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Growth and Form: Indian Tribes, Terrorism, and the Durability of Environmental Law

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INTRODUCTION

It is an honor to deliver the Sterry R. Waterman Lecture at the Vermont Law School. I had the privilege of meeting Judge Waterman many years ago when I was a law clerk to the Honorable Frederick Van Pelt Bryan, Southern District of New York. Sterry Waterman was a buoyant, creative, and thoroughly wise man—the epitome of a judge we are pleased to honor and remember.

It is doubly a pleasure to appear at a law school that has made environmental law a special mission and a highly successful trek. I would thank especially your faculty members who have taught me so much about environmental law and litigation (Professor Karin P. Sheldon, my “first” student at the University of Washington, and Professor Pat Parenteau, a true national treasure), the environmental law/land-use interface (Professor Richard Brooks), and Native American environmental law (Professor Dean Suagee) that has my full attention and sympathy. I would like to thank Professor Stephen Dycus for inventing and defining the field of environmental law and national security, and Professor Celia Campbell-Mohn for showing me how to write an environmental book. I would like to give special encouragement to Professor Tseming Yang who will tell us how to think about the grand topic of environmental justice. I would like to acknowledge also the common interests I share with Professor Oliver Goodenough and Professor Cheryl Hanna who have joined me in the study of “Law and Biology” in the meetings organized by Margaret Gruter and her institute.

My target audience is the body of extraordinary law students here at Vermont who will define the shape and direction of tomorrow’s environmental law. My plan is to derive five virtues of significant achievement—genius, high-leveraging, symbolism, optimism, and courage—and to convince you that the Indian tribes of the United States are fortuitously blessed with these capacities for positive change. I am obliged to defend my five virtues against the charge that they are “gray” virtues, mere tactics.
of opportunity open to use by the forces of hatred and destruction as freely as those of nurturing and protection. This charge, and the terrorist example we unforgettably learned on September 11, 2001, oblige me to identify a sixth virtue of nondestructive change, which I will call "commitment to the past." Environmentalists have this commitment and it enables them to work creatively toward saving life on earth. The Indian tribes have it too, and it puts them in the dual role of catalyst for change and protector of orthodoxy.

I. THE BILLION-DOLLAR CLUB

For a number of years, I have been collecting accounts of those who have inflicted more than a billion dollars worth of ecological damage on the planet. These are tales of human hubris, stupidity, greed, and disappointment. They are stories of organizational collapse, betrayal, and ineptitude. But, above all, they are accounts of achievement; these folks made a difference, even if we measure it in astonishing regrets.

In the small corner of human introduced nonindigenous species, to mention but one example, is a readily available short list of charter members of the billion-dollar club:

- In 1890, Eugene Schieffelin, a Shakespeare enthusiast, introduced the STARLING to Central Park;
- In 1868, Leopold Trouvelot, an amateur astronomer, introduced the GYPSY MOTH;
- In 1826, the crew of the Wellington brought MOSQUITOS to Hawai‘i; and
- In 1604, Samuel de Champlain introduced the PIGEON.

2. Id. at 135–47. A member of the American Acclimatization Society, aimed at introducing "interesting" foreign varieties of animals, Schieffelin released 80 starlings into Central Park. Id. at 137–38. The birds now number two hundred million, decimating fruit crops and thriving in cities and garbage dumps. Id. at 142.
3. Id. at 77. While trying to breed a better silkworm, Trouvelot mistakenly released gypsy moth eggs to Medford, Mass. Id. The gypsy moths quickly became an epidemic still present in recent years—in "1981 they defoliated twelve million acres." Id. at 88.
4. Id. at 49. When the merchant ship Wellington sailed from Mexico and docked in Lahaina, Hawaii, the crew "emptied the dregs of the ship's water barrels into Maui's streams," dumping mosquito larvae. Id.
5. Id. at 11–13. As part of his mission to colonize North America for France, Champlain established a colony in Port Royal. A resupply ship brought not only typical life saving supplies, but pigeons, then a sign of nobility. Id.
These seemingly harmless introductions irreparably changed local ecosystems. No great research is needed to extend this particular dishonor role to the billion-dollar men of other types of environmental damage:

