TO THE LIGHTHOUSE

Donald M. Kreis*

"So it was like that, James thought, the Lighthouse one had seen across the bay all these years; it was a stark tower on a bare rock. It satisfied him. It confirmed some obscure feeling of his about his own character."[1]

Virginia Woolf presumably did not set out to write a paean to infrastructure when she began work on the provocative and haunting novel she published in 1927, about the Ramsay family and certain events at the family's summer home on the Isle of Skye in Scotland. And yet the book, considered a landmark of twentieth century literature, coalesces around the family's thwarted sailing trip, followed by a successful trip a decade later, to a man-made nautical landmark.[2]

To the Lighthouse is about many things, described by Woolf in a poetic, stream-of-consciousness manner that is not unduly tethered to the once-prevailing conventions of plot and storytelling.[3] And so, Woolf required a unifying, eponymous image. Thus her novel, so steeped in concern for the inner life of her characters, the sometimes self-defeating facets of their relationships to one another, and their shared connection to the natural landscape in which they summered, became a tribute to a big piece of industrial equipment.[4]

We, of course, are no more inclined than Woolf was to think of lighthouses as looming mechanical interventions in the landscape of the seashore. Still, they were built not for their postcard allure, but as aids to

* Assistant Professor of Law and Associate Director, Institute for Energy and the Environment, Vermont Law School. The author dedicates this essay to the memory of his grandmother, Deborah Rafish Kreis (1900–1997), who inspired in him an enduring regard for the built world.

1. VIRGINIA WOOLF, TO THE LIGHTHOUSE 206 (Mark Hussey ed., Harcourt, Inc. 2005) (1927).

2. *Id.*

3. Christie Lamon-Burney & Srirupa Dhar, *Stream of Consciousness in* To the Lighthouse, *in* University of Alabama in Huntsville: Virginia Woolf Seminar, June 6, 2002, http://www.uah.edu/woolf/stream.html.

4. *The Lighthouse*, University of Alabama in Huntsville: Virginia Woolf Seminar, Aug. 14, 1997, http://www.uah.edu/woolf/lighthouseoutlinelite.html.

navigation.[5] As such, lighthouses are as infrastructural as the Panama Canal (which helps prevent shipwrecks off Cape Horn)[6] and the GPS satellites that orbit the globe.

Our affection for lighthouses is not innate. The beacons and the structures that house them are neither anthropomorphic nor evocative of anything else from the natural world. That we appreciate and cherish them nonetheless, even to the point of preserving them in their now-vestigial form[7] in the face of forces that would restore the landscape to its natural state,[8] offers hope to those who wonder whether the U.S. will summon the requisite resources to make necessary improvements to the nation's benighted infrastructure. The trick will be in discovering how to inspire affection for newly built instruments of civilization to rival the esteem in which we hold artifacts of economies past: objects like lighthouses, barns, silos, water wheels, and railroad trestles.

Such a discovery is of practical importance as the need for economic stimulus, the crisis occasioned by decades of underinvestment in common machinery of civilization, and the imperative to confront climate change combine to place infrastructure improvements at or near the top of the national agenda.[9] But the discovery also has moral significance if the nation is to meet President Obama's biblically-inspired inaugural challenge to "set aside childish things."[10]

"[H]eightened claims of individual autonomy have eviscerated the concept of citizenship," historian Andrew J. Bacevich recently warned,

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5. *See* Maritime Heritage Program, Nat'l Park Serv., Lighthouses: An Administrative History, http://www.nps.gov/history/maritime/light/admin.htm (last visited Apr. 12, 2009) (discussing that lighthouses were historically built as a navigational tool).

6. Sarah Dowdey, How the Panama Canal Works, http://geography.howstuffworks.com/central-america/panama-canal.htm/printable (last visited Apr. 12, 2009).

7. *See* Press Release, Cal. Dep't of Parks and Recreation, Historic Lighthouse Transferred to California State Parks (May 25, 2005) (on file with author) (recognizing that 300 lighthouses have been transferred under the National Historic Lighthouse Preservation Act due to the fact that GPS technology has rendered them obsolete).

