

Globethics Repository

The logo for Globethics, featuring the word "Globethics" in white, sans-serif font centered within a solid blue rectangular background.

Risky business

This page was generated automatically upon download from the Globethics Repository. More information on Globethics see <https://www.globethics.net>. Data and content policy of Globethics Repository see <https://repository.globethics.net/pages/policy>.

Item Type	Article
Authors	Jones, Rachel R.
Publisher	UC Berkeley School of Law
Rights	With permission of the license/copyright holder
Download date	2026-06-16 09:08:09
Link to Item	http://hdl.handle.net/20.500.12424/175800

Risky Business: Barriers to Rationality in Congress

Rachel R. Jones*

In Defenders of Wildlife v. Chertoff, the D.C. District Court upheld the constitutionality of an extraordinarily broad waiver provision in the REAL I.D. Act of 2005. That provision, section 102, allows the Secretary of Homeland Security to waive all laws he deems necessary to ensure expeditious construction of border fencing along the United States-Mexico border. While Defenders of Wildlife confirms the legality of waiver provisions like section 102, it also raises the interesting question of what drives legislative decision-making in the face of uncertainty. Behavioral science research shows that in the post-9/11 world, our ability to objectively perceive risk is altered by our knowledge of terrorist attacks and by our exposure to media coverage of the terrorist threat the United States faces. This diminished ability to objectively perceive risk can negatively affect the deliberative process when Congress must legislate around uncertain risks, like the risk of environmental harm and the risk of future terrorist attacks. I consider several options that might minimize the effect of this phenomenon on the crafting of legislation, including the creation of a standing risk assessment council, the inclusion of traditional waiver provision elements that limit the effects of potentially irrational legislative behavior, and drafting legislation that requires waiver-invoking officials to accurately characterize the risks to be considered.

Introduction.....	468
I. Environmental Waivers in the Name of National Security: Pre-9/11 Waiver Provisions, Rising Tension between Military and Environmental Interests, and Post-9/11 Waiver Provisions	472

Copyright © 2009 by the Regents of the University of California.

* J.D. Candidate, University of California, Berkeley, School of Law, 2010; M.S., Wildlife Biology, University of Alaska Fairbanks, 2005; B.S., Natural Resources Management, University of Nebraska-Lincoln. I would like to thank Holly Doremus, Nicole Ries, and Bob Infelise for their helpful suggestions and comments. Matt Henjum, Christie Henke, and Emily Jeffers provided excellent editorial advice.

A.	Early Waiver Provisions	472
B.	Historical Tension Between the Military and Environmentalists	473
C.	Post-9/11 Waiver Provision Amendments	476
1.	MBTA	476
2.	MMPA	476
3.	ESA	476
4.	REAL ID Act Section 102	477
D.	<i>Defenders of Wildlife v. Chertoff</i>	477
II.	Heuristics, Bias, and Their Potential Role in the Legislative Process	480
A.	Mechanisms Affecting the Decision-Making Process	481
1.	The Availability Heuristic	481
2.	Availability Cascades	483
3.	Probability Neglect	484
B.	The Impact of These Mechanisms on Decision Making	485
III.	Balancing Environmental Integrity and National Security: The Implications of Heuristics and Biases	486
A.	Heuristics Cut Against Objective Consideration of Environmental Concerns	486
B.	Heuristics and Biases Lead to High Valuation of National Security Concerns	487
C.	These Concepts Applied to the Passage of REAL ID Act Section 102	488
IV.	Increasing Rationality in Congress	491
A.	The Precautionary Principle	492
B.	Risk Oversight Committee	493
C.	Cost-Benefit Analysis	494
D.	Potential Heuristic and Bias-Reducing Mechanisms	495
1.	Standing Risk Assessment Council	495
2.	Role of Traditional Waiver Provision Elements	496
3.	Accurate Characterization of Risks to be Considered	496
	Conclusion	497

INTRODUCTION

In *Defenders of Wildlife v. Chertoff*, the District Court for the District of Columbia upheld the constitutionality of an extraordinarily broad waiver provision in the REAL ID Act of 2005.¹ That provision, section 102, allows the Secretary of Homeland Security to “waive all legal requirements . . . necessary

