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Recovering from the Recovery Narrative: On Glocalism, Green Jobs and Cyborg Civilization

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Recommended Citation

Michael Burger, *Recovering from the Recovery Narrative: On Glocalism, Green Jobs and Cyborg Civilization*, 46 Akron L. Rev. 909 (2013).

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RECOVERING FROM THE RECOVERY NARRATIVE: ON GLOCALISM, GREEN JOBS AND CYBORG CIVILIZATION

Michael Burger*

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Stories matter. They matter in life, they matter in politics, and they matter in law.¹ Stories have played a particularly important role in the development of environmental and natural resources law in the United States. From Henry David Thoreau's diary of his mythic year on Walden Pond (which together with the advocacy-oriented writings of John Muir provided the content of much early preservationist thought) to President Theodore Roosevelt's accounts of his masculine adventures in the wild (which together with Gifford Pinchot's utilitarian view of nature gave life to the conservationist movement) to Edward Abbey's gang of eco-saboteurs inserting monkey wrenches into road-building operations in the Utah desert (which inspired the radical activists in EarthFirst!) to Leslie Marmon Silko's complex interweaving of contemporaneity and Laguna folkways (which exposed a generation of readers to an un-sentimentalized Native American perspective on nature), stories about the relationships between people and places have drawn the contours of

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1. See, e.g., STEVEN L. WINTER, *A CLEARING IN THE FOREST: LAW, LIFE, AND MIND* (2003); ANTHONY G. AMSTERDAM & JEROME BRUNER, *MINDING THE LAW* 46 (2000).

environmentalist thought and defined the terms of environmental debates.² Most famously, perhaps, several highly visible nonfiction stories—Rachel Carson’s *Silent Spring*, the toxic disaster at Love Canal, the Cuyahoga River catching on fire—made possible the “Republican moment” that produced the slate of statutes which constitute the bulk of modern environmental law.³ Today, stories, and storytelling, continue to factor in significant ways into environmental conflicts, as campaigns on all sides self-consciously deploy sophisticated narrative frames to persuade diverse audiences to adopt one policy perspective or another.⁴

Over the last forty years, a number of “storylines” have dominated environmental law discourse.⁵ These have been helpfully catalogued in other contexts by the field of literary studies known as ecocriticism and include categories such as pastoral, wilderness and wildness, toxic discourse, and apocalypse.⁶ Elsewhere, I argue that these storylines, or tropes, figure prominently not only into literature, media campaigns, and policy debates but also into litigation, and that the development of environmental law in the courts may actually be seen as an iterative response to competing versions of them.⁷ Yet, at the core of all of these storylines is a broader, more encompassing mythology, which the environmental historian Carolyn Merchant titled the Recovery Narrative.⁸ The Recovery Narrative is, in essence, about the biblical fall from grace and the quest to return to Eden. As Merchant puts it, “[I]t is perhaps the most important mythology humans have developed to make sense of their relationship to the earth.”⁹ The Recovery Narrative can

2. See, e.g., DANIEL J. PHILIPPON, *CONSERVING WORDS: HOW AMERICAN NATURE WRITERS SHAPED THE ENVIRONMENTAL MOVEMENT* (2004); DANIEL G. PAYNE, *VOICES IN THE WILDERNESS: AMERICAN NATURE WRITING AND ENVIRONMENTAL POLITICS* (1996).

3. On the “Republican moment,” see Daniel A. Farber, *Politics and Procedure in Environmental Law*, 8 J.L. ECON. & ORG. 59 (1992); Christopher H. Schroeder, *Rational Choice Versus Republican Moment—Explanations for Environmental Laws, 1969-73*, 9 DUKE ENVTL. L. & POL’Y F. 29 (1998).

4. See, e.g., Charles Davis & Katherine Hoffer, *Federalizing Energy? Agenda Change and the Politics of Fracking*, 45 POL’Y SCI. 221 (2012).

5. On the concept of storylines, see MAARTEN A. HAJER, *THE POLITICS OF ENVIRONMENTAL DISCOURSE: ECOLOGICAL MODERNIZATION AND THE POLICY PROCESS* 56, 62 (1995).

6. For full explorations of these concepts, see generally LAWRENCE BUELL, *THE ENVIRONMENTAL IMAGINATION: THOREAU, NATURE WRITING, AND THE FORMATION OF AMERICAN CULTURE* (1995); GREG GARRARD, *ECOCRITICISM* (2004).

7. Michael Burger, *Environmental Law/Environmental Literature*, 40 ENVTL. LAW Q. 1 (2013), available at http://www.boalt.org/elq/documents/001_Burger.pdf.

8. See generally CAROLYN MERCHANT, *REINVENTING EDEN: THE FATE OF NATURE IN WESTERN CULTURE* (2003).

9. *Id.* at 2.

take either one of two forms, which Merchant terms “progressive” and “declensionist.” The progressive version informs mainstream cultural perspectives and involves the search for a lost paradise through exploration, settlement, and the transformation of wilderness into a domesticated garden.¹⁰ The declensionist version informs the environmentalist counternarrative and involves the loss and destruction of an aestheticized and pristine nature and an attempt to either regain integrity through conservation or else set aside refuges through preservation.¹¹ Though they are differently oriented in regards to both retrospective evaluations and prospective vision, both versions share a dependence on the linearity of Enlightenment thinking, and both share an encoded differentiation between culture and nature as between self and other.¹²

Climate change—with its multitudinous sources, global scale, and pervasive impacts—has disrupted many of the basic tenets that once provided coherence to these long-cherished environmental storylines and the underlying Recovery Narrative, including entrenched notions of place and seasonality, causality and fault, and self and other. This disruption has, of necessity, given rise to a new set of storylines, visible not only in cultural artifacts such as documentary film and fine art photography,¹³ but also in new legislation and policymaking, and in the litigation literature arising around them.

In this Essay, I make a preliminary foray into this new narrative terrain, identifying several emerging legal storylines that have arisen in the wake of climate change disruptions and that I predict will prove influential in the coming years. In Part I, I discuss the ways in which new perceptions of scale are re-defining human beings’ attachments to a sense of “place” or “dwelling” and are shaping new attitudes about what constitutes the local, posing potential problems for existing federalism schemes.¹⁴ In Part II, I discuss the ways in which America’s long history of nationalizing nature manifests in the discourse surrounding energy security, energy independence, and the “green economy”—a discourse which has quickly come into conflict with existing place-based preservationist storylines.¹⁵ In Part III, I discuss the ways in which

10. *Id.*

11. *Id.* at 3.

12. *Id.* at 4.

13. See, e.g., Michael Ziser & Julie Sze, *Climate Change, Environmental Aesthetics, and Global Environmental Justice Cultural Studies*, 29 DISCOURSE 384, 385 (2007) (exploring “aesthetic and ideological dimensions . . . of this new phase of environmental representation.”).

14. See *infra* Part I.

15. See *infra* Part II.

climate change adaptation can produce a reimagining of nature and culture as a kind of cyborg, perhaps demanding reassessment of existing environmentalist attachments, such as those encoded in the Endangered Species Act.¹⁶ I conclude by noting that although some of these new storylines share common origins in the Recovery Narrative, they also reflect important updates, changes, and innovations and may point in the direction of even more radical transformations that can shape our environmental future.