8. *See, e.g., Hatteras Lighthouse Completes its Move,* N.Y. TIMES, July 10, 1999, at A11 (describing the ten million dollar relocation of a historic lighthouse in New Jersey, which, when only 150 feet from the surf, was considered too vulnerable to hurricane-induced destruction).

9. *See, e.g.*, John C. Dernbach, *Toward A National Sustainable Development Strategy*, 10 BUFF. ENVTL. L.J. 69, 98 (2008) (discussing that climate change should be incorporated into the national agenda); *see also* Michael Cooper, *U.S. Infrastructure Is in Dire Straits,* N.Y. TIMES, Jan. 28, 2009, at A16 (reporting that $2.2 trillion is needed to bring the country into a state of good repair); Robert E. Rubin and Jared Bernstein, *No More Economic False Choices,* N.Y. TIMES, Nov. 3, 2008, at A31 (arguing that failure of public policy has led to an increase in federal debt, inadequate regulatory policy, and underinvestment in infrastructure).

10. President Barack Hussein Obama, Inaugural Address (Jan. 20, 2009) (transcript available at http://www.whitehouse.gov/blog/inaugural-address).

complaining that "[w]hether the issue at hand is oil, credit, or the availability of cheap consumer goods, we expect the world to accommodate the American way of life."[11] As a retired colonel, Bacevich's concern is that such self-indulgence drives a need to dominate the world in the military sense.[12] An alternative approach to coexisting with the rest of the world would surely involve Americans revising their conception of beauty and embracing the possibility that within their daily field of vision will be more of the gadgetry that actually provides life's comforts.

We can start by learning to see, and even to explore, what is already there. For example, consider the Tappan Zee Bridge, which has, carried the New York Thruway across the Hudson River just north of New York City since 1955.[13]

As the road network in the Northeast has evolved, this particular bridge has assumed an ever more crucial role.[14] Apart from its significance as a commuter artery, the Tappan Zee Bridge is the best option for long-distance travel between New England and points south and west because it allows vehicles to bypass congested New York City itself without deviating too drastically from the Interstate 95 corridor.[15] Although derided by its own designers as the ugliest bridge in the region, and one built to last only fifty years,[16] the Tappan Zee Bridge has remarkable attributes: its sheer length (slightly more than three miles, crossing the second widest portion of the river); the two undulating curves along its route; a remarkable climb from Nyack to the bridge's cantilever span near the Westchester shore—how many bridges include a hill?—and the astonishingly 1,212 foot width of the cantilever span itself—a watery-aisle four football fields wide—created to accommodate the shipping lane beneath the bridge.[17]

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11. ANDREW J. BACEVICH, THE LIMITS OF POWER: THE END OF AMERICAN EXCEPTIONALISM 9 (2008).

12. *Id.*

13. Tappan Zee Bridge/I-287 Environmental Review: FAQs, http://www.tzbsite.com/tzb-library/faq.html#6 (last visited Apr. 12, 2009).

14. According to the New York State Department of Transportation, the Tappan Zee Bridge carried an average of 18,000 vehicles a day when the bridge opened in 1955, a figure that has grown by an order of magnitude to 140,000 vehicles daily. The data comes from the agency's web site, dedicated to the environmental review process associated with the proposed replacement of the bridge. *Id.*

15. *See* Alexander Soule, *From Point A to Point B, Q to Zee*, FAIRFIELD COUNTY BUS. J., July 21, 2008 (noting that the Tappan Zee Bridge allows I-95 traffic to move north of New York City via I-287).