1. *Defenders of Wildlife v. Chertoff*, 527 F. Supp. 2d 119, 129 (D.D.C. 2007).

to ensure expeditious construction” of border fencing along the United States’ border with Mexico.² In the face of litigation that halted border fence construction, Secretary of Defense Michael Chertoff invoked section 102 to waive virtually all federal environmental laws as applied to the border fence construction at issue in the case.³ *Defenders of Wildlife* presents a new twist in the perpetual battle between two governmental objectives often in tension with one another: providing for national security and protecting environmental integrity. While the struggle between these objectives usually plays out in clashes between environmental groups and the military,⁴ *Defenders of Wildlife* marks the extension of that struggle into civilian territory and highlights the crucial deliberative role Congress plays in determining how national security and environmental concerns should be balanced.

Because section 102 gives broad waiver authority to the Secretary of Homeland Security, its passage could be seen as a simple, adaptive response by Congress to the increased threat of domestic terrorism the United States faces in a post-9/11 world. However, section 102 also fits into a broader dialogue between Congress and those charged with defending the United States concerning the perceived risks of environmental compliance requirements. Long before 9/11, the military complained vigorously about “encroachment” concerns, while environmentalists lobbied Congress to require the military to fully comply with environmental laws.⁵ For example, prior to 9/11, the Department of Defense (DOD) issued a report outlining several “marine encroachment issues” affecting “Naval operations and training,”⁶ and Navy attorneys voiced concerns about the effects of Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) compliance on submarine and Navy SEAL training.⁷

While the military complained openly about the deleterious effects of environmental compliance on its ability to train soldiers for combat, environmental groups successfully lobbied for the introduction of legislation aimed at eradicating *all* opportunities for military exemption from environmental law compliance.⁸ This legislation, the Military Environmental

2. REAL ID Act § 102, 8 U.S.C. § 1103 note (2006).

3. *Defenders of Wildlife*, 527 F. Supp. 2d at 121–22.

4. *See, e.g.*, *Winter v. NRDC*, 129 S. Ct. 365 (2008).

5. *See* Hope Babcock, *National Security and Environmental Laws: A Clear and Present Danger?*, 25 VA. ENVTL. L.J. 105, 126 (2007); Paul C. Kiamos, *National Security and Wildlife Protection: Maintaining an Effective Balance*, 8 ENVTL. LAW. 457, 461–62 (2001); Kristen D. Wheeler, *Homeland Security and Environmental Regulation: Balancing Long-Term Environmental Goals with Immediate Security Needs*, 45 WASHBURN L.J. 437, 439–44 (2006).

6. Memo from Patrick Meehan, Jr., Acting Deputy Undersec’y of Def. (Envtl. Sec.) on Marine Encroachment Issues to several Department of Defense employees (May 14, 2001), available at <http://www.peer.org/docs/dod/navyworking.pdf>.

7. Kiamos, *supra* note 5, at 471, 505. MMPA compliance issues resulted in the litigation of *Winter*, 129 S. Ct. 365 (2008).

8. Wheeler, *supra* note 5, at 443.

Responsibility Act (MERA), was introduced in Congress in the summer of 2001.⁹ However, the 9/11 attacks thwarted any chance of MERA passing; the military took advantage of the alarmist post-9/11 atmosphere to successfully push for new environmental compliance waiver provisions in the Migratory Bird Treaty Act (MBTA), MMPA, and ESA.¹⁰ These new waiver provisions joined the host of waiver provisions already found in almost all major federal environmental laws.¹¹

Like the new waiver provisions, section 102 is aimed at reducing the threats posed to national security by environmental compliance, but section 102 is much broader than both the pre- and post-9/11 waivers in a number of ways. Because it does not place a time limit on the waiver exercise, specify a discrete law or set of laws that may be waived, or require the waiving official to record or report her rationale for invoking the waiver, section 102 vests the Secretary of Homeland Security with unparalleled environmental compliance waiver authority.¹² The holding in *Defenders of Wildlife* is troublesome because section 102 potentially eviscerates environmental protections that would minimize harm caused by border fence construction. Nevertheless, the congressional delegation of such authority to an executive agency is permissible under the well-established nondelegation doctrine.¹³