I. GLOCALISM: A NEW STORY ABOUT PLACE

Place has always been an essential element of the American environmental imagination.¹⁷ In talking of “place,” here, I refer to “space to which meaning has been ascribed,” a center of “felt value,” a setting for social relations and personal association with a landscape, an environment that is “seen, heard, smelled, imagined, loved, hated, feared, revered.”¹⁸ Place, in this sense, acts on the imagination by provoking reflection and creating new personal and communal identifications with the nonhuman environment.¹⁹

In this Part, I introduce the relationship between what might be called “glocalist” stories and environmental law.²⁰ The traditional environmental stories in the Recovery Narrative pantheon all depend to a large degree on a form of place attachment wherein place is understood as primarily having to do with the spatially local.²¹ These local place stories have been instrumental to the environmental movement: Stories of place immersion have helped form environmentalist thought.²² Epic battles like those fought to preserve Hetch Hetchy and Storm King have been foundational to both environmental consciousness and

16. See *infra* Part III.

17. BUELL, THE ENVIRONMENTAL IMAGINATION, *supra* note 6, at 252.

18. LAWRENCE BUELL, THE FUTURE OF ENVIRONMENTAL CRITICISM: ENVIRONMENTAL CRISIS AND THE LITERARY IMAGINATION 63 (2005).

19. *Id.* at 62-97.

20. See Erik Swyngedouw, *Neither Global nor Local: “Glocalization” and the Politics of Scale*, in SPACES OF GLOBALIZATION: REASSERTING THE POWER OF THE LOCAL 137, 140-42 (Kevin R. Cox ed., 1997). The idea of glocalism has also begun to be addressed in legal scholarship. See, e.g., Lauren Carasik, “Think Glocal, Act Glocal”: *The Praxis of Social Justice Lawyering in the Global Era*, 15 CLINICAL L. REV. 55 (2008); Berta Esperanza Hernández-Truyol, *Glocalizing Law and Culture: Towards a Cross-Constitutive Paradigm*, 67 ALB. L. REV. 617 (2003).

21. BUELL, THE FUTURE OF ENVIRONMENTAL CRITICISM, *supra* note 18, at 77-79 (“Traditional writing about place tends to interest itself especially in bounded areas of small size” that present the possibility of a self-sufficient, holistic lifestyle.).

22. See *supra* note 2 and accompanying text.

environmental law.²³ Place values are built into laws ranging from local zoning codes to the National Park Organic Act.²⁴ The connection between the sense of place and environmental activism is easily understandable. “The more a site feels like a place, the more fervently it is so cherished, the greater the potential concern at its violation or even the possibility of violation.”²⁵ Indeed, the history of environmental law illustrates that place attachments have long been at the core of environmental concerns; arguably, a sense of place may even be necessary to inspire an environmental ethic.²⁶

But attachments to place can be complex, and they are not uniform in either source or dimensionality. Some derive from an individualistic ethos and private property norms, while others derive from more communitarian sensibilities. Moreover, some attachments to place focus exclusively on the tangible and sensory presence of the proximate and local, while others intentionally associate with more cosmopolitan networks that might span the globe.²⁷ Indeed, the bounded area defining a “place” can be expanded out from Walden Pond, Tinker Creek, Storm King Mountain, or the Hetch Hetchy Valley to include a state,²⁸ a nation,²⁹ a transnational or international region such as the Caribbean,³⁰ or even the planet as a whole.³¹

With our increasingly interconnected and globalized world and our increasing awareness of shared risks, we are now far more conscious than ever before of the ways in which “places” are produced by translocal relationships, interjurisdictional dynamics, and macro-economic and macro-ecological global forces. Thus, one’s attachment to a given place can be expressed not only as a vision or sense of

23. See, e.g., RODERICK NASH, *WILDERNESS AND THE AMERICAN MIND* 161-181; ROBERT W. RIGHTER, *THE BATTLE OVER HETCH HETCHY: AMERICA’S MOST CONTROVERSIAL DAM AND THE BIRTH OF MODERN ENVIRONMENTALISM* (2005); ALLAN R. TALBOT, *POWER ALONG THE HUDSON: THE STORM KING CASE AND THE BIRTH OF ENVIRONMENTALISM* (1972).

24. See generally *THE PLACE OF LAW* (Austin A. Sarat et al. eds., 2006).

25. LAWRENCE BUELL, *WRITING FOR AN ENDANGERED WORLD: LITERATURE, CULTURE, AND ENVIRONMENT IN THE U.S. AND BEYOND* 56 (2001).

26. BUELL, *THE ENVIRONMENTAL IMAGINATION*, *supra* note 6, at 252-53 (“Without a complex knowledge of one’s place, and without the faithfulness to one’s place on which such knowledge depends, it is inevitable that the place will be used, and eventually destroyed.”) (quoting Wendell Berry).

27. BUELL, *WRITING FOR AN ENDANGERED WORLD*, *supra* note 25, at 58-59.

28. BUELL, *THE FUTURE OF ENVIRONMENTAL CRITICISM*, *supra* note 18, at 79 (discussing the work of Carl Hiassen).

29. *Id.* at 79-80.

30. *Id.* at 80 (discussing Derek Walcott’s poem, *The Star-Apple Kingdom*).

31. *Id.* at 67 (“[W]hat counts as place can be as small as a corner of your kitchen or as big as the planet.”).

grounding in a particular plot of earth but also as a vision or sense of grounding in how a city or town defines, remains, and re-forms itself in relation to demographic shifts, capital flows, and ecological conditions that are global in nature.³² At this point in human history it is probably foolish, and perhaps impossible, *not* to think of localities as defined, in part, by the disruptions caused by these macro-economic and macro-ecological forces.³³

The rise of the “green cities” movement and the growth of sub-local climate change action groups offers evidence that both civic leaders and individual citizens have this new “glocal” view in mind in defining their home places.³⁴ Translocal networks of government actors all situate local governments in direct relation to the global problems of sustainability and climate change. These actors include: ICLEI – Local Governments for Sustainability (formerly the International Council of Local Environmental Initiatives), which has grown from approximately two hundred local governments in forty-three countries in 1990 to include “12 mega-cities, 100 super-cities and urban regions, 450 large cities as well as 450 small and medium-sized cities and towns in 84 countries” today;³⁵ the World Mayors Conference on Climate Change, a network of eighty mayors from around the world dedicated to reducing greenhouse gas emissions;³⁶ and the U.S. Conference of Mayors, which signed the Mayors Climate Action Agreement in 2005 and now has more than one thousand municipalities around the United States committed to reducing greenhouse gas emissions below 1990 levels in accordance with the terms of the Kyoto Protocol.³⁷ Sub-local affiliations, such as neighborhood climate action groups, Carbon Rationing Action Groups, and the “towns” and nodes of the Transition Network, offer individuals a way to even more immediately relate their sense of dwelling, or inhabitation, to these same global phenomena.³⁸ In these instances one can see the evolution of what has been referred to as

32. *Id.* at 77.

33. *See id.* at 89 (discussing narrative structure of Richard Powers’s novel, *Gain*).

34. *See, e.g.,* Michael Burger, “It’s Not Easy Being Green”: *Local Initiatives, Preemption Problems, and the Market Participant Exception*, 78 U. CIN. L. REV. 835 (2010).

35. *About ICLEI*, ICLEI—LOCAL GOVERNMENTS FOR SUSTAINABILITY, <http://www.iclei.org/index.php?id=about> (last visited Jan. 29, 2013).

36. *See Home*, WORLD MAYORS COUNCIL ON CLIMATE CHANGE, <http://www.worldmayorscouncil.org/> (last visited Jan. 29, 2013).

37. *See U.S. Conference of Mayors Climate Protection Agreement*, THE UNITED STATES CONFERENCE OF MAYORS (2008), <http://www.usmayors.org/climateprotection/agreement.htm>.

38. *See generally* Sarah Krakoff, *Planetarian Identity Formation and the Relocalization of Environmental Law*, 64 FLA. L. REV. 87 (2012).

a “planetarian identity,”³⁹ only as invested into a geographical location, a “place,” rather than a singular self.