16. Patrick McGeehan, *A Bridge That Has Nowhere Left to Go*, N.Y. TIMES, Jan. 17, 2006, at B1.

17. Tappan Zee Bridge: Historic Overview, http://www.nycroads.com/crossings/tappan-zee (last visited Apr. 12, 2009).

Other Hudson River suspension bridges sport much wider spans,[18] but these are flashier affairs than the Tappan Zee Bridge and the rigid trusswork that comprises its cantilever span.[19] Those 1,212 feet between supporting piers of the Tappan Zee Bridge[20] are remarkable precisely because it is so natural to cross them without noticing. In truth, one's jaw only drops if travelling beneath the bridge on a boat of some kind. From that vantage point, carrying all that traffic across 1,212 feet of air, 138 feet above the river, seems downright miraculous.[21]

The world, near and far, is rich with such industrial and engineering achievements merely waiting to be savored. For example, just a few miles from the campus of Vermont Law School is the Ledyard Bridge, connecting Norwich, Vermont and Hanover, New Hampshire; it was completed in 2000 as an off-the-shelf highway bridge but it is decorated with eight outsized concrete orbs which, in combination with their pedestals, resemble giant Newell posts.[22]

On the Chicago River are two circular apartment towers of sixty-five stories, built in the early 1960s to resemble corn cobs.[23] What makes this project remarkable as infrastructure is the first nineteen stories of each tower is taken up by a parking facility that winds its way upward as a continuous, open-air ramp that creates, in effect, a public display of urban automobile preferences.[24]

Along the East River Drive, near 90th Street in Manhattan, is a concrete structure that appears to be a scaled-down and filled-in version of the

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18. *See* Diane Mobley, *Federal Highway Administration Materials*, 1 A.L.I. 159, 161, 195 (2007) (listing length of bridge spans in the State of New York).

19. Tappan Zee Bridge, *supra* note 13.

20. *Id.*

21. The miracle, such as it is, has been exceeded elsewhere. According to the National Steel Bridge Alliance, the Tappan Zee is only the world's eleventh longest cantilever span in the world, the longest (1,800 feet) spanning the St. Lawrence River at Quebec City, Quebec. NATIONAL BRIDGE STEEL ALLIANCE, WORLD'S LONGEST BRIDGE SPANS 24 (1999), http://www.aisc.org/WorkArea/showcontent.aspx?id=18600 (last visited Apr. 12, 2009). However, the central span of the Tappan Zee is thirty feet longer than that of the Queensborough Bridge in New York City, a somewhat more romantic example of this bridge type by virtue of having been commemorated by Simon and Garfunkel's *The 59th Street Bridge Song (Feelin' Groovy)*. SIMON & GARFUNKEL, *The 59th Street Bridge Song (Feelin' Groovy)*, *on* PARSLEY, SAGE, ROSEMARY AND THYME (Columbia Records 1966).

22. *See* Donald M. Kreis, *Paradise Lost: The New Ledyard Bridge*, www.dmkdmk.com/articles/ledyard.html (last visited Apr. 12, 2009) (crediting the "bridge ball" design to architect Christopher Carley).

23. SIMON HENLEY, THE ARCHITECTURE OF PARKING 224–27 (2007) (crediting the design of Chicago's Marina City towers to architect Bertrand Goldberg).

24. *Id.*

Gateway Arch in Saint Louis.[25] This graceful structure was built in the 1940s as the city's asphalt plant.[26]

About twenty miles northwest of Knoxville, Tennessee is the Norris Dam of the Tennessee Valley Authority.[27] According to architecture professor Christine Macy, "[t]he experience of the dam was designed to thrill, and this sensation was magnified with careful attention to the nighttime lighting of the complex . . . ."[28]

Atop Kitt Peak in Arizona is the McMath-Pierce solar telescope, the largest instrument of its kind in the world.[29] Much of the installation is below ground; the visible portion resembles a stark white elbow that seems to point suggestively to the heavens and reaches back into the earth.[30]

Or, if you prefer a more distant example, consider the six-story Auf dem Wolf railway signal tower No. 4 in Basel, Switzerland.[31] It is a giant rectangle entirely wrapped in eight-inch copper strips, variously bent inward and outward in organized patterns that suggest organic growth rather than bland utilitarianism.[32]

