit was issued for the marina in 1982 by the New York State Department of Environmental Conservation (DEC). In 1987, the DEC transferred all regulatory authority over the marinas on Lake George to the Lake George Park Commission (the "Commission") pursuant to Environmental Conservation Law § 43-0117(4). Upon being denied a renewal permit for their marina by DEC, Appellants commenced action in December 1998 against the Commission, the DEC, and 14 individuals in their official capacities as employees of either the Commission or the DEC. Appellants alleged numerous causes of action relating to the Commission's refusal to grant Appellants a permit to construct handicapped accessible facilities at their marina or grant a renewal permit for the marina. Appellants brought causes of action pursuant to 42

U.S.C. § 1983, alleging violations of the Due Process and Equal Protection clauses, *ex post facto* regulation, retaliation for First Amendment activity, defamation, violation of the Dormant Commerce Clause, and antitrust claims, as well as violation of the Americans with Disabilities Act (ADA).[1] Appellants appealed here, to the U.S. Second Circuit Court of Appeals, from a ruling granting Defendants dismissal of all causes of action.[2]

Issue: Whether Defendants were entitled to sovereign and qualified immunity; the latter dependent on whether Appellants alleged an actual deprivation of a constitutional right in any of their causes of action.

Analysis: In determining whether a state entity is entitled to Eleventh Amendment sovereign immunity, courts examine how the entity is funded.[3] The Eleventh Amendment has been consistently interpreted to mean that an unconsenting state is immune from suit brought in federal courts by her own citizens.[4] DEC was previously decided to be a state entity in a separate action, as "moneys appropriated for the use of the commission by the state [are] paid out of the state treasury."[5] Suits against state officials that are in fact suits against a state are also barred by the Eleventh Amendment.[6]

A government official can claim qualified immunity as long as he did not clearly violate established law, or it was objectively reasonable that the defendant did not believe that his action would violate established law.[7] Therefore, each of Appellants' causes of action were considered in turn to determine whether there was an actual deprivation of a constitutional right, and therefore a violation of clearly established law.

In claiming a violation of Equal Protection, Appellants contended that the Commission treated their application for a marina permit differently than other similarly situated applicants. The U.S. Second Circuit Court of Appeals found that Appellants failed to allege any facts that, if proven, would establish that they had been treated differently than other applicants. The permit application was incomplete and in violation of Queensbury town ordinances; thus they did not act as other applicants similarly situated.

A procedural Due Process violation was claimed by Appellants in that, by denying their petition for a renewal of the marina permit, the Commission "arbitrarily or irrationally" deprived them of a valid property interest.[8] The Court noted that a permit is not a valid property interest as a matter of New York law, and even if it was, the permit had expired well before Appellants' application for a renewal, and ruled that the Commission did not breach Due Process in denying Appellants a renewal of the permit.

Appellants claimed to be victims of *ex post facto* regulation in the marina regulations promulgated by the Commission after assuming regulatory authority over marinas in Lake George from the DEC. For the claim to be effective, a plaintiff must show either that the legislature intended the statute to be criminal (punitive), or if the intent was nonpunitive, that the regulations are so punitive in fact that the legislation cannot be legitimately seen as civil in nature. The Court ruled that "nothing alleged in the complaint even hints that marina regulations are so punitive either in purpose or effect as to trigger *ex post facto* concern."[9]

Appellants claimed retaliation for First Amendment activity in response to the legal challenges to Defendants' decision and authority brought by Appellants. To be successful, a retaliation claim requires a showing (1) that the speech or conduct at issue was protected; (2) that the defendant took adverse action against the plaintiff; and (3) that there was a causal connection between the protected speech and the adverse action.[10] First, Appellants did not state what protected activity they took. Second, Appellants failed to specify what retaliatory action was taken against them. Third, Appellants' complaint contained no sufficient allegation of a causal connection.

Governmental defamation was alleged by Appellants to have been carried out during the litigation by Defendants. A claim for governmental defamation must allege (1) the utterance of a statement about the plaintiff that is sufficiently derogatory to injure plaintiff's reputation, that is capable of being proved false, which the plaintiff claims is false, and (2) that some tangible and material state-imposed burden or alteration of status or right has been inflicted in addition to the stigmatizing statement. Even assuming that an allegation of regulatory violations occurred when Defendant denied Appellants the marina permit, Appellant did not allege any tangible or material state-imposed burden as required by the second element of the action.

Appellants claimed that by refusing to issue a permit allowing them to build a handicapped ramp on their marina, Defendants violated the ADA. However, Appellants' complaint did not allege that Defendants had denied the permit renewal because of any handicap to Appellants, or one that their employees, guests, or customers had. The failure to state a claim of discrimination for any handicap of these parties made the cause of action unsustainable.

The Dormant Commerce clause was claimed to have been violated when Defendants enforced zoning ordinances prohibiting the construction that Appellants wished to perform, thereby burdening interstate commerce. A court must first determine whether a state or local government is regulating commerce, and, if so,

whether the regulation affects interstate commerce. Finally, the court must determine whether the regulation discriminates against interstate commerce. The Court held that Appellants alleged nothing that could constitute interstate discrimination, and therefore, the Commerce Clause claim lacked merit.

U.S. Second Circuit Court of Appeals determined that none of Appellants' allegations survived even the mildest scrutiny. Since there was no violation of established law resulting from the acts of the individual Defendants, they were granted qualified immunity by the Court, and the dismissal of Appellants' claims as a matter of law by the District Court for the Northern District of New York was upheld.

Endnotes

1. 42 U.S.C. § 12101.
2. *Salvador v. Adirondack Park Agency of New York State*, 2001 U.S. Dist. LEXIS 23465 (N.D.N.Y. 2001).
3. *McGinty v. New York*, 251 F.3d 84, 95–96 (2d Cir. 2001).
4. *Edelman v. Jordan*, 415 U.S. 651, 662–63 (1974).
5. *Baker v. Dep't of Envtl. Conservation*, 634 F. Supp. 1460, 1462–63 (N.D.N.Y. 1986).
6. *Pennhurst State School & Hosp. v. Halderman*, 465 U.S. 89, 102 (1984).
7. *Johnson v. Newburgh Enlarged School District*, 239 F.3d 246, 250 (2d Cir. 2001).
8. *Crowley v. Courville*, 76 F.3d 47, 52 (2d Cir. 1996).
9. *Salvador v. Adirondack*, 2002 LEXIS 10244, 11 (2d Cir. 2002).
10. *Garcia v. State Univ. of New York Health Science Center of Brooklyn*, 280 F.3d 98, 106–07 (2d Cir. 2001).

Jordan M. O'Brien, '05

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