- Dr. Hullie Griffen, a moving force in the introduction of Melaleuca to the Everglades ecosystem;\(^6\)
- Captain Joseph Hazelwood, *Exxon Valdez* oil spill in Alaska;\(^7\)
- Robert Ward, president of company that disposed of PCB’s along North Carolina roadways;\(^8\)
- Mohamed Atta, hijacker, September 11, 2001 World Trade Center terrorist attack;\(^9\)
- British colonial officials, introduction of the Nile perch to Lake Victoria.\(^10\)

Many “do-badders” are also “do-gooders.” Peculiar distinction is earned by those whose efforts have left the world a billion dollars in costs and another billion dollars in benefits. Paul Müller of Switzerland, who discovered the first synthetic contact insecticide DDT, is undoubtedly in this category—simultaneously a winner of the Nobel Prize for Medicine and creator of a dreadful worldwide pollutant.\(^11\) The creation story of chlorofluorocarbons is another deep excursion into the good and the bad.\(^12\)

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\(^6\) See Thomas E. Lodge, *The Everglades Handbook: Understanding the Ecosystem* 170 (1994) ("Some ecologists consider melaleuca to be the single most serious threat to the future integrity of the Everglades ecosystem.").


\(^8\) United States v. Ward, 618 F. Supp. 884, 890–91 (D. N.C. 1985). In 1978, the Ward Transformer Company (WTC) knowingly disposed of transformer insulating fluid, containing PCB’s, by dumping the fluid onto a military reservation and along various roadways in North Carolina. *Id.* at 891. The United States brought suit against WTC and succeeded in recovering federal funds spent in cleaning up the hazardous waste. *Id.* at 914.


\(^10\) See Tjus Goldschmidt, *Darwin’s Dreampond: Drama in Lake Victoria* 194–96 (Sherry Marx-Macdonald trans., MIT Press 1996) (1994) (discussing the introduction in the 1950’s and 1960’s of the nonindigenous Nile perch to East Africa’s Lake Victoria despite opposition and warnings by ecologists and conservationists). By the mid 1980’s, the predatory Nile perch had devastated the Lake’s ecosystem by consuming vast quantities of indigenous fish until there were virtually none of some species left. *Id.* at 223–31.

\(^11\) Compare *Scientific American Science Desk Reference* 667 (1999) (listing Müller as a 1948 winner of a Nobel Prize for Physiology or Medicine for discovering DDT), with William H.
This stream of speculation about significant consequence is not limited to the realm of scoundrels. Here is a short list of those who might lay legitimate claim to helping the environment by an arbitrary measure of one billion dollars:

- Rachel Carson, author of *Silent Spring*, the groundbreaking book on the dangers of pesticides;¹³
- Marjory Stoneman Douglas, author of *River of Grass*, which brought public attention to the need to protect the Everglades;¹⁴
- Senator Edmund S. Muskie, a major political force behind the passage of the Clean Water Act;¹⁵
- George Mitchell, a strong political force behind the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);¹⁶
- Judge George Boldt, historical rulings for Indian treaty fishing rights;¹⁷
- Judge William Dwyer, protected the spotted owl;¹⁸
- Hiram Hill, used the Endangered Species Act to protect the snail darter;¹⁹

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¹⁴ See F. Sherwood Rowland, *Chlorofluorocarbons and the Depletion of Stratospheric Ozone*, 77 AMERICAN SCIENTIST 36 (1989). "The very lack of chemical reactivity which makes chlorofluorocarbon molecules commercially useful also allows them to survive unchanged in most applications and eventually emerge in gaseous form into the earth's atmosphere, where they persist for many decades." Id. at 36.