None of these landmarks enjoy the celebrity of a Golden Gate Bridge, the Hoover Dam, the Great Wall of China, or the sewers of Paris. They are but a few examples of relatively obscure infrastructural achievements, designed nonetheless by people who understood the connection between the physical power and the visual power of what they were creating. Exploring and savoring such hidden wonders is at least as virtuous as paddling the Allagash or walking the Appalachian Trail. The late urbanist Jane Jacobs wrote a fine, little book in 2000 to argue that our economy and our ecology

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25. ROBERT A.M. STERN ET AL., NEW YORK 1960, at 853–55 (1995) (crediting the design of the Municipal Asphalt Plant to the architectural firm of Kahn & Jacobs).

26. *Id.*

27. THE TENNESSEE VALLEY AUTHORITY: DESIGN AND PERSUASION app. at 137 (Tim Culvahouse ed., 2007).

28. Christine Macy, *The Architect's Office of the Tennessee Valley Authority, in* THE TENNESSEE VALLEY AUTHORITY: DESIGN AND PERSUASION 26, 44 (Tim Culvahouse ed., 2007).

29. MYRON GOLDSMITH, BUILDINGS AND CONCEPTS 74–81 (Werner Blaser ed., Rizzoli Int'l Publ'ns, Inc. 1987).

30. *Id.*

31. HERZOG & DE MEURON: NATURAL HISTORY 93, 424 (Philip Urspring ed., Canadian Centre for Architecture and Lars Muller Publishers 2002) (crediting the design to Basel architects Jacques Herzog and Pierre de Meuron). Their partnership received much worldwide attention in 2008 by virtue of their "bird's nest" design for the Olympic Stadium in Beijing. Their recent museum buildings in the U.S.—the de Young in San Francisco and the addition to the Walker Art Center in Minneapolis—are each richly textured, nearly windowless buildings that convey something of the same intrigue embodied by their railway signal tower in Switzerland.

32. *Id.*

are really one system, subject to the same laws and limitations.[33] What better, and more inspiring, proof of this than a well-built bridge or dam?

We lawyers face a particular challenge as we discharge our duty to seek a renewed national commitment to infrastructure. With few exceptions, a lack of scientific and technical inclinations played a significant role in our career choices. A tour of duty at most any state utility regulatory agency will quickly confirm that, as a result, attorneys and engineers can have an especially difficult time communicating with each other on matters of mutual professional interest. What self-respecting energy lawyer would admit to being lost in a power-system substation or even a photograph or diagram thereof?

A fine antidote to this problem is *Infrastructure: A Field Guide to the Industrial Landscape* by Brian Hayes.[34] Touted by its science journalist author as a volume in the form of a "nature guide" but one that concerns "everything that *isn't* nature,"[35] Hayes proceeds from the laudable premise that industrial interventions are fascinating and often beautiful.[36] Here is an opportunity to develop sufficient visual literacy so as to be dangerous.

One discovers, for example, that substations exist mainly to take high-voltage electricity (useful in that form for ease of transmission over long distances) and transform it (via, appropriately enough, transformers) to lower, more customer-friendly voltages for distribution.[37] The characteristic latticework consists of scaffolding and "bus bars," sets of parallel conductors that carry current from one conductor to the next through rigid metal tubes, their complexity trebled because each circuit has three phases.[38]

A substation "functions like the fuse box in your basement,"[39] but, at high voltage, merely opening the breaker is insufficient to extinguish the current because "[e]lectricity will cheerfully jump across the gap, forming a white-hot arc, which then proceeds to melt the whole mess."[40] Substation switches, therefore, are formidable objects that tend to resemble giant spark plugs; they contain oil or sulfur hexafluoride—a gas designed to quench the arc when the circuit opens.[41] Others, even more intriguingly, are equipped

33. JANE JACOBS, THE NATURE OF ECONOMIES (2000).

34. *See generally* BRIAN HAYES, INFRASTRUCTURE: A FIELD GUIDE TO THE INDUSTRIAL LANDSCAPE (2005).