The nondelegation doctrine provides Congress with virtually unlimited ability to delegate authority to the executive branch. Delegations of authority to the executive are constitutionally valid so long as Congress “lay[s] down . . . an intelligible principle to which [the authorized body] is directed to conform.”¹⁴ As the Supreme Court noted in *Whitman v. American Trucking Ass’ns*:

In the history of the Court we have found the requisite “intelligible principle” lacking in only two statutes, one of which provided literally no guidance for the exercise of discretion, and the other of which conferred authority to regulate the entire economy on the basis of no more precise a standard than stimulating the economy by assuring “fair competition.”¹⁵

Given this precedent, the *Defenders of Wildlife* court upheld the constitutionality of section 102, noting that “[the Supreme Court’s]

9. Nancey L. Bethurem, *Environmental Destruction in the Name of National Security: Will the Old Paradigm Return in the Wake of September 11?*, 8 HASTINGS W.-NW. J. ENVTL. L. & POL’Y 109, 123 (2002).

10. Marcilynn Burke, *Green Peace? Protecting Our National Treasures While Providing for Our National Security*, 32 WM. & MARY ENVTL. L. & POL’Y REV. 803, 823 (2007).

11. See Toxic Substances Control Act § 22, 15 U.S.C. § 2621 (2006); Clean Air Act § 188(b), 42 U.S.C. § 7418(b) (2006); Comprehensive Environmental Response, Compensation, and Liability Act § 120(j)(1), 42 U.S.C. § 9620(j)(1) (2006); Resource Conservation and Recovery Act § 6001(a), 42 U.S.C. § 6961(a) (2006); Coastal Zone Management Act § 307(c)(1)(B), 16 U.S.C. § 1456(c)(1)(B) (2006).

12. See REAL ID Act § 102(c), 8 U.S.C. § 1103 note (2006); 15 U.S.C. § 2621; 42 U.S.C. § 7418(b); 42 U.S.C. § 9620(j)(1); 42 U.S.C. § 6961(a); 16 U.S.C. § 1456(c)(1)(B).

13. *Defenders of Wildlife v. Chertoff*, 527 F. Supp. 2d 119, 126–27 (D.D.C. 2007).

14. *Mistretta v. United States*, 488 U.S. 361, 372 (1989).

15. *Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457, 474 (2001).

nondelegation precedent has never required Congress to define, for example, 'how 'necessary' was necessary enough.'"¹⁶

At first glance, both the holding in *Defenders of Wildlife* and Secretary Chertoff's decision to invoke the broad authority granted by section 102 are unpalatable from the standpoint of environmental protection. However, the court's holding is legally sound in light of Supreme Court precedent, and Secretary Chertoff's waiver decision is similarly justified given the Department of Homeland Security's mission "[to] lead the unified national effort to secure America[, to] prevent and deter terrorist attacks and protect against and respond to threats and hazards to the Nation[, and to] secure our national borders while welcoming lawful immigrants, visitors, and trade."¹⁷ Charged with the responsibility to provide for the United States' national security, and given authority by Congress to waive laws, if necessary, to carry out that responsibility, Secretary Chertoff acted predictably in the face of project-halting litigation and in response to a congressional cue to "ensure expeditious construction of barriers and roads"¹⁸ along the United States' border with Mexico.

Given both the acceptable behavior of the court and Secretary Chertoff, and the environmentally troublesome outcome, it is apparent that section 102 itself is the source of mischief in *Defenders of Wildlife*. Why did Congress choose to enact such a broad and sweeping waiver provision? Although interest group politics and rent-seeking certainly could have influenced the passage of section 102, this Note focuses on the role human behavior plays in the crafting of legislation that must balance environmental integrity and national security.