²⁰ See Victor M. Sher, *Travels with Strix: The Spotted Owl's Journey Through the Federal Courts*, 14 PUB. LAND L. REV. 41 (1993) (describing Judge Dwyer's important role in the spotted owl cases). After finding that the U.S. Fish and Wildlife Service and the Forest Service violated environmental laws, Judge Dwyer enjoined timber sales until a spotted owl habitat conservation was in place. *Id.* at 66–68, 75.

²¹ Tenn. Valley Auth. v. Hill, 437 U.S. 153 (1978). Hiram Hill and other environmentalists sued Tennessee Valley Authority, seeking to enjoin the completion of a dam and impoundment of the reservoir on the grounds that those actions would cause extinction of the snail darter and thereby violate
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- Attorney Jan Schlichtmann, inspiration for *A Civil Action*;\(^\text{20}\)
- Attorney Brian O’Neill, secured a $5 billion punitive damages award after the *Exxon Valdez* oil spill);\(^\text{21}\) and
- Nameless Young Attorneys, obtained injunctions against West Virginia mountaintop strip mining.\(^\text{22}\)

II. VIRTUES OF SIGNIFICANT ACHIEVEMENT

Each of the stories above, and many others not mentioned, offer examples of heroic action or breathtaking accounts of perfidy. They share in common a stunning consequence, the leaving of a mark, a book, a law, a case, a tactic, or a deed that is much admired or greatly abhorred. These endeavors counted, and people took notice. The billion-dollar club is filled with celebrities, their work the stuff of saga.

What are the virtues necessary to do great things in environmental law or in other endeavors? One is the proper mindset; the belief that it can be done, the spark of insight often described as genius. Genius requires a certain fierceness of intellect, a confidence in one’s own convictions, and a willingness to stray from the beaten path. Genius is described elegantly as “the fire that lights itself.”\(^\text{23}\)

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\(^{20}\) Jan Schlichtmann, a Boston lawyer, sued two of the largest U.S. corporations, W.R. Grace and Beatrice Foods, on behalf of several families living in Woburn, Massachusetts who claimed the companies contaminated their drinking water with toxic chemicals. See JONATHON HARR, *A CIVIL ACTION* (1995).


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the Endangered Species Act. *Id.* at 164–65. The Supreme Court upheld the injunction, reasoning that even though Congress apportioned significant funds to the project after the Act’s passage, the plain language of the statute and the dam’s operation made for an “irreconcilable conflict.” *Id.* at 193–95.


A key technique is essential to the burning conviction of genius—the hidden way to pull it off. This unlocking of obstacles can be called high-leveraging, summed up nicely by the term "much from little."  

Symbolism is usually added to these breakthroughs of thought and technique. A good show, a nice display, or a moving reminder wins eager recruitment to the cause. Unheralded achievement is quickly surpassed by heralded achievement. The memorable moments of environmental law are filled with symbolism—from the "crack" in the Glen Canyon Dam, 25 to the tools of the Monkey Wrench gang, 26 to protestors placing their bodies in harm’s way.

Big deeds require panache—a touch of spirit and resolve—to pull off. Optimism, even unwarranted optimism, is helpful in making the improbable happen. I consider optimism to be the positive side of self-deception—a belittling of obstacles in one’s mind to make highly implausible activities manageable. Incurable optimists are not good risk-assessors but they are superb comrades in combat.

Optimism must be supported by courage—the willingness to accept the consequences of failed action. As William Miller explains, "[c]ourage is a virtue that depends on scarcity, danger, death, and pain." 29 As developed further in Miller’s superb book, The Mystery of Courage, "[t]here is the courage of congenital optimism, and then there is that which comes from the rum ration, the boast, the vow, the exhortation speech, or even, at times, from the application of reason."

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24. For discussions on leveraging see Rodgers, The Whos, supra note 21, at 18–20, (citing JOHN H. HOLLAND, EMERGENCE: FROM CHAOS TO ORDER 2 (1998)).