Importantly, these “glocalized” communities are what Robert Cover delineated as “jurisgenerative”⁴⁰: they foster new cultural norms and promote new policies and laws, typically as part of local government sustainability initiatives or climate action plans. It is here, where the glocal vision becomes an adopted policy, or even a legal rule, that one can see the conflict between these new place stories and the established place stories encoded in our existing domestic federalism schemes. A number of legal doctrines pose problems for local governments seeking to transcend the limits of their jurisdiction and participate in the global environmental dialog, including the dormant Commerce Clause, foreign policy preemption, and state and federal preemption. Two examples of federal preemption of local laws are illustrative.

First, the City of New York twice attempted to hybridize its famous fleet of yellow cabs, and in both instances courts found the city’s actions preempted by the Energy Policy and Conservation Act (“EPCA”).⁴¹ In its first attempt, the New York City Taxi and Limousine Commission directed that new taxicabs had to achieve a minimum city fuel efficiency rating of twenty-five miles per gallon (“mpg”) by October 1, 2008, and 30 mpg by October 1, 2009 (“25/30 Rule”).⁴² Because all taxis in the city must be retired within five years, the rule would have effectively hybridized the taxi fleet by 2012. After a district court judge held that the rule was preempted by the Corporate Average Fuel Efficiency (“CAFE”) standards promulgated pursuant to EPCA,⁴³ the Commission repealed the 25/30 Rule and enacted a new regulation that increased the maximum lease rate taxi owners using hybrid vehicles could charge their drivers and decreased the maximum lease rate for those continuing to

39. *Id.* See also Robert H. Socolow & Mary R. English, *Living Ethically in a Greenhouse*, in *THE ETHICS OF GLOBAL CLIMATE CHANGE* 170,170-91 (Denis G. Arnold ed., 2011).

40. Robert M. Cover, *The Supreme Court, 1982 Term—Foreword: Nomos and Narrative*, 97 *HARV L. REV.* 4, 15 (1983).

41. *Metro. Taxicab Bd. of Trade v. City of N.Y.*, No. 08 Civ. 7837, 2008 WL 4866021 (S.D.N.Y. Oct. 31, 2008); *Metro. Taxicab Bd. of Trade v. City of N.Y.*, 633 F. Supp. 2d 83 (S.D.N.Y. 2009), *aff’d*, *Metro. Taxicab Bd. of Trade v. City of N.Y.*, 615 F.3d 152 (2d Cir. 2010), *cert. denied*, *City of N.Y. v. Metro. Bd. of Trade*, 131 S. Ct. 1569 (2011).

42. *Metro. Taxicab*, 615 F.3d at 154.

43. *Id.* at 154-55. The district court also found that the Clean Air Act did not preempt the rules as they related to fuel efficiency standards rather than emissions standards. See *Metro Taxicab*, 2008 WL 4866021 at *14; see also *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295 (D. Vt. 2007); *Cent. Valley Chrysler-Jeep, Inc. v. Goldstene*, 529 F. Supp. 2d 1151 (E.D. Cal. 2007).

use non-hybrid vehicles (the “Lease Rate Rule”).⁴⁴ The district court held that the Lease Rate Rule constituted an “effective mandate” for taxi owners to purchase hybrids achieving certain fuel efficiencies and therefore was preempted by EPCA, and that the Lease Rate Rule was intended to affect emissions standards, and was therefore preempted by the Clean Air Act as well.⁴⁵ The Second Circuit also found part of the rule to be preempted by EPCA, though its reasoning differed. The appellate panel found that the decreased maximum lease rate for non-hybrid vehicle owners “related to” fuel economy standards, and was therefore preempted.⁴⁶

Second, in 2007 the City of Albuquerque revised its building code to include performance-based and prescriptive options for new commercial and residential buildings and those undergoing substantial addition, alteration or renovation.⁴⁷ The new code required the use of various systems and components that exceeded then-current federal standards for energy efficiency. An industry group filed suit, claiming that the code was preempted by EPCA, as amended by the National Appliance Energy Conservation Act⁴⁸ and the Energy Policy Act of 1992.⁴⁹ Ruling on a motion to dismiss, a federal district court found that the code was most likely preempted as it “effectively require[d]” the installation of appliances that exceeded the existing federal efficiency standards.⁵⁰ Such a requirement, the court held, conflicted with the broad scope of preemption and the specific legislative purpose of protecting appliance manufacturers from a “patchwork of differing State regulations.”⁵¹

Both New York City’s and Albuquerque’s rules were part of larger

44. *Metro. Taxicab*, 615 F.3d at 155.

45. *Id.* at 155-56.

46. *Id.* at 155.

47. *Air Conditioning, Heating and Refrigeration Inst. v. City of Albuquerque*, No. 08-633 MV/RLP., 2008 WL 5586316 (D.N.M. Oct. 3, 2008), *subsequent decision*, 835 F. Supp. 2d 1133 (D.N.M. 2010).

48. National Appliance Energy Conservation Act, Pub. L. No. 100-102, 101 Stat. 719 (1987).

49. 42 U.S.C.A. §§ 6311-17 (West 2012). EPCA, as amended, sets energy conservation standards for commercial heating, air conditioning, and water heater equipment, and, for certain types of equipment, establishes standards that correspond to the levels set in the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) Standard 90.1. 42 U.S.C.A. § 6313(a). The law preempts any state or local regulation “concerning the energy efficiency, energy use, or water use of” covered products. 42 U.S.C.A. § 6297(c) (West 2012). The statute provides a number of exceptions to preemption, including procurement standards for states and local governments and building code standards for new construction that satisfy specified criteria. 42 U.S.C.A. § 6297(e), (f)(3). *See also* 42 U.S.C. §§ 6295(j)-(k), 6313, 6316(a)-(b) (West 2013).

50. *Air Conditioning, Heating and Refrigeration Inst.*, 2008 WL 5586316, at *9.

51. *Id.* at *7 (citing S. Rep. No. 100-6, at 4).

sustainability initiatives and climate action plans that reflected the cities' participation in the translocal "green cities" movement described above. New York's attempt to hybridize the taxi fleet was part of its much-lauded PlaNYC sustainability initiative.⁵² PlaNYC was conceived as a plan to improve the quality of life in New York, to prepare for an expected increase of one million new residents, and to "combat climate change."⁵³ Similarly, Albuquerque's building code revision reflected commitments the city had made as part of its different networked affiliations. As a signatory city to the U.S. Mayor's Climate Protection Agreement, the city committed to "[m]ake energy efficiency a priority through building code improvements" and to "[p]ractice and promote sustainable building practices using the U.S. Green Building Council's LEED program or a similar system."⁵⁴ As a member of the U.S. Conference of Mayors, Albuquerque also committed to make all new residential and commercial buildings, as well as all major building renovations, carbon neutral by 2030.⁵⁵

Despite their engagement in a broader movement to combat climate change, neither New York City nor Albuquerque pushed these issues in their legal briefs, nor did they even mention them. Nor, from a legal perspective, was there reason to do so. The preemption doctrine, as currently configured and applied to instances of both express and implied preemption, does not account for the storyline enacted by glocalised places, or the variety of commitments they reflect. Local governments cannot leapfrog the federal government just because local politicians and residents affiliate with translocal attempts to address global environmental problems. Local governments have now found ways to reduce greenhouse gas emissions associated with taxi fleets and new building construction *without* running afoul of federal preemption.⁵⁶ Nonetheless, these examples illustrate the gap between one emerging environmental storyline and existing law and point to one potential area for reform.⁵⁷

52. See *Home*, PLANYC, <http://www.nyc.gov/html/planyc2030/html/home/home.shtml> (last visited Jan. 29, 2013).

53. *About PlaNYC*, PLANYC <http://www.nyc.gov/html/planyc2030/html/about/about.shtml> (last visited Jan. 29, 2013).