Behavioral science research shows us that in the post-9/11 world, our ability to objectively perceive risk is altered by our knowledge of terrorist attacks and by our exposure to media coverage of the terrorist threat the United States faces.¹⁹ When faced with cognitively difficult risk evaluation tasks, we often resort to heuristics, or short-cuts, in the decision-making process, that both increase our confidence in our risk assessments and bias the decisions we make in light of those assessments.²⁰ Because individuals perceive events as more likely to occur if instances of those events are easier to recall, Congress' deliberation over section 102 was likely biased by an overestimation of both the risk of terrorists sneaking into the United States across the Mexican border and

16. *Defenders of Wildlife*, 527 F. Supp. 2d at 127 (quoting *Am. Trucking*, 531 U.S. at 475).

17. U.S. DEPARTMENT OF HOMELAND SECURITY, ONE TEAM, ONE MISSION, SECURING OUR HOMELAND: U.S. DEPARTMENT OF HOMELAND SECURITY STRATEGIC PLAN, FISCAL YEARS 2008–2013 3 (2008), available at http://www.dhs.gov/xlibrary/assets/DHS_StratPlan_FINAL_spread.pdf.

18. REAL ID Act § 102(c), 8 U.S.C. § 1103 note (2006).

19. See, e.g., PAUL SLOVIC, THE PERCEPTION OF RISK 105, 109; Cass R. Sunstein, *On the Divergent American Reactions to Terrorism and Climate Change*, 107 COLUMBIA L. REV. 503, 507 (2007).

20. SLOVIC, *supra* note 19, at 105; Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCI. 1124, 1124 (1974).

the likelihood that environmental litigation could delay fence construction in a way that would increase the chance of terrorists actually doing so.²¹ Given that identifying the proper balance between national security and the environment in a certain set of circumstances is a complex policy question that requires fact intensive analysis beyond the scope of this Note, my purpose instead is to identify a potentially significant hiccup in the legislative process that might make it difficult, if not impossible, for Congress to properly identify that balance.

To investigate the possibility that Congress's deliberation over section 102 was skewed by cognitive biases, I evaluate the history of environmental compliance waivers predicated on national security concerns, the potential role of heuristics in the lawmaking process, and why heuristics make balancing environmental and national security concerns particularly difficult. Based on this analysis, I consider several options for increasing rationality in Congress when heuristics pose a threat to rational lawmaking. Finally, I suggest a few options that might help Congress avoid or minimize the effects of heuristics on lawmaking.

I. ENVIRONMENTAL WAIVERS IN THE NAME OF NATIONAL SECURITY:
PRE-9/11 WAIVER PROVISIONS, RISING TENSION BETWEEN MILITARY
AND ENVIRONMENTAL INTERESTS, AND POST-9/11 WAIVER PROVISIONS

Waiver provisions that may be invoked in response to national security concerns are a common component of environmental laws. They are also a common topic of debate amongst both military officials and environmentalists. Military officials often claim that the waiver provisions contained in environmental laws are too cumbersome to use, while environmentalists claim that those waiver provisions unfairly allow the military to evade environmental compliance requirements.²² This debate, exemplified by *Defenders of Wildlife*, reached a fever-pitch after 9/11, when Congress crafted new waiver provisions premised on national security concerns.

A. *Early Waiver Provisions*

Tension between national security and environmental protection is not new. Congress drafted all of the basic federal environmental laws, except the National Environmental Policy Act (NEPA), to contain some sort of provision allowing environmental compliance to be waived in extraordinary circumstances.²³ While such provisions may increase the political viability of environmental laws, they also reflect a need for flexibility in circumstances

21. See SLOVIC, *supra* note 19, at 105.

22. See *infra* Part I.B.

23. Babcock, *supra* note 5, at 110.

where a threat to national security might temporarily supercede threats to environmental integrity.