35. *Id.* at 1 (emphasis added).

36. *Id.*

37. *Id.* at 246–47.

38. *Id.* at 249.

39. *Id.* at 246.

40. *Id.* at 254.

41. *Id.* at 255–56.

with air blasters that extinguish electrical arcs much as a child blows out a birthday candle.[42]

Substations are somewhat exotic presences on the landscape, but they are key elements of the electricity grid that are ubiquitous. Some understanding of the purposes served by these elements, and how they work, is not merely a means to greater aesthetic appreciation of the world as humanity has decisively altered it. One can entertain the children on boring car journeys, yes, but one also engages in an act of self-empowerment.

Still, we should not be expected to embrace our infrastructure unless it and its designers meet us halfway. The examples referenced above—the Ledyard Bridge, Marina City in Chicago, the municipal asphalt plant in Manhattan, the solar telescope in Arizona, and the railroad signal tower in Basel—are all examples of projects created with laudable attentiveness to their visual impacts. All too often, our master builders have been stolid in their obliviousness to the effects their interventions have on the landscape.

At the extreme is Robert Moses, the so-called "master builder" of New York City and environs. Although responsible, *inter alia*, for a bucolic network of parkways[43]—Riverside Park in Manhattan (a covered-over railroad line),[44] and the 1964-1965 World's Fair[45]—this powerful government official is perhaps most famous for ramming a dismal sunken highway—the Cross Bronx Expressway—straight through the heart of the borough whose name it bears, decimating one of its most vibrant neighborhoods.[46] Convinced that succeeding generations would be grateful, he memorably pointed out that when building new infrastructure in an existing metropolis, as opposed to a wilderness, "you have to hack your way with a meat ax."[47]

Moses has had many kindred spirits—officials and designers so convinced of the necessity and virtue of their plans, so driven by the imperative to make public works projects acceptable to tax-averse polities and return-hungry investors, that nothing as prosaic as mere ugliness could stop them. Have we yet seen a nuclear power plant designed with an eye

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42. *Id.* at 257.

43. ROBERT A. CARO, THE POWER BROKER 8 (1974).

44. *Id.* at 65–67.

45. *Id.* at 1082–116.

46. *Id.* at 850–94. It is no coincidence that the Tappan Zee Bridge, whose designers bragged about their indifference to the aesthetic appeal of the work, arose during the same era as the Cross Bronx Expressway. As Robert Caro's biography of Moses meticulously documents, notions of engineering efficiency seemed during this era to trump any concern for effects that are experienced at the scale of individual people. *See generally id.*

47. *Id.* at 849.

toward inspiring rather than spooking people?[48] Did the abutments holding up Interstate 93 at the exit northbound travelers use to gain access to the Massachusetts state capital have to be lined with concrete panels that look like—and, in fact, were designed to look like—cheap imitations of stone work?

Regrettably, such indifference to the way in which people are affected by the engineered objects in their midst has not merely engendered obliviousness as everyday people look inward for signs of beauty. Public thinkers have responded by promoting hostility to the efforts of those who would demand a higher standard for our infrastructure.

For example, the late Daniel Patrick Moynihan laudably complained in 1969 of

> a steady deterioration in the quality of public buildings and spaces, and with it a decline in the symbols of public unity and common purpose with which the citizen can identify, of which he can be proud, and by which he can know what he shares with his fellow citizens.[49]

In a book published two years later, *After the Planners*, architect and urban planner Robert Goodman juxtaposed Moynihan's comments with a complaint by Adolph Hitler that "our cities of the present lack the symbol of national community which, we must therefore not be surprised to find, sees no symbol of itself in the cities."[50]

Goodman fancied himself a "guerrilla architect," as he embodied the counter-cultural zeitgeist of his era.[51] But if his juxtapositions were amusingly subtle, ultimately this contempt for the prevailing design imperatives of his day found their way into popular culture, delivered in

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48. The Soreq research facility of the Israel Atomic Energy Commission, built in 1960, is the proverbial exception that proves the rule. It was designed by a famous American architect, Philip Johnson (1906–2005) and won an honor award from the American Institute of Architects. A Philip Johnson Building Chronology, http://philipjohnsonglasshouse.org/gedownload!/PJ%20Building%20Chronology.pdf?item_id=1242011&version_id=1242012 (last visited Apr. 12, 2009). But the facility, near Rehovot, was built for research purposes. About Soreq, http://www.soreq.gov.il/asp/masterPage_EN.asp?f=about/about.asp&sb=2&m=null&smId=undefined (last visited Apr. 12, 2009).