54. U.S. CONFERENCE OF MAYORS CLIMATE PROTECTION AGREEMENT (2005).

55. *The 2030 Challenge*, ARCHITECTURE 2030, http://www.architecture2030.org/2030_challenge/index.html (last visited Jan. 29, 2013).

56. *Bldg. Indus. Ass'n of Wash. v. Wash. State Bldg. Code Council*, 683 F.3d 1144 (9th Cir. 2012); *Ass'n of Taxicab Operators v. City of Dallas*, 866 F. Supp. 2d 595 (N.D. Tex. 2012).

57. Cf. Annie Decker, *Preemption Conflation: Dividing the Local from the State in Congressional Decision Making*, 30 YALE L. & POL'Y REV. 321 (2012).

II. AMERICA'S NEXT NATURE: ENERGY SECURITY, ENERGY INDEPENDENCE, AND THE CLEAN ENERGY ECONOMY

The laws and practices that define our relationship to nature have always been central to America's national identities.⁵⁸ Faced in recent years with the threats posed by climate change, terrorism, a rambunctious Russia, and a fully risen China, this proclivity to make of nature a nationalist concern has come to focus in particular on the production and control of domestic energy supplies. In this Part, I establish a political and legislative context for this new version of America's "nationalized nature" storyline,⁵⁹ and then illustrate how the storyline factors into contemporary legal conflicts surrounding renewable energy facility siting on public lands in the American West.

A. *The Political and Legislative Context*

The discourse surrounding the most recent push to increase domestic energy production has made frequent reference to the intertwined ideas of energy security, energy independence, and the development of a domestic "clean energy" or "green" economy. Energy security refers to the sustainable and reliable provision of energy at reasonable prices.⁶⁰ Energy independence, in contrast, refers to a nation's ability to satisfy its energy supply needs with internal resources.⁶¹ Both the clean energy economy necessary to achieve either energy security or energy independence and the "green jobs" that economy would create refer, at least for the purposes of this article, to

58. See Jedediah Purdy, *American Natures: The Shape of Conflict in Environmental Law*, 36 HARV. ENVTL. L. REV. 169 (2012) (mapping four historical conceptions of the natural world onto different environmental laws and natural resources to show how conflicting values and ideas of nature have shaped American environmental law). See also Michael Burger & Paul Frymer, *Property Law and American Empire*, 34 U. HAWAII L. REV. (forthcoming), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2228418 (relating common law property rules of the settler era and intellectual property law at the end of the 20th century to the operation of American empire).

59. See Jared A. Goldstein, *Aliens in the Garden*, 80 U. COLO. L. REV. 685 (2009) (discussing "nationalization of nature" as metaphoric means of describing nature by reference to "the world of nations").

60. U.S. ENERGY ASS'N, NATIONAL ENERGY SECURITY POST 9/11 7 (2002), available at <http://indianstrategiccknowledgeonline.com/web/USEARReport.pdf> ("In its most fundamental sense, energy security is assured when the nation can deliver energy economically, reliably, environmentally soundly and safely, and in quantities sufficient to support our growing economy and defense needs.").

61. But see Daniel M. Kammen, *Renewable Energy in United States Foreign Policy*, 36 GOLDEN GATE U. L. REV. 327, 331 (2006) (identifying oil, rather than oil imports or other nations, as the thing from which a nation seeks to be independent).

the renewable energy sector. All three of these concepts—security, independence, and economy—are intimately connected with a larger mythos of American national identity.⁶²

These three concepts have been part of the national political dialog for years, but they have become prominent of late. Energy security, which first rose to prominence during the oil crisis of the 1970s, has gained salience by virtue of its rhetorical connection to national security in the post-9/11 era.⁶³ Similarly, energy independence, which has been a national goal of every U.S. president since Richard Nixon,⁶⁴ has been at the heart of President Obama's environmental policies, and was a hot button topic in the 2012 presidential campaign.⁶⁵ The clean energy economy offers a more recent rhetorical and political focal point, but one that also promotes ideas of the nation's economic self-interest, its imperial identity, and its overall national security.⁶⁶

Several federal statutes inscribe the nation's pursuit of energy security, energy independence, and green jobs into law. The Energy Security Act of 1980 first made security and independence policy goals of the U.S. and called attention to their impact on the economy,⁶⁷

62. Energy security is also talked about on the state and local level, where it tends to focus more on the economics and reliability of supply. See MATTHEW H. BROWN, CHRISTIE REWEY & TROY GAGLIANO, NAT'L CONFERENCE OF STATE LEGISLATURES, ENERGY SECURITY 7 (2003) (defining energy security as referring to "a resilient energy system . . . capable of withstanding threats through a combination of active, direct security measures . . . and passive or more indirect measures—such as redundancy, duplication of critical equipment, diversity in fuel, other sources of energy, and reliance on less vulnerable infrastructure").

63. As one critical observer has noted, energy security presents "a vague and fuzzy abstract ideal that . . . events have tinged with a variety of . . . associations, among them war, occupation, the emotionally charged phrase 'supporting the troops,' and the volatile term 'patriotism.'" Stephen Cushman, *Speaking of Alaska*, 24 VA. ENVTL. L.J. 299, 332 (2005).

64. Charles Homans, *The Best Laid Plans*, FOREIGN POLICY (Jan./Feb. 2012), available at http://www.foreignpolicy.com/articles/2012/01/03/the_best_laid_plans_us_presidents_and_their_shrinking_ambitions_for_energy_indep (charting statements, goals, and plans for energy independence by Presidents Richard Nixon, Gerald Ford, Jimmy Carter, George H. W. Bush, George W. Bush, and Barack Obama).

65. See *All of the Above: President Obama's Approach to Energy Independence*, OBAMA FOR AM. (2011-2012), <http://www.barackobama.com/energy-info/> (homepage for Obama/Biden ticket's energy policy platform); Steve Hargreaves, *Romney: Energy Independence by 2020*, CNMONEY (Aug. 23, 2012, 1:34 p.m. ET), <http://money.cnn.com/2012/08/23/news/economy/romney-energy/index.html>.

66. See, e.g., Memorandum from Vice President Joe Biden to President Barack Obama on the Transformation to a Clean Energy Economy (Dec. 15, 2009); Exec. Order No. 13,514, 74 Fed. Reg. 52,117, 52,117 (Oct. 5, 2009) (requiring federal agencies to reduce emissions of GHG's justified in part by improving energy security); Press Release, U.S. Dep't of Energy, President Obama Announces Over \$467 Million in Recovery Act Funding for Geothermal and Solar Energy Projects (May 27, 2009).

67. Energy Security Act, Pub. L. No. 96-294, 94 Stat. 611 (1980).

acknowledging that “achievement of energy security . . . [is] essential to the health of the national economy, the well-being of our citizens, and the maintenance of national security,”⁶⁸ and that the government can “improve the Nation’s balance of payments, reduce the threat of economic disruption from oil supply interruptions and increase the Nation’s security by reducing its dependence upon imported oil.”⁶⁹ The Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007 were both intended to serve these same purposes.⁷⁰ In addition, the Outer Continental Shelf Lands Act, as amended, provides for the “expedited exploration and development of the Outer Continental Shelf in order to achieve national economic and energy policy goals, assure national security, reduce dependence on foreign sources, and maintain a favorable balance of payments in world trade.”⁷¹ The Coastal Zone Management Act also provides for an analysis of whether specific projects, including energy projects, promote national security and are otherwise in the “national interest.”⁷²

The storyline that exploration and production of conventional fossil fuels is good for our country’s security, independence, and economy—that it is in a pure sense in the public interest—is well established, and its conflicts with potentially constraining environmental protection goals are well rehearsed.⁷³ The new push toward energy security, energy

68. *Id.* at § 100(a)(1).