These early waiver provisions share several common characteristics, and the Clean Air Act's waiver provision provides an example of all of these characteristics:

*The President may exempt any emission source . . . if he determines it to be in the paramount interest of the United States to do so. . . . Any exemption shall be for a period not in excess of one year. . . . The president shall report each January to the Congress all exemptions from [the CAA] during the preceding calendar year, together with his reason for granting such an exemption.*²⁴

First, most of these waivers name the President as the sole person authorized to invoke the waiver.²⁵ Second, these waivers almost invariably contain triggering language such as “in the interest of national defense” or “in the paramount interest of the United States” that explicitly recognizes a threat to national security as the sole justification for invocation.²⁶ Third, many of these waiver provisions impose a time limit on any exemptions granted.²⁷ Finally, these waivers often impose a requirement that the person authorized to invoke the waiver report to Congress both her decision to invoke the waiver and the rationale behind that decision.²⁸

These common characteristics minimize the deleterious environmental effects of waiver invocation in a number of ways. First, they help minimize frivolous waiver invocation by requiring those seeking to employ the waiver to explain to Congress how environmental compliance would threaten national security. They also act to limit the situations in which the waiver is invoked by requiring authorization by the President or some other high-ranking official. By including time-limits, they further limit the potential for abuse by requiring those who employ the waiver to periodically re-evaluate its necessity.

B. Historical Tension Between the Military and Environmentalists

Despite the existence of these waiver provisions, military officials have complained repeatedly about “encroachment” and its negative effect on

24. Clean Air Act (CAA) § 188(b), 42 U.S.C. § 7418(b) (2006) (emphasis added).

25. For waiver provisions authorizing the president to grant an exemption, see, e.g., Toxic Substances Control Act § 22, 15 U.S.C. § 2621 (2006); Clean Air Act § 188(b), 42 U.S.C. § 7418(b) (2006); Comprehensive Environmental Response, Compensation, and Liability Act § 120(j)(1), 42 U.S.C. § 9620(j)(1) (2006); Resource Conservation and Recovery Act § 6001(a), 42 U.S.C. § 6961(a) (2006); Coastal Zone Management Act § 307(c)(1)(B), 16 U.S.C. § 1456(c)(1)(B) (2006).

26. For waiver provisions that employ such triggering language, see 15 U.S.C. § 2621; 42 U.S.C. § 7418(b); 42 U.S.C. § 9620(j)(1); 42 U.S.C. § 6961(a); 16 U.S.C. 1456(c)(1)(B).

27. See 42 U.S.C. § 7418(b); 42 U.S.C. § 9620(j)(1); 42 U.S.C. § 6961(a).

28. See 15 U.S.C. § 2621; 42 U.S.C. § 7418(b); 42 U.S.C. § 9620(j)(1); 42 U.S.C. § 6961(a).

military readiness.²⁹ The DOD defines encroachment as the “cumulative result of any and all outside influences that inhibit necessary training and testing,”³⁰ including “the impacts of growth and environmental requirements.”³¹ Thus far, DOD has failed to produce empirical evidence to back up its claim that environmental compliance harms its ability to prepare troops for combat, but it has cited numerous anecdotal examples demonstrating that environmental compliance forces alterations in its training regimes. These anecdotes include, for example, the prohibition on digging fox holes and the requirement that vehicles drive single file in protected habitat at Camp Pendleton, California;³² restricted operations on the Barry M. Goldwater Range in southwest Arizona to protect the endangered Sonoran Pronghorn;³³ expensive “workarounds” at Fort Bragg, North Carolina and Fort Irwin, California designed to protect the red-cockaded woodpecker and Desert Tortoise, respectively;³⁴ and, most notably, the forced cessation of various submarine sonar training exercises in the Pacific Ocean due to the potential impacts of sonar on marine mammals.³⁵ Motivated by this perceived reduction in training effectiveness, military officials continually lobbied Congress prior to 9/11 to grant it more encompassing, more easily invoked exemptions than those already in existence.³⁶

Despite the military’s pleas for relaxed environmental compliance requirements, environmentalists appeared to be on the verge of requiring full military compliance with all federal environmental laws in the summer of 2001.³⁷ With the June 2001 introduction of MERA in Congress and Puerto Rico’s request that the Navy stop bombing exercises on Vieques Island, momentum seemed to be shifting in favor of environmental groups.³⁸ MERA

29. See, e.g., Burke, *supra* note 10, at 805.

30. Everett Willard et al., *Environmental Law and National Security: Can Existing Exemptions in Environmental Laws Preserve DOD Training and Operational Prerogatives without New Legislation?*, 54 A.F.L. REV. 65, 65 & n.1 (2004).