25. "In 1980, a radical new environmental group calling itself Earth First burst into the pages of the news media by unfurling a 300 foot long sheet of black plastic down the side of the Glen Canyon Dam during a news conference. From a distance, the plastic strip looked like a huge crack in the side of the dam. This act was the first in a series of actions taken by Earth First designed to protect the environment from further degradation at the hands of developmental and government interests." Garn LeBaron, Jr., When Tragic and Comic Conflict: Burkean Frames and the Environmental Movement, 1995, available at http://www.lebaronet.net.burke.htm.


30. Id. at 172. Miller gives an example of calculated courage that is worth repeating:
I went on patrol fairly often, finding that the only thing respected in young officers was personal courage. Besides, I had cannily worked it out like this. My best way of lasting through to the end of the War would be to get wounded. The best time to get wounded would be at night and in the open, with rifle-fire more or less unaimed and my whole body exposed. Best, also, to get wounded when there was no rush on the dressing-station services, and while the back areas were not
To sum up, the virtues necessary for a billion-dollar impact are:

- Genius ("Thinking outside the Box");
- High-Leveraging ("Much from Little");
- Use of Symbolism ( AIDS in recruitment);
- Optimism (related to "Self-Deception"); and
- Courage ("there must be danger and hardship to overcome, real danger and hardship, publicly discernible, properly appreciated").

III. INDIAN TRIBES AND THE VIRTUES OF SIGNIFICANT ACHIEVEMENT

The Indian tribes' contributions to environmental law conspicuously display the virtues of achievement developed here. Different patterns of thinking in Indian country have marked significant environmental progress under nineteenth-century treaty rights to take fish. Thinking outside the box. Fortunate strokes of genius. Similar inspiration has marked tribal campaigns to save sacred places under the free exercise of religion clause of the First Amendment, although there is no progress yet. But this imaginative campaign has put great—and deserving—stress on the Supreme Court's reputation for knowing something about freedom of religion.

Attorneys fortunate enough to work with tribal clients are constantly inspired and bemused by the sheer originalities coming from Indian country. Among countless examples, consider the views of Crazy Horse on the current rage of consensus decision making: "For almost the whole of his life he did avoid all parleys, councils, treaty sessions, and any meeting of an administrative or political nature, not merely with whites but with his own people as well"; and Southern Ute Chief John Miller's views on economic development:

...
We are contented as we are. We do not want roads built on the reservation. We have always got along without them and if they are built now the white men will come in and take our reservation. We do not want you to work on our springs. If you do the water will stop running.  

Traditionally, low budgets, high conflict, and steel nerves have meant that legal progress in Indian country is marked by creative avenues and confrontational entries. Consider the following examples of Indians and high-leveraging:

- Joe DeLaCruz (Quinault) (Chow Chow Bridge),  
- Hank Adams (Rosebud Sioux) (takeover of BIA building);  
- Billy Frank (Nisqually) (fishing under the gun);  
- Levi Van Pelt (Umatilla) (shot at Celilo);  
- David Sohappy (Yakama) (selling fish);  
- Charlotte Black Elk, (Lakota) (defense of the Black Hills);  

36. See Land of the Quinault 205-07 (Pauline K. Capoeman ed. 1990). In 1971, under the leadership of Joe DeLaCruz, tribal president and business manager, and following a General Council vote for action, the Quinault tribe barricaded the road to Chow Chow Bridge in protest of the logging companies' environmental practices that damaged streams and fisheries, and their employment practices of hiring very few Indians. *Id.* The Quinault actions were also in protest of the Bureau of Indian Affairs' (BIA) administration of the logging contracts, which resulted in inequitable prices paid to Indians for their resources and inadequate forest management techniques for replanting. *Id.* This protest was an important event in curtailing rapacious logging on the Quinault Reservation in the rainforests of western Washington. See *id.* at 224-38.
38. Charles Wilkinson, Messages from Frank's Landing: A Story of Salmon, Treaties, and the Indian Way (2000). Billy Frank Jr. was first arrested for fishing salmon at the age of fourteen and accumulated fifty arrests over the years. He also became an entrusted statesman for his people. *Id.* at 4.
39. Levi Van Pelt was a Umatilla Indian shot in a fishing dispute at Downes Channel at Celilo Falls on the morning of Sept. 15, 1931. This incident gave rise to litigation known as United States v. Brookfield Fisheries, 24 F. Supp. 712, 713–16 (D. Or. 1938) (holding that under U.S. treaties certain Indian tribes have rights in common with others to fish on lands held by Brookfield Fisheries and noting that "for fifty years Indians were excluded by force and violence from this corner of the land").
40. On the "Sohappy cases," see Robert Clark, River of the West: Stories from the Columbia ch. 6 (1995).
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- Robert Jim (Yakama) (return of Mt. Adams);\(^{42}\)
- Barry Dana (Penobscot) (Freedom of Information Act).\(^{43}\)