69. *Id.* at § 100(b); § 100(a)(2).

70. *See, e.g.*, H.R. Rep. No. 102-474(1), at 132, *reprinted in* 1992 U.S.C.C.A.N. 1954, 1955 (House Report on EPAct); American Security and Independence Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (2007) (Act designed to “move the United States toward greater energy independence and security”).

71. 43 U.S.C.A. § 1802(1)–(2) (West 2012).

72. *See* 16 U.S.C.A. § 1452(2)(D) (West 2012) (requiring state CMP to give “priority consideration . . . to coastal-dependent uses and orderly processes for siting major facilities related to national defense, energy, fisheries development, recreation, ports and transportation.”); 16 U.S.C.A. 1456(c)(1)(B) (West 2012) (providing for Presidential override of court decision in favor of project-adverse state CZMA determination); 16 U.S.C.A. 1456(c)(3)(A) (West 2012) (allowing Secretary of Commerce to override State CZMA determination if either the activity is consistent with CZMA objectives or is otherwise necessary in the interest of national security.); 15 C.F.R. § 930.121(a)–(c) (2012) (CZMA override requires finding that (a) the activity furthers the national interest as articulated in § 302 or § 303 of the CZMA “in a significant or substantial manner”; (b) the national interest furthered by the activity outweighs the activity’s adverse coastal effects when those effects are considered separately or cumulatively; and (c) there is no reasonable alternative available which would permit the activity to be conducted in a manner consistent with the enforceable policies of the state’s CMP).

73. *See, e.g.*, Park Cnty. Res. Council v. U.S. Dept. of Agric., 817 F.2d 609, 620–21 (10th Cir. 1987) (“The hybrid goal for this nation is to encourage the development of domestic oil and gas production while at the same time ensuring that such development is undertaken with an eye toward environmental concerns.”).

independence, and green jobs, however, has produced a new conflict, cast in greener shades, between industrial scale renewable energy and traditional place-based and species-oriented preservationism.

B. New and Old Narratives in Conflict: The Case of Industrial Scale Renewable Energy

The attempt to meet the triplet goals of independence, security, and jobs, while at the same time mitigating climate change impacts, has in several instances come into direct conflict with more traditional goals of historic preservation, wilderness preservation, and species preservation. This conflict has been most visible in litigation surrounding attempts to use public lands to construct industrial-scale wind and solar farms and to connect those facilities to existing power grids. The construction of these renewable energy plants and their transmission lines raises many of the same hackles that other industrial and real estate developments do: the use of land, both public and private, for commercial purposes that disturb existing communities' and stakeholders' stories about those places and the people, creatures, plant life, and histories that inhabit them.

A series of district court decisions from the Ninth Circuit denying various plaintiffs' motions for preliminary injunction exemplify the competing narratives at stake in industrial-scale renewable energy facility siting.⁷⁴ The preliminary injunction phase is of particular import because judges address not only the merits of the claim and the question of irreparable harm but also how the public interest factors into the decision; thus, these cases involve courts directly weighing the environmental and economic benefits of renewable energy and place and species preservation. As one judge succinctly put it: "[T]he public has

74. See *Quechan Tribe of the Fort Yuma Indian Reservation v. U.S. Dept. of the Interior*, No. 12cv1167, 2012 WL 1857853, at *7 (S.D. Cal. May 22, 2012) (considering public interest in renewable energy and finding that public interest in cultural preservation was adequately protected); *W. Watersheds Project v. Bureau of Land Mgmt.*, 774 F. Supp. 2d 1089, 1103–04 (D. Nev. 2011) (considering the public interest in renewable energy and job creation to find that the balance of hardships did not tip in plaintiff's favor when the environmental injury would not result in irreparable harm); *Sierra Club v. Kenna*, Civil Complaint No. 12-CV-974-JAM (EDCA); *Backcountry Against Dumps v. Abbott*, No. 10-cv-1222, 2011 WL 3567963, at *8 (S.D. Cal. Aug. 12, 2011) (finding that benefits of renewable energy and job creation from construction of Sunrise Powerlink transmission line outweigh potential environmental harms), *aff'd on other grounds*, No. 11-56121, 2012 WL 3091041 (9th Cir. Jul 31, 2012); *Protect Our Cmty. Found. v. U.S. Dept. of Agric.*, 845 F. Supp. 2d 1102, 1117 (S.D. Cal. Jan. 13, 2012) (deferring to agency expertise to decide among alternative locations for proposed solar farm), *aff'd*, 473 Fed.Appx. 790 (9th Cir. 2012).

an interest in protection against environmental injury and promotion of environmentally responsible renewable energy on public land.”⁷⁵ A closer look at three such cases is illustrative.

In *Quechan Tribe of the Fort Yuma Indian Reservation v. United States Department of the Interior*,⁷⁶ the Quechan Tribe challenged Interior’s decision to permit a developer (“Octolillo”) to construct and operate a wind farm within the California Desert Conservation Area in southern California.⁷⁷ The Quechan presented a well-established storyline and pleaded a typical environmental cause of action: the place itself is of special significance due to the presence of archaeological sites and artifacts, some of which were eligible for inclusion on the National Register of Historic Places, and that the government, the tribe alleged, failed to provide a sufficient analysis of historic and cultural resources impacts under the National Environmental Policy Act.⁷⁸ In defense, Interior and Octolillo also presented a well-established storyline, arguing the “jobs” side of the “jobs vs. environment” debate. Their stories, however, also implicated the nationalist purposes the renewable energy development might serve. Octolillo, for instance, argued that the project would not only provide jobs in an area suffering from high unemployment but would also “boost energy security for the nation.”⁷⁹ Interior argued that the wind farm would not only create jobs and pay rent and taxes to the state and federal government but would also “provide renewable energy and offset greenhouse gas emissions.”⁸⁰ Thus, the jobs to be gained were not only good for the local or regional economy, or even the national economy, but also for the nation’s overall energy security and, by reducing greenhouse gas emissions, for the entire world. The judge denied the plaintiffs’ motion for a preliminary injunction.

In *Western Watersheds Project v. Bureau of Land Management*,⁸¹ an environmental group challenged the Bureau of Land Management’s permitting a developer to build a wind farm in Spring Valley, Nevada near Great Basin National Park,⁸² and adjacent to the Swamp Cedar Area of Critical Environmental Concern, a site of special significance to

75. *Quechan*, 2012 WL 1857853, at *7.

76. *Id.*

77. *See id.* at *1.

78. *Id.* at *1 (internal quotes and citations omitted).

79. *Id.* at *4.