49. ROBERT GOODMAN, AFTER THE PLANNERS 104 (1971) (quoting Press Release, Daniel P. Moynihan, Architecture in a Time of Trouble, to the American Inst. of Architects and the Royal Architecture Inst. of Canada (June 23, 1969)).

50. *Id.* at 105 (quoting ADOLF HITLER, MEIN KAMPF 266 (Ralph Manheim trans., Houghton Mifflin 1943)). To underscore the point, Goodman juxtaposed a photograph of a then-contemporary major government building, the Department of Housing and Urban Development designed by exiled German architect Marcel Breuer, with a similarly shaped building of the Third Reich. *Id.* at 106–07.

51. *Id.* at 187.

one memorable instance by a blunt instrument indeed: the pen of popular writer Tom Wolfe.[52] "Every child goes to school in a building that looks like a duplicating-machine replacement-parts wholesale distribution warehouse," Wolfe grumbled in his amusing 1981 book *From Bauhaus to Our House*, noting that children and other unassuming users of public facilities were not the only victims of the phenomenon he decried.[53] "[H]as there ever been another place on earth," he began his book by wondering, "where so many people of wealth and power have paid for and put up with so much architecture they detested . . . ?"[54]

More recent public commentary on the state of the built world suggests some potential for public rediscovery of the notion that our built world may be what saves our natural one.

Staff writer David Owen of *The New Yorker* magazine went from being an obscure golf writer to semi-famous environmental provocateur in 2004 when he published an article proclaiming Manhattan a "utopian community" that is, "in comparison with the rest of America . . . a model of environmental responsibility."[55] He declared that New York City was "the greenest community in the United States."[56]

To make his point, Owen compared his current existence, in an eighteenth century farmhouse on a dirt road in rural Connecticut, to his former, automobile-free life in a 700-square-foot Manhattan apartment.[57] Calling the move an "ecological catastrophe," Owen pointed out that "if you made all eight million New Yorkers live at the density of my town, they would require a space equivalent to the land area of the six New England states plus Delaware and New Jersey."[58] The author's plausible contention is that those eight million people, so arrayed, would increase their use of energy by an order of magnitude.[59] Thus, Owen reasoned, "[t]he environmental challenge we face, at the current stage of our assault on the world's non-renewable resources, is not how to make our teeming cities more like the pristine countryside. The true challenge is how to make other settled places more like Manhattan."[60]

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52. TOM WOLFE, FROM BAUHAUS TO OUR HOUSE (1981).

53. *Id.* at 3.

54. *Id.*

55. David Owen, *Green Manhattan: Everywhere Should be More Like New York*, THE NEW YORKER, Oct. 18, 2004, at 111.

56. *Id.*

57. *Id.* at 111–12.

58. *Id.*

59. *Id.* at 112.

60. *Id.*

That means infrastructure. And it means infrastructure that is attentive to the concerns Senator Moynihan expressed in 1969.[61] It cannot be a coincidence that the nation's largest producer of electric power, more than sixty years after its creation in the crucible of the New Deal, is the Tennessee Valley Authority.[62] This massive public works initiative was so noteworthy as a design that New York's Museum of Modern Art held an exhibition on the TVA in 1941, prompting historian and cultural critic Lewis Mumford to praise the TVA's designs in *The New Yorker* magazine as "breathtaking . . . as close to perfection as our age has come."[63]

Perhaps the most crucial thing that the designers of our infrastructure can do is to suffuse their projects with honesty, eschewing artifice. New York's grand suspension bridge, the George Washington, is especially beloved because the planned masonry cladding for the bridge's two massive towers was never built, leaving satisfyingly visible evidence of the powerful structure that holds up the giant Hudson River crossing.[64] In Columbus, Indiana, a haven of architectural excellence, architect Myron Goldsmith took the bold step of creating an industrial building with one entire façade of glass, the better to show off the newspaper printing presses within.[65] Similarly, the muscular concrete dams of the TVA require little explanation to those curious about how so much energy is produced.