31. *Id.* at 65.

32. *Id.*

33. *Id.* at 66.

34. *Id.*

35. All limits on sonar training were lifted by the Supreme Court in *Winter v. NRDC*, 129 S. Ct. 365, 370 (2008). See also Kiamos, *supra* note 5, at 485–87 (discussing the delayed deployment of Low Frequency Active Sonar due to litigation by environmental groups).

36. See Burke, *supra* note 10, at 811.

37. Bethurem, *supra* note 9, at 123.

38. *Id.* at 111, 123. The United States bought approximately 26,000 acres on Vieques Island (out of its 33,000 total acres) during World War II. Cesar Ayala, *From Sugar Plantations to Military Bases: the U.S. Navy’s Expropriations in Vieques, Puerto Rico, 1940–45* 5, available at <http://www.sscnet.ucla.edu/soc/faculty/ayala/vieques/Papers/06ayalacentro.pdf> (unpublished manuscript) (last visited April 11, 2009). Although the land was originally purchased to provide safe haven to the British Navy, if necessary, the United States retained the land after the war. *Id.* The U.S. Navy used this land for bombing exercises and rented the land out to foreign militaries for the same purpose. *Id.* In 2003, in response to vigorous local and international protest, the Navy left Vieques, and the former bombing ranges are now managed as a national wildlife refuge by the U.S. Fish and Wildlife Service. Dana Canedy, *Navy Leaves a Battered Island, and Puerto Ricans Cheer*, N.Y. TIMES, May 2, 2003, available

“would [have] eliminated all the defense and national security exceptions and exemptions from all environmental laws, and ma[d]e the DOD accountable for environmental compliance on the exact same basis as any private citizen or corporation” by completely waiving sovereign immunity and unitary executive privilege.³⁹ Although MERA’s introduction appeared to signal progress in the environmentalists’ battle to increase military environmental compliance, that momentum was checked when the bill died in the House Judiciary Committee in July 2001 and disappeared following the 9/11 attacks.⁴⁰

After 9/11, DOD stepped up its efforts to obtain new waivers and exemptions from environmental laws by introducing the Readiness and Range Preservation Initiative (RRPI) in 2002.⁴¹ To justify its request for relaxed environmental compliance requirements, similar to its arguments pre-9/11, the military claimed that compliance with environmental laws decreased its readiness for combat by limiting activity on its training ranges.⁴² Explaining shortcomings the military perceived in the early waiver provisions, DOD spokesman Glenn Flood remarked that “asking the President to grant an exemption every time the military needs to train is not practical.”⁴³ As Representative Bob Barr’s statement in a 2002 hearing before the House Committee on Government Reform shows, at least some in Congress responded favorably to DOD’s arguments:

When things go wrong on the battlefield, people, and the importance of the Marine Mammal Protection Act, the Migratory Bird Treaty Act, or the Noise Control Act pale in comparison. I have yet to speak to a soldier, sailor, airman, or Marine who would prefer a migratory bird or marine mammal merit badge to coming home in one piece from the battlefield. The United States is at war and we need to proceed with that in mind.⁴⁴

Although the RRPI only brought about new waiver provisions in the MBTA, DOD eventually gained new waiver provisions in the MMPA and ESA through the National Defense Authorization Act of 2004.⁴⁵ Together, these changes to the MBTA, MMPA, and ESA reflect a post-9/11 change in Congress’s willingness to legislate in favor of national security over environmental integrity.

at <http://www.nytimes.com/2003/05/02/us/navy-leaves-a-battered-island-and-puerto-ricans-cheer.html?sec=&spon=&scp=15&sq=vieques%20navy%20withdrawal&st=cse&pagewanted=1> (last visited April 11, 2009).