80. *Id.*

81. 774 F. Supp. 2d 1089, 1103–04 (D. Nev. 2011)

82. *Id.* at 1090-91.

the Western Shoshone.⁸³ Like the Quechan Tribe, the environmental plaintiffs adopted a traditional environmentalist storyline: They described the site as a “narrow valley . . . surrounded by the towering Snake Range to the east (which includes Great Basin National Park and the Mount Moriah Wilderness) and the Schell Range to the west (which includes the High Schells Wilderness),”⁸⁴ conveying a sense of ecological, wilderness, and spiritual values inhering in the place and positing the threat of industrial intrusion. The site’s proximity to the Great Basin National Park was also of special importance, as the Park, known for the soaring Wheeler Peak and its “stunning views” of Spring Valley and the surrounding mountains “is also known for its dark sky.”⁸⁵ In addition, the environmentalist plaintiffs alleged that the project could impact the greater sage-grouse who live in the sagebrush predominant in the area and the Brazilian free-tailed bats that roost in the Rose Guano Cave four miles from the project site.⁸⁶

Nowhere in their pleadings did the plaintiffs mention the economy, jobs, or the renewable energy policies and programs through which the project was being developed. Yet, it was through this new version of the jobs versus environment frame that the court ultimately decided the case. The judge did note the economic benefit to the state, stating in plain terms that “[t]he project is beneficial to Nevada’s economic recovery.”⁸⁷ But the judge also located the project within the larger agenda codified in the Energy Security Act, the Energy Policy Act, the Energy Independence and Security Act (“EISA”), and the American Reinvestment and Recovery Act, emphasizing that the federal government has seen fit to subsidize and incentivize the construction of renewable energy projects on public lands, and worrying that an injunction would threaten the ability of the developer to take advantage of available tax credits.⁸⁸ Accordingly, the judge found that the public interest weighed in favor of the project, as enjoining it “would harm federal renewable energy goals,” and interfere with development of the clean energy economy, “a necessary part of America’s future . . . essential to securing our nation’s energy independence and decreasing green house [sic] emissions.”⁸⁹

83. Complaint at 2, 5, 9-10, *W. Watersheds Project v. Bureau of Land Mgmt.*, 774 F. Supp. 2d 1089 (2011) (No. 3:11-cv-00053), 2011 WL 10885346.

84. *Id.* at 9.

85. *Id.*

86. *W. Watersheds Project*, 774 F. Supp. 2d at 1092.

87. *Id.* at 1103.

88. *Id.*

89. *Id.*

Those skeptical of the security/independence/economy storyline might wonder whether there have been more odious attempts to co-opt the story for plainly self-interested purposes. The short answer, arguably, is yes. In *Rocky Mountain Farmers Union v. Goldstene*⁹⁰ the plaintiff farmers union argued that energy security, independence, and clean energy jobs are tied up with the fate of a particular domestic industry sector, namely the corn growers and biofuel refineries responsible for the existing production of ethanol.⁹¹ The farmers union further argued that a California rule incentivizing innovation in the production and use of low carbon fuels with reduced GHG emissions conflicted with provisions in EISA that purportedly grandfathered existing and already-planned ethanol production plants and protected them from economic uncertainty.⁹² The farmers union alleged that meeting EISA's goals for renewable fuel production requires "the preservation of the American ethanol industry against predatory competition,"⁹³ and "the Congress, the President, the American farming community, and the ethanol industry are all partners in the drive to use ethanol to reduce America's dependence on foreign energy."⁹⁴ The judge found the protectionist argument unpersuasive and held that the California rule did not conflict with EISA.⁹⁵

90. 843 F. Supp. 2 1042 (E.D. Cal. 2011).

91. *Id.* As summarized by the district court judge: "Plaintiffs contend that while the protection of the first generation of United States corn ethanol producers serves EISA's purposes of energy security and protection from foreign energy independence, the [California rule] frustrates this purpose by threatening to shut down the first generation corn ethanol producers." *Id.* at 1066.

92. See Second Amended Complaint for Declaratory and Injunctive Relief at ¶¶ 30-35, *Rocky Mountain Farmers Union v. Goldstene*, 843 F. Supp. 2d 1042 (E.D. Cal. 2011) (Nos. CV-F-09-2234 LJO GSA, CV-F-10-163 LJO DLB), 2010 WL 1393648; Plaintiffs' Memorandum in Opposition to Defendants' Motion to Dismiss, *Rocky Mountain Farmers Union v. Goldstene*, 843 F. Supp. 2d 1042 (E.D. Cal. 2011) (Nos. CV-F-09-2234 LJO GSA, CV-F-10-163 LJO DLB), 2010 WL 1935810 ("Provisions reflect a congressional purpose to ensure a continued nationwide market for ethanol from existing biorefineries, which Congress has deemed necessary to 'stabilize the cost and availability of energy.'").

93. Second Amended Complaint, *Rocky Mountain Farmer's Union*, 843 F. Supp. 2d at ¶ 32 (Nos. CV-F-09-2234 LJO GSA, CV-F-10-163 LJO DLB).

94. *Id.* at ¶ 35.

95. Similarly, another district court refused to interpret EISA to protect refiners, in particular, as opposed to distributors or retailers. *Am. Petroleum Inst. v. Cooper*, 681 F. Supp. 2d 635, 645 (E.D.N.C. 2010) ("Plaintiffs define Congress's objective too narrowly as increasing production of renewable fuels *by refiners*. In fact, Congress's goal was increasing production and usage of renewable fuels generally. Even more specifically, Congress's goal was to ensure that a statutorily set amount of renewable fuel be produced each year."). *Cf.* *Am. Petroleum Inst. v. Cooper*, 835 F. Supp. 2d 63, 70-71 (E.D.N.C. 2011) ("[T]he uncontested and uncontroversial purpose of the renewable fuel program is 'to ensure jobs . . . [through] secure, affordable, and reliable energy' and 'to move the United States toward greater energy independence and security' by 'increas[ing] the production of clean, renewable fuels.'").

In each of these cases, we see the storyline of America's next nature, wherein the nation's conventional and renewable natural resources provide energy supplies sufficient to ensure energy security, energy independence, and the jobs that make up a globally competitive green energy economy. This storyline has made its way from broad political rhetoric into federal legislation, and from there into the courts. Parties have attempted to wield the storyline to obtain and sustain permits for individual projects and to protect individual sectors of the energy economy. To date, the storyline has proven persuasive in the former instance, but not in the latter. To be sure, this new "nationalization" storyline is an example of the progressive version of the Recovery Narrative, and reflects a confidence in technology's ability to make of nature a bountiful garden. As the pressure increases to ensure a sufficient and affordable domestic energy supply, to compete for renewable energy sector dominance, and to mitigate against climate change, this vision will undoubtedly continue to factor in to legal disputes and to compete against more traditional preservationist stories grounded in the declensionist version of the Recovery Narrative. The question whether it should continue to win those competitions requires further study.

III. CYBORG STORIES: ASSISTED MIGRATION AND THE END OF WILDNESS

As we enter the post-climate change "no-analog future,"⁹⁶ one can argue that the Recovery Narrative at the heart of so many environmental and natural resources laws is becoming obsolete.⁹⁷ This is so for at least two reasons. First, we have never before experienced either this pace or these types of social and ecosystemic changes, and, despite our remarkable modeling capacity, they are most likely beyond our ability to accurately, or at least confidently, predict.⁹⁸ As climate change progresses, we will of necessity encounter conditions of both increasing uncertainty and dedicated loss, what Robin Kundis Craig (one of my co-

96. J.B. Ruhl, *Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future*, 88 B.U. L. REV. 2 (2008); Douglas Fox, *Back to the No-Analog Future?*, 316 SCI. 823 (2007).

97. See, e.g., Alejandro E. Camacho, *Transforming the Means and Ends of Natural Resource Management*, 89 N.C. L. REV. 1405, 1426 (2011) ("Many natural resources laws are also poorly suited to foster effective adaptation because they prioritize preservationism and minimizing human interaction with natural systems.").

98. See Robin Kundis Craig, "Stationarity is Dead"—*Long Live Transformation: Five Principles for Climate Change Adaptation Law*, 34 HARV. ENVTL. L. REV. 9, 15 (2010).

panelists at this Symposium) has called, “[a] world of triage, best guesses, and shifting sands.”⁹⁹ Second, the extent of humanity’s impacts on even the most remote places in the world is now known. One can debate whether nature, environment, and wilderness are social constructions or entities possessed of their own ontological reality,¹⁰⁰ but it is inarguable that the application of human reason through technology has an impact on everything on earth. Accordingly, “the modern notion of an external nature, opposite to culture, and there for discovery, ‘a source of insight and a promise of innocence,’ has become less and less useful,” leaving us in a condition that is definitively postmodern.¹⁰¹ In the place of the familiar nature-culture dualism we are left with a socio-ecological unity.¹⁰² These circumstances call for new storylines. New storylines, in turn, call for new heroes.