In his lucidly persuasive disquisition on the connection between architecture and human happiness, the writer Alain de Botton describes a train trip that took him across the Salginatobel Bridge, near Schiers in Switzerland.[66] Now nearly 70-years old, the 269-foot span across an alpine chasm has become an icon of reinforced concrete as used in an arch bridge,[67] so nimbly does it make its leap.[68] According to de Botton, the Salginatobel Bridge

> testifies to how closely a certain kind of beauty is bound up with our admiration for man-made objects which can withstand the life-destroying forces of heat, cold, gravity or

61. GOODMAN, *supra* note 49, at 104.

62. THE TENNESSEE VALLEY AUTHORITY: DESIGN AND PERSUASION, *supra* note 27, at 16.

63. *Id.* at 28, 46. (noting Mumford's review appeared in *The New Yorker* issue of June 7, 1941).

64. ELIZABETH B. MOCK, THE ARCHITECTURE OF BRIDGES 59 (1949).

65. GOLDSMITH, *supra* note 29, at 116–20.

66. ALAIN DE BOTTON, THE ARCHITECTURE OF HAPPINESS 203–06 (2006).

67. Salginatobel Bridge, http://www.schierstourismus.ch/salgina/esalgina.htm (last visited Feb. 25, 2009).

68. MOCK, *supra* note 64, at 107. According to this influential effort to place bridges in the realm of architecture that merited artistic notice, the Swiss engineer who designed the Salgina Bridge, Roger Maillart (1872–1940), "was so far in advance of his time that the full meaning and impact of his work may not be felt for years to come." *Id.* at 102.

> wind. We see beauty in thick slate roofs that challenge hailstones to do their worst, in sea defences that shrug off the waves which batter them, and in bolts, rivets, cables, beams and buttresses. We feel moved by edifices—cathedrals, skyscrapers, hangars, tunnels, pylons—which compensate for our inadequacies, our inability to cross mountains or carry cables between cities. We respond with emotion to creations which transport us across distances we could never walk, which shelter us during storms we could not weather, which pick up signals we could never hear with our own ears and which hang daintily off cliffs from which we would fall instantly to our deaths.[69]

Are we losing the capacity for this kind of admiration?

De Botton is a vigilant observer of things; he marvels at how his train, crossing the bridge, "makes its way over the gap, and through a small cloud, with the brisk formality one might associate with the most routine of activities."[70] He pronounces the span the very embodiment of elegance, which he defines as "a subcategory of beauty" in which a work of architecture "succeeds in carrying out an act of resistance—holding, spanning, sheltering—with grace and economy as well as strength; when it has the modesty not to draw attention to the difficulties it has surmounted."[71] It is reasonable to assume that, in the England and Scotland of the early twentieth century, people gazed at lighthouses and properly understood them as their own acts of resistance against what was then the very real possibility of perilous navigational error. *To the Lighthouse*, after all, followed the sinking of the *Titanic* by only fifteen years.[72]

Today we perceive lighthouses as quaint, much as we regard windmills, silos, steam locomotives, and old-fashioned ballparks. But wind turbines, arguably as elegant as the Salginatobel Bridge, so lightly do they carry their burden of generating electricity from natural forces at megawatt scale, are derided as unwelcome changes to the natural landscape when they threaten to alter the view of Nantucket Sound, enjoyed by the descendants of Joseph

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69. DE BOTTON, *supra* note 66, at 204.