39. Bethurum, *supra* note 9, at 123.

40. See Babcock, *supra* note 5, at 109 n.12.

41. Willard, *supra* note 30, at 66.

42. Burke, *supra* note 10, at 806.

43. *Id.* (quoting Felicity Barringer, *Pentagon is Pressing to Bypass Environmental Laws for War Games and Arms Testing*, N.Y. TIMES, Dec. 28, 2004, at A18).

44. Burke, *supra* note 10, at 807 (quoting *Critical Challenges Confronting National Security—Continuing Encroachment Threatens Force Readiness: Hearing Before the H. Comm. on Gov’t Reform*, 107th Cong. 7–8 (2002) (statement of Rep. Bob Barr, Vice Chairman, House Comm. on Govt. Reform)).

45. Willard, *supra* note 30, at 67–68; Babcock, *supra* note 5, at 127–28.

*C. Post-9/11 Waiver Provision Amendments**1. MBTA*

The MBTA was amended in 2002 so that its prohibition on taking migratory birds no longer applies to incidental takes resulting from military readiness activities.⁴⁶ To implement this amendment, U.S. Fish and Wildlife Service (FWS) promulgated regulations that allow the military to incidentally take migratory birds, provided that

- 1) it consults with FWS “to develop and implement appropriate conservation measures” when it determines that a military readiness activity “may result in a significant adverse effect on a population of migratory bird species;” and
- 2) FWS finds that take is not incompatible with “one or more of the migratory bird treaties” to which the United States is a party.⁴⁷

2. MMPA

The MMPA was amended in 2004 in three critical ways.⁴⁸ First, the definition of “harassment” now includes fewer activities with respect to military readiness actions.⁴⁹ Second, the MMPA now allows incidental take of marine mammals during military readiness activities without restricting that take to “small numbers” or a “specified geographical region.”⁵⁰ Finally, the MMPA now authorizes the Secretary of Defense to exempt “any action or category of actions undertaken by the [DOD] or its components from compliance with any requirements of [the MMPA], if the secretary determines it is necessary for national defense.”⁵¹

3. ESA

In 2004, Congress amended the ESA to reduce the impact of critical habitat designations on military readiness activities. The ESA now requires the Secretary of the Interior to consider the impact on “national security” when designating critical habitat.⁵² It also prohibits the Secretary of the Interior from designating critical habitat on “any lands or other geographical areas owned or controlled by the [DOD], or designated for its use” if that land is subject to an

46. Burke, *supra* note 10, at 853.

47. *Id.* at 854 (quoting 50 C.F.R. § 21.15(a)–(b) (2007)).

48. *Id.* at 824–25.

49. *Id.* at 824.

50. *Id.*

51. *Id.* at 825.

52. *Id.* at 839.

integrated natural resources management plan that the Secretary deems beneficial to the species in question.⁵³

4. *REAL ID Act Section 102*

Although not related to military encroachment concerns specifically, section 102 of the REAL ID Act resulted from a similar concern that requiring compliance with environmental laws could hamper the Department of Homeland Security's ability to protect our national security.⁵⁴ Section 102 amended the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) in two important ways.⁵⁵ While IIRIRA already allowed waiver of NEPA and ESA compliance for border fence construction projects, the addition of section 102 drastically expanded that waiver authority by allowing the Secretary of Homeland Security to "waive all legal requirements" he deems necessary "to ensure expeditious construction of barriers and roads" along the United States' border with Mexico.⁵⁶ Section 102 also places a limitation on judicial review so that a district court judgment is only reviewable upon petition for certiorari to the Supreme Court.⁵⁷ *Defenders of Wildlife* stems from Secretary Chertoff's decision to invoke section 102 to streamline border fence construction in Arizona.⁵⁸