In this Part, I explore the possibility that we might find such an evolutionary hero in the figure of the cyborg. The cyborg is a biological being that has been hybridized with technology, scientific reason, and social discourse and so becomes a new entity, one simultaneously made up of organic material, technological invention, and symbolic meaning.¹⁰³ The cyborg possesses important characteristics for the post-climate change era. As one ecocritic describes it, “the cyborg is a creature of adaptation who does not recognize the stigma of illegitimacy that might limit it from certain kinds of social engagement. Rather, it takes pride in its nature, and uses what is available to it.”¹⁰⁴ This amorality, self-centeredness, and lack of sentimentality cannot be read as a character flaw because the cyborg exists outside the “salvation history”

99. *Id.* at 16.

100. See, e.g., Eileen Crist, *Against the Social Construction of Nature and Wilderness*, 26 ENVTL. ETHICS 5 (2004); James D. Proctor, *The Social Construction of Nature: Relativist Accusations, Pragmatist and Critical Realist Responses*, 88 ANNALS OF THE ASS’N OF AM. GEOGRAPHERS 352 (1998).

101. Molly Wallace, “A Bizarre Ecology”: *The Nature of Denatured Nature*, 7 INTERDISC. STUD. IN LITERATURE & ENV’T 137, 138 (2000) (quoting DONNA JEANNA HARAWAY, *SIMIANS, CYBORGS AND WOMEN: THE REINVENTION OF NATURE* (1991)).

102. “Socio-ecological systems, social-ecological systems, and coupled human-environmental systems are commonly used in the literature to describe systems of human-environmental interactions.” Elinor Ostrom et al., *Going Beyond Panaceas*, 104 PROC. NAT’L ACAD. SCI. 15, 176 (2007).

103. Donna Haraway, *A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century*, in THE INTERNATIONAL HANDBOOK OF VIRTUAL LEARNING ENVIRONMENTS 117, 118 (Joel Weiss et al. eds. 2006) (“The cyborg is a condensed image of both imagination and material reality.”).

104. Breyan Strickler, *The Pathologization of Environmental Discourse: Melding Disability Studies and Ecocriticism in Urban Grunge Novels*, 15 INTERDISC. STUD. IN LITERATURE & ENV’T 112, 132 n.9 (2008).

that underlies so many environmentalist attitudes.¹⁰⁵ And it is precisely because of this outsider status that the cyborg may be able to liberate environmental law from the Recovery Narrative. Indeed, the cyborg can offer a new angle on responsibility because “its irreverence and its keen sense of irony are quite incompatible with traditional pastoral, wilderness and apocalyptic tropes Not having ‘fallen’, the cyborg does not need to be redeemed, only to survive.”¹⁰⁶

I do not mean to propose that people, beyond a small group of science fiction fans, can or will begin to see themselves as cyborgs. Rather, my suggestion here is that we might begin to tell a more holistic, yet still postmodern, story of our newly appreciated socio-ecological unity as a kind of “cyborg civilization,” that is, a civilization in which humans do not stand outside of nature in order to dominate it or subject it to our extractive needs, nor to preserve it as a separate sphere of the world, but instead recognize mutuality and interdependence of bodies, technologies, and ideas. Such a deep restructuring of our core narrative could impact a broad range of legal structures, from embedded property stories¹⁰⁷ to the particular conventions of the conservation easement¹⁰⁸ to hybrid concepts like ecosystem services.¹⁰⁹ Here, however, I will look at one possible case study, namely how the climate change adaptation strategy of assisted migration poses a direct challenge to the wildness storyline inscribed in the Endangered Species Act.

In the age of climate change, the goals of preservation through passive management appear to make less sense. Setting aside special areas as national parks due to their special characteristics does not carry the same persuasive burden if those characteristics are likely to change in unpredictable ways. Setting aside special areas as “wilderness” is an inaccurate, if not delusional, goal since there is no area left on the planet that is “untrammelled by man.”¹¹⁰ Preserving threatened and endangered species in their native habitats will likely prove futile, at least in some instances, as the native habitat becomes uninhabitable for the species, or

105. Haraway, *supra* note 103, at 118.

106. GARRARD, *supra* note 6, at 146.

107. Carol M. Rose, *Property as Storytelling: Perspectives from Game Theory, Narrative Theory, Feminist Theory*, 2 YALE J.L. & HUMAN. 37 (1990).

108. Jessica Owley, *Changing Property in a Changing World: A Call for the End of Perpetual Conservation Easements*, 30 STAN. ENVTL. L.J. 121 (2011).

109. Keith H. Hirokawa, *Three Stories About Nature: Property, the Environment, and Ecosystem Services*, 62 MERCER L. REV. 541 (2011).

110. See, e.g., BILL MCKIBBEN, *THE END OF NATURE* (Random House ed. 2006); William Cronon, *The Trouble with Wilderness; or, Getting Back to the Wrong Nature*, in UNCOMMON GROUND: TOWARD REINVENTING NATURE 69, 69-90 (William Cronon ed. 1995).

else disappears into the sea.¹¹¹ On a practical level, such strategies will, as one commentator has pointed out, become increasingly costly and difficult, even as their chances of success decrease.¹¹² In addition, climate change puts the goals and techniques of passive management in direct conflict: affording historical preservation and securing ecosystemic health simply may not be possible just by leaving places or animals alone.¹¹³

The human-assisted relocation of climate change-impacted species outside their known or probable historic range to another suitable habitat, also called assisted colonization or assisted migration, poses a set of difficult practical problems.¹¹⁴ As a matter of law, the U.S. Fish and Wildlife Service (“FWS”) possesses the authority to relocate endangered or threatened species outside their current range under Section 10(j) of the ESA, which permits the invention of such “experimental populations” where the agency determines that it will “further the conservation of such species.”¹¹⁵ Pursuant to FWS regulations, experimental populations must be established within the “probable historic range” of the species, *unless* suitable habitat within that range has been destroyed, in which case the populations may be established in areas beyond the probable historic range.¹¹⁶ This new habitat outside the species’ probable historic range might be a place that resembles what it has been in recent historical memory; it may be a place that has become fit for the species because of climate change. It may even be a place that has been engineered for that purpose.¹¹⁷ Any which way, the statutory authority exists to move listed species to pretty much anywhere FWS reasonably concludes will further the species’ chance of survival.

Assisted migration will not be easy. The FWS will have to determine whether the new experimental population is “essential” or “non-essential,” and whether the new habitat is “primary habitat” or

111. Ben A. Minteer & James P. Collins, *Move It or Lose It? The Ecological Ethics of Relocating Species Under Climate Change*, 20 *ECOLOGICAL APPLICATIONS* 1801 (2010).

112. Camacho, *supra* note 97, at 1407.

113. *Id.*

114. See, e.g., Patrick D. Shirey & Gary A. Lamberti, *Assisted Colonization Under the U.S. Endangered Species Act*, 3 *CONSERVATION LETTERS* 45, 45 (2010); Ruhl, *supra* note 96; Alejandro E. Camacho, *Assisted Migration: Redefining Nature and Natural Resource Law Under Climate Change*, 27 *YALE J. ON REG.* 171 (2010).

115. 16 U.S.C.A. § 1539(j)(2)(A) (West 2012).