Tribal campaigns of the sort just mentioned show the strong symbolism and buoyant optimism that one expects to see in these arenas of conflict, change, and achievement. But it is in the arena of courage that tribal efforts to achieve environmental change are particularly noteworthy.

I have used William Miller’s recent book\(^{44}\) to develop a list of the attributes of courage especially applicable to the Indian tribes. Miller speaks of the respect that is won by survivors against great odds. Of World War I: “See that fellow? That’s Jock Miller. Out from the start and hasn’t got it yet.”\(^{45}\) Likewise, the tribes are survivors all—sturdy and admirable. They have something to tell us.

“[J]ustice tends to generate good stories, only when it is operating in the corrective mode, that is, when it makes demands on courage to undertake the risky business of revenge, of paying back what is owed, of punishing wrong, of reasserting one’s honor and dignity.”\(^{46}\) The Indian tribes are one of the great corrective justice stories of United States law. Much of what they have to say about the environment is convincing because their justice arguments are “operating in the corrective mode”—restoring losses that should not have happened.

“Style matters a lot, especially when courage becomes more a matter of defense than offense, more about taking it than about dishing it out. Patience and endurance are nine-tenths a matter of style; it is, after all, mostly about suffering in silence.”\(^{47}\) In their environmental conflicts,

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41. See EDWARD LAZARUS, BLACK HILLS/WHITE JUSTICE: THE SIOUX NATION VERSUS THE UNITED STATES, 1775 TO THE PRESENT 402-07 (1991) (discussing the Sioux tribal government’s rejection of a $106 million Supreme Court judgment for “sale” of the Black Hills tribal land in favor of pursuing the return of the land to the tribe and more money in damages); see also MEANS & WOLF, supra note 37, at 421 (“We never wanted money! We wanted our land. We wanted the U.S. government to keep its promise.”).


43. See Great Northern Paper, Inc. v. Penobscot Nation, 770 A.2d 574 (Me. 2001), cert. denied, 122 S. Ct. 543 (2001). Polluting paper companies used state disclosure laws to raid the private files of the Penobscot Nation and the Passamoquoddy Tribe. Id. at 578. The “threat” that these companies foresaw was reinvigorated enforcement of the water pollution laws led by the tribes. Id. at 577-78. The tribes, claiming that the act did not apply to them, refused to disclose the information to the companies. Id. The dispute is ongoing.

44. See MILLER, supra note 29.

45. Id. at 18 (quoting GRAVES, supra note 30, at 98 and referring to his writings on the reputations of “only survivors” of World War I trench warfare).

46. Id. at 8.

47. Id. at 199.
Indians impress with their style, dignity, eloquence, and determination. They are masters of decorum and believers in ceremony. When it comes to "style," I always remember the preparations of Iron Hawk, Hunkpapa, as Custer's troops descended on the waters the Indians knew as Greasy Grass.48

I went into our tepee and got dressed for war as fast as I could; but I could hear bullets whizzing outside, and I was so shaky that it took me a long time to braid an eagle feather into my hair. Also, I had to hold my pony's rope all the time, and he kept jerking me and trying to get away. While I was doing this, crowds of warriors on horses were roaring by, upstream, yelling: "Hoka hey!" Then I rubbed red paint all over my face and took my bow and arrows and got on my horse.49