70. *Id.* at 203.

71. *Id.* at 206.

72. *See* WOOLF, *supra* note 1 (stating that *To the Lighthouse* originally was published in 1927); *see also Titanic Sinks Four Hours After Hitting Iceberg*, N.Y. TIMES, Apr. 16, 1912, at 1, *available at* http://timesmachine.nytimes.com/browser/1912/04/16/100530234/article-view (stating the Titanic sank at 2:20 a.m. on April 15, 1912).

P. Kennedy when they visit the fabled family compound at Hyannis on Cape Cod.[73]

The point here is not to deride the Kennedy family for opposing the proposed Cape Wind project, which would, in fairness, comprise not just one structure of roughly the same magnitude as a lighthouse but 130 of them.[74] Nor is the point to criticize Vermont, a state that cultivates a reputation as green in every sense of the word but which, to date, has been notably ambivalent about the development of wind power within its borders.[75]

Rather, the question is whether we owe it to ourselves as a civilization—or, more specifically, as a civilization with future aspirations—to cultivate a more evolved sense of beauty than the one that is apparently driving the Kennedy family and other opponents of wind turbines.

As conjured by Virginia Woolf, a young man standing looking out over the Hebrides in Scotland could find in the sight of a lighthouse the

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73. *See* Abby Goodnough, *Wind Farm Off Cape Cod Clears Hurdle,* N.Y. TIMES, Jan. 17, 2009, at A11 (describing the eight year fight by the Kennedy family and others against the wind farm).

74. *Id.* (noting that Cape Wind would cover twenty-four square miles and consist of 130 turbines, each of which would be 440 feet tall). However, as the *Times* pointed out, the turbines would be "visible half an inch above the horizon on clear days." *Id.* When the Minerals Management Service of the Department of the Interior released its final environmental impact statement concluding that it posed no serious environmental threat, on January 16, 2006, Senator Kennedy issued a statement predicting that the Interior Department had "virtually assured years of continued public conflict and contentious litigation." *Id.* According to another *Times* account, Kennedy's aides "made a point of saying . . . that an obstructed view was not among the senator's concerns." *See* Robert F. Kennedy, Jr., *An Ill Wind Off Cape Cod,* N.Y. TIMES, Dec. 16, 2005, at A41 ("I wouldn't build a wind farm in Yosemite National Park. Nor would I build one on Nantucket Sound . . . . [which would] damage the views from 16 historic sites and lighthouses on the cape and nearby islands."). The Kennedy Compound in Hyannis, MA is listed on the National Register of Historic Places. U.S. Dep't of Interior, Nat'l Register of Historic Places: Massachusetts-Barnstable County-Historic Districts, http://www.nationalregisterofhistoricplaces.com/ma/Barnstable/districts.html (last visited Apr. 12, 2009).

75. See VT. DEP'T OF PUB. SERV., VERMONT COMPREHENSIVE ENERGY PLAN 2009, at III-63 (2008), *available at* http://publicservice.vermont.gov/planning/CEP%20%20WEB%20DRAFT%20FINAL%206-4-08.pdf, noting that:

> Because wind projects must be sited in visually prominent locations, a proposed development generates considerable controversy. Opponents cite the visual intrusion posed by these projects and the uncertain impact on the local environment while proponents emphasize the environmental benefits of displacing fossil-fueled generation and regional fuel diversity. To date, the Public Service Board has rejected one application and approved one. Given this level of uncertainty regarding the ability of any specific project to receive the necessary permits, efforts to better define the impacts of this type of facility would aid in determining the possible future role of wind generation in Vermont.

confirmation of "some obscure feeling of his about his own character."[76] It may well be possible to resist the addition of wind turbines to the verdant ridgelines in Vermont or the placid seascapes of Cape Cod. Or we may embrace such human interventions, there and elsewhere, as visual confirmation of how ingenuity can overcome adversity and create harmony. Our character, among other things, depends on how we choose.

76. WOOLF, *supra* note 1, at 301–02.