116. See 50 C.F.R. § 17.81(a) (2006).

117. Minteer & Collins, *supra* note 111, at 1802 (“Human-modified systems could play a critical part in the provision of . . . new habitat for the plants and animals we may introduce in anticipation of harmful changes in ‘native’ ecosystems.”).

something else.¹¹⁸ The agency will also have to contend with political opposition from landowners and local governments over the potential economic costs and other burdens associated with managing these relative strangers, as well as both scientific and political concerns about species invasiveness and impacts on existing ecosystems.¹¹⁹ Indeed, there are a number of ethical and policy questions confronting FWS as it contemplates assisted migration. For instance, what administrative and/or private processes and what substantive criteria should be used for selecting species to migrate? Should climate change impacts on species be the only basis for assisted migration, or should other concerns be allowed to factor in? A number of efforts have been made to begin to answer these questions. In one formulation, the policy choices range from “aggressive assisted migration” to “avoidance of assisted migration,” with the middle of the range occupied by a “constrained assisted migration.”¹²⁰ J.B. Ruhl adopts the constrained approach, recommending that “assisted migration should be employed for such a species only if the FWS has assembled conclusive evidence of the extinction threat, a quantitative model showing the likely success of assisted migration for the species with de minimis anticipated effects on other species, and an assisted migration management plan including long term monitoring and active adaptive management.”¹²¹ Alejandro Camacho has recommended that an assisted migration framework will require a new adaptive learning infrastructure.¹²² A paper published by an international team of scientists in the Proceedings of the National Academy of Sciences develops a multidimensional analytic tool that includes the impact on the focal species and its community from climate change and exacerbating effects of assisted migration, the effect of the focal species in recipient region, the constraints on or opportunities for assisted migration, and societal willingness to pursue assisted migration.¹²³

118. Shirey & Lamberti, *supra* note 114, at 48-49 (discussing difference between designating essential and non-essential experimental populations under §10(j) and restrictions imposed by primary habitat standard under 50 CFR 17.81(a)).

119. *Id.* at 50; Minter & Collins, *supra* note 111, at 1801-02 (summarizing scientific disputes over ecological and genetic threats posed by assisted migration).

120. Jason S. McLachlan et al., *A Framework for Debate of Assisted Migration in an Era of Climate Change*, 21 CONSERVATION BIOLOGY 297 (2007). See also O. Hoegh-Guldberg et al., *Assisted Colonization and Rapid Climate Change*, 321 SCI. 345, 345-46 (2008).

121. Ruhl, *supra* note 96, at 61.

122. Camacho, *Assisted Migration: Redefining Nature and Natural Resource Law Under Climate Change*, *supra* note 114, at 240.

123. David M. Richardson et al., *Multidimensional Evaluation of Managed Relocation*, 106 PROCEEDINGS OF THE NAT'L ACAD. OF SCI. USA 9721, 9721-24 (2009).

In addition to these management issues, however, the prospect of “dealing with the doomed”¹²⁴ through assisted migration also presents significant narrative problems, directly challenging the most romantic elements of the Recovery Narrative. Assisted migration transgresses a defining boundary between nature and culture, and the storyline that sells the ESA is an idea of restoration, of returning to something approaching a previously extant steady state in a particular place, that depends on that boundary.¹²⁵ Listing species, regulating activities that threaten the species, and designing conservation and recovery plans all fit easily into this narrative frame, as they are oriented toward restoring the past.¹²⁶ Assisted migration, however, re-orientes the solution toward an unknown future, one that requires ongoing adaptation and possibly constant human manipulation.¹²⁷ It emphasizes the importance of the species over species habitat, transforming the habitat from a valuable place in its own right to one whose value derives from its ability to prevent species extinction. Rather than fixing nature back to what it was, assisted migration seeks to re-engineer nature to reflect our own determination that the existence of this particular species, even outside its existing range, is of sufficient meaning and importance. In short, it upsets many of the traditional illusions of conservation law and politics.¹²⁸ It asks us to accept that humans are not outside of nature, but are instead an interdependent part of it, and that our bodies, technologies, and ideas are integral to it. It asks us to accept that humans, non-human species, and the habitats in which we dwell

124. Ruhl, *supra* note 96, at 30-31.

125. See Camacho,, *supra* note 114, at 202-25 (exploring some of the ways in which the science of ecology and ideas of preservationism have informed the ESA).

126. See Lindsay Borthwick, *Tending to our Rambunctious Garden: Q&A with Emma Marris*, ONEARTH (Sept. 28, 2011), available at <http://www.onearth.org/article/tending-to-our-rambunctious-garden> (“[T]he myth of pristine wilderness has got two components: One is that nature in the absence of humans doesn’t change; and, the other is that change that comes from humanity is always bad and always final; that you can’t ‘untouch’ a piece of nature.”); Holly Doremus, *The Endangered Species Act: Static Law Meets Dynamic World*, 32 WASH. U. J. L. & POL’Y 175, 182 (2010) (arguing that the ESA “has come to embody the essentialist notion that natural types are distinct and unchanging” while “the regulatory provisions of the ESA assume a vision of nature that is both static and simplistic.”).

127. For an excellent argument in favor of assisted migration and discussion of the challenge it poses to traditional environmentalism, see EMMA MARRIS, *RAMBUNCTIOUS GARDEN: SAVING NATURE IN A POST-WILD WORLD* (2011).

128. See, e.g., Michelle Nijhuis, *Taking Wildness in Hand: Rescuing Species*, ORION, (May/June 2008), available at <http://www.orionmagazine.org/index.php/articles/article/2966/>; Brandon Keim, *8 Wild Proposals to Relocate Endangered Species*, WIRED SCI. (Feb. 1, 2012, 6:04 PM), <http://www.wired.com/wiredscience/2012/02/assisted-migration/> (“Moving big animals to places they don’t already live is at once appealing and disturbing, a sort of adolescent environmental fantasy come to life.”).

constitute a single entity, one that resembles a machine as much as an organic body. That is, a cyborg civilization.

The prospect of this cyborg civilization will seem daunting to many—frightening to some. We have our psychological attachments to the romantic story, the salvation narrative, the promise of stability,¹²⁹ and this conceptualization may appear to indicate surrender to technological control.¹³⁰ So environmentalists are unlikely to readily adopt the trope of the cyborg civilization. It just doesn't sound good. But this information-gathering, hyper-rational, survivalist, adaptive, hybrid biological-technological-semiotic creature has landed on planet Earth. We can try to banish it from our minds, but like the Terminator, it will be back!

IV. CONCLUSION

Environmental and natural resources law are witnessing the emergence of a new set of central storylines. Some of these storylines are connected to familiar tropes grounded in the Recovery Narrative. The glocalization made evident in the green cities movement, for example, is an expansion of and abstraction from traditional place-based stories. Similarly, the new nationalization of nature made evident in the trident of energy security, energy independence, and green jobs reflects traditional associations between use of America's land and natural resources and national identity. Other emerging storylines represent a more radical break from the traditionally dominant environmental narratives. The hybridization of nature and culture visible in the possibility of assisted migration pursuant to the Endangered Species Act, for instance, challenges central assumptions regarding ecological stability, animal wildness, and the boundary between what is natural and unnatural, perhaps prompting us to identify new characterizations of the relationship between nature and culture. In each case, one can see how the storylines have begun to infiltrate the law through legislation, policy-making, litigation, and predictive conceptualization. But the law has not yet fully responded to any of them. Whether, how, and why legal actors can and/or should respond will be the subject of my own further study. Of course, regardless of my academic inquiry, the law's response, and

129. See, e.g., Doremus, *supra* note 126, at 231 ("People are uncomfortable with dynamic natural systems and have spent considerable effort and resources in a quest to remove variability from those systems.")

130. Haraway, *supra* note 103, at 122 ("From one perspective, a cyborg world is about the final imposition of a grid of control on the planet.")

the eventual inclusion or exclusion of the storylines, is something that will evolve through the coming years.