Miller says that many of us "cannot deny the awe and rightful respect we have for certain kinds of reckless action."50 He reminds us that Samuel Johnson insists that "rashness 'is never mentioned without some kind of veneration.'"51 Why? Because he who has "passed the middle point of virtue, is always accounted a fairer object of hope, than he who fails by falling short."52 Sitting Bull offered his own commentary on rashness by dismounting and taking a smoke not quite out of range of Crook's troops at the Battle of the Rosebud.53 He was so rash and defiant, so much like the Billy Franks, the Hank Adams', and the Levi Van Pelts who put themselves conspicuously in the way of harm to tell their justice stories.

Miller also reminds us that conspicuous courage has elements of grandeur—doing it your way under your terms in full confidence that you have it right when others do not. Miller speaks of Alexander the Great: "'Were I Alexander,' said Parmenio, 'I would accept these offers made by Darius.' 'So would I, too,' replied Alexander, 'were I Parmenio.'"54 This

49. Id. at 120–21.
50. MILLER, supra note 29, at 160.
51. Id. at 160 (quoting SAMUEL JOHNSON, THE RAMBLER no. 25 (W.J. Bate & Albrecht B. Strauss eds., 3 Yale Edition of the Works of Samuel Johnson 136 (1969) (1750))
52. Id.
53. See EDITORS OF TIME-LIFE BOOKS, THE AMERICAN STORY: DEFIANT CHIEFS 105 (undated). Sitting Bull sat on the ground amid the puffs of dust raised by enemy bullets. "After smoking the last of the tobacco, Sitting Bull carefully cleaned his pipe, returned it to its pouch, and walked at a deliberate pace back to safety while his companions scurried ahead." Id.
54. MILLER, supra note 29, at 136 (quoting DAVID HUME, AN ENQUIRY CONCERNING THE PRINCIPLES OF MORALS 88 (1966) and noting that Hume takes the example from Longinus' treatise ON THE SUBLIME).
displays an admirable touch of conspicuous arrogance. Lawyers working in Indian country will attest that greatness of character seems never in short supply.

According to Miller, courage can only come to the fore in the face of fear or danger, with serious losses on the line: "The core is about the fear of violent death, pain, and mutilation, the fear of being killed and at times, too, the fear of having to kill." He adds, "[t]here must be danger and hardship to overcome, real danger and hardship, publicly discernible, properly appreciated." This limiting factor, having something to lose, is absent from much environmental litigation today, where a trip to the court of appeals can be like a walk in the park and where wins and losses are measured in fine margins of ideology. However, risk is conspicuously present in Indian litigation where treaties, reservations, and fundamental police powers are routinely challenged by the small and the mean.

These virtues of significant achievement (genius, high-leveraging, symbolism, optimism, and courage) have enabled the Indian tribes of North America to make special and enduring contributions to the protection of the planet. They have done this with the aid of their key geographies, resolute spirit, unique laws (including the trust doctrine), and special sovereignty. The question still remains whether these virtues are available equally to destroyers as well as to protectors.

IV. THE "GRAY" VIRTUES AND THE WORK OF THE TERRORISTS

"Courage is all too martial and masculine, too low-class for some present tastes. It is also rather promiscuous in that we are obliged to grant it to nefarious actors as well as to noble ones, to scourges of humanity as well as to benefactors, to enemies as often as to friends." Therein lies the challenge of the "gray" virtues—courage itself tarnished by its association with evil deeds. Genius, high-leveraging, symbolism, and optimism can fall as well.

Must we concede that these virtues of effective action are mere tools available to the bandits as well as the blessed? Must we admit that the human traits we so admire in effective environmental activists are open for

55. Id. at 12.
56. Id. at 282.
57. See, e.g., DAN MCGOVERN, THE CAMPO INDIAN LANDFILL WAR: THE FIGHT FOR GOLD IN CALIFORNIA'S GARBAGE (1995) (examining the Campo tribe's efforts to site a commercial solid waste landfill on tribal lands and the opposition by the environmental justice movement).
59. MILLER, supra note 29, at 4–5.
appropriation by the wrong-doer? It certainly appears so, however reluctantly we make the concession. Remember, these “virtues” were derived from a cacophony of “billion-dollar” deeds, both foul and fair.

The September 11 terrorists certainly presumed to appropriate the virtues of which we speak. Wanton destruction was the aim; evil genius in the design; and breathtaking leverage in the execution. Bin Laden reminded us that this damage was inflicted not by nineteen nations of the world, but by nineteen high-school graduates. The deed was born in symbolism—the World Trade Center, the Pentagon, and the White House.

These terrorists praised their own optimism. The ringleader, Mohamed Atta, told them: “You have to be convinced that those few hours that are left to you in your life are very few. From there you will begin to live the happy life, the infinite paradise. Be optimistic. The prophet was always optimistic.”

They celebrated their own courage while the rest of us asked whether bravery falters under the delusion of life after death or whether cowardice is the better word for stealthy attacks on unsuspecting innocents. Timothy McVeigh made a quick getaway from Oklahoma City but had a distinct memory of his own courage, associating himself with William Ernest Henley’s poem, Invictus: “I thank whatever gods may be for my unconquerable soul.”

The casual way in which these virtues change sides is best illustrated by the very definitions of “terrorism.” “Bio-terrorism,” it seems, defined post-September 11, 2001, is wanton destruction wrought by biological means—the insidious spread of anthrax through the mail being the prime example. Must this mean, then, that “eco-terrorism” is wanton destruction by ecological means—the insidious spread of toxins, contamination of wildlife, the dewatering of wetlands? No. “Eco-terrorism” was defined before September 11, 2001. It means destruction of property “if committed for the primary purpose of protesting the practices of a person or business.


62. Id. (“You will be entering paradise. You will be entering the happiest life, everlasting life.”).


64. For a discussion of the different definitions of “terrorism,” see NOAM CHOMSKY, 9-11 (2001). “Terrorism is the use of coercive means aimed at civilian populations in an effort to achieve political, religious, or other aims.” Id. at 57.
with respect to an environmental or natural resource issue.\textsuperscript{65} Thus, bio-terrorism is terrorism; eco-terrorism is protest.

I do not wish to surrender my five virtues completely to the charge that they are but "gray" modes of opportunism. I have invested a lifetime admiring true genius, bold leveraging, moving symbolism, infectious optimism, and unflinching courage. For the moment, I will try to save the virtues by supplementing the list.

\textbf{V. THE SIXTH VIRTUE OF NONDESTRUCTIVE CHANGE: COMMITMENT TO WHAT CAME BEFORE}

Do we have a way to distinguish the terrorists of September 11 from the environmental activists and the Indian tribes who refined the tactics of the underdog? I think we do. I turn to the words in my title, "Growth and Form," to explain this distinction. The title is derived from the great book first published in 1917 by the zoologist D'Arcy Thompson, who wrote on the designs and structures of living things.\textsuperscript{66} Thompson showed that prior patterns of life and the laws of physics worked as a constraint upon future prospects. Elephants will never fly, Thompson made clear, because they have invested too greatly and gloriously in the never-turn-back prospects of the large terrestrial land animal.

Thompson's great insight into past constraints on future life is popularized in the writings of Stephen Jay Gould. Gould delightfully illustrates this insight in his account of the strange design of the panda's thumb:

An engineer's best solution is debarred by history. The panda's true thumb is committed to another role, too specialized for a different function to become an opposable, manipulating digit. So the panda must use parts on hand and settle for an enlarged wrist bone and a somewhat clumsy, but quite workable, solution. The sesamoid thumb wins no prize in an engineer's derby. It is, to use Michael Ghiselin's phrase, a contraption, not a lovely contrivance. But it does its job and excites our imagination all the more because it builds on such improbable foundations.\textsuperscript{67}

\textsuperscript{65} This definition is taken from S. 293, 120th Leg., 1st Reg. Sess. (Me. 2001) (not enacted into law but representative of similar definitions).

\textsuperscript{66} D'ARCY WENTWORTH THOMPSON, ON GROWTH AND FORM (abridged ed. John Tyler Bonner, 1961).

\textsuperscript{67} STEPHEN JAY GOULD, THE PANDA'S THUMB: MORE REFLECTIONS IN NATURAL HISTORY 24 (1980).
Rudolph A. Raff found another convincing way to explain this phenomenon of developmental constraint:

When you're young, all evolution lies before you, every road is open to you, and at the same time you can enjoy the fact of being there on the rock, flat mollusk-pulp, damp and happy. If you compare yourself with the limitations that come afterwards, if you think of how having one form excludes other forms, of the monotonous routine where you finally feel trapped, well, I don't mind saying life was beautiful in those days.68

Thompson removed infinite plasticity from the story of life. The breaking of the DNA code in our lifetime has not restored it. All future life rests upon the preexisting rules of prior life.

Thompson's ideas on constraints are readily applied to social conditions, not just as a metaphor, but as an inherent conservative limitation. Economists speak of sunk costs, while lawyers talk of roads not taken. Mark J. Roe gives the name "path dependence" to decisions in the past that may commit a system to a certain direction, perhaps irreversibly:

[T]oday's road, dependent on the path taken by the trader decades ago, is not the one that the authorities would lay down if they were choosing their road today. But society, having invested in the past itself and in the resources alongside the path, is better off keeping the winding road on its current path than paying to build another.69

D'Arcy Thompson's insights into the constraints upon life show the way to distinguishing the wreckers from the rebuilders, the terrorists from the eco-terrorists. The environmental struggles in Indian country are informed by a strong vision of what used to be. David Getches calls this a "philosophy of permanence" based on an ethical relationship with land that "was fully developed at the time of white contact."70 Getches adds, "[the


70. David H. Getches, A Philosophy of Permanence: The Indians' Legacy for the West, 29 J. WEST, 54, 64 (1990); see also Rebecca Tsosie, Tribal Environmental Policy in an Era of Self-Determination: The Role of Ethics, Economics, and Traditional Ecological Knowledge, 21 VT. L. REV. 225 (1996) (discussing ways in which American Indian Nations try to preserve their lands while also recognizing economic opportunities).
Indians] survived to that point compatibly with the resources around them by living as if they were there to stay. They have since resisted attempts to change them and to part them from their land against apparently insuperable odds by holding fast to the same philosophical anchor.”

This “philosophy of permanence” enables us to derive the sixth virtue of nondestructive change—commitment to what came before. This virtue is frequently manifested by the following:

- Deeply Rooted Laws (Treaties);
- Sacred Places (Path Dependence);
- Patriotism;
- Defection not an Option;
- Make-Do Contrivance;
- Courage of Congenital Optimism; and
- Acceptance of the Rule of Law.

Terrorists could blow up the Dalles Dam and obliterate Celilo Falls hidden beneath the reservoir behind the dam. Indians could never do this, although they despise the dam. They want a campaign of restoration not one of ruin. They are comfortably caught in D'Arcy Thompson's constraints of prior life; they are revolutionaries locked into lessons of an earlier life on earth. Simultaneously, they enjoy the dual role of catalyst for change and protector of orthodoxy.

Many wish to disassemble the structures we have come to know as environmental law, but they are durable. They are held secure by people who adhere to the sixth virtue of nondestructive change—commitment to what came before.

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71. Getches. supra note 70, at 64.
72. See Roe, supra note 69 and accompanying text.
73. For background on the Dalles Dam that flooded Celilo Falls, the last major Indian fishing site in the Columbia Gorge, see CHUCK WILLIAMS, BRIDGE OF GODS, MOUNTAINS OF FIRE: A RETURN TO THE COLUMBIA GORGE 152-59 (1980).