D. *Defenders of Wildlife v. Chertoff*

In September of 2007, the Department of Homeland Security (DHS) began border fence, road, and drainage structure construction in the San Pedro Riparian National Conservation Area (SPRNCA) in Arizona.⁵⁹ The Bureau of Land Management (BLM), which manages the SPRNCA, granted DHS a perpetual right of way for the fencing project after completing an Environmental Assessment as required under NEPA and concluding that the border fence project would have no significant impact on the environment.⁶⁰ *Defenders of Wildlife* originated when environmental groups Defenders of Wildlife and Sierra Club challenged the legal adequacy of BLM's environmental analysis.⁶¹ Two weeks after the district court found that plaintiffs were likely to succeed on the merits and issued a temporary

53. *Id.*

54. The REAL ID Act amended several immigration laws governing, among other things, visa eligibility, asylum, and the standards that must be met in order to obtain a drivers' license. 109 Pub. L. 13, 119 Stat. 231 (2005).

55. See *Defenders of Wildlife v. Chertoff*, 527 F. Supp. 2d 119, 122 (D.D.C. 2007).

56. See Real ID Act § 102, 8 U.S.C. § 1103 note (2006).

57. *Id.*

58. *Defenders of Wildlife*, 527 F. Supp. 2d at 121–22.

59. *Id.* at 121.

60. *Id.*

61. *Id.*

restraining order barring further construction in the SPRNCA, Secretary Chertoff invoked section 102 of the REAL ID Act and waived NEPA along with virtually all major federal environmental laws as they pertained to construction of border fences through the SPRNCA.⁶² Accordingly, the court vacated the restraining order and the environmental groups amended the complaint to challenge the constitutionality of section 102.⁶³

Specifically, the environmental groups argued that the waiver provision violated the separation of powers principle by delegating legislative power to a politically-appointed executive branch official.⁶⁴ To support this argument, plaintiffs cited *Clinton v. City of New York*, in which the Supreme Court struck down as unconstitutional the Line Item Veto Act of 1996.⁶⁵ The Line Item Veto Act allowed the President to remove specific spending items from bills passed by Congress, and the Court held that it unconstitutionally violated the bicameralism and presentment requirements of Article I of the Constitution because it essentially allowed the President to amend Acts of Congress by repealing specific provisions.⁶⁶ The environmental groups analogized section 102 to the Line Item Veto Act, arguing that Chertoff's waiver invocation amounted to a repeal of laws like NEPA that would otherwise apply to the border fence construction projects. The court dismissed this logic for two reasons.⁶⁷ First, unlike the Line Item Veto Act, section 102 provided no authority for the Secretary to "change the text of [a] duly enacted statute[]." ⁶⁸ Second, the court found that exercise of the waiver did not amount to a "partial repeal" of the laws in question because such reasoning would render virtually any waiver provision unconstitutional.⁶⁹

The court also rejected the environmental groups' separation of powers argument on a more general basis, noting that "the Supreme Court has widely permitted the Congress to delegate its legislative authority to the other branches, so long as the delegation is accompanied by sufficient guidance."⁷⁰ Finding that section 102's requirement that laws only be waived if "necessary to ensure expeditious construction of barriers and roads" provided the Secretary with such sufficient guidance, the court declined to hold that section 102 was an "impermissibly standardless delegation."⁷¹ To support this conclusion, the court cited *Whitman v. American Trucking Ass'ns*, in which the Supreme Court upheld the constitutionality of the statute delegating the Environmental

62. *Id.* at 121–22.

63. *Id.* at 123.

64. *Id.*

65. *Clinton v. City of New York*, 524 U.S. 417, 421 (1998).

66. *Id.* at 438.

67. *Defenders of Wildlife v. Chertoff*, 527 F. Supp. 2d 119, 124 (D.D.C. 2007).

68. *Id.* (quoting *Clinton*, 524 U.S. at 446–47).

69. *Id.*

70. *Id.* at 126 (internal quotations omitted).

71. *Id.* at 127.

Protection Agency (EPA) the authority to set air quality standards at a level “requisite to protect public health.”⁷² In that case, the Court noted that the nondelegation doctrine does not require Congress to define “how necessary [is] necessary enough.”⁷³

Furthermore, the court disagreed with the plaintiffs’ contention that section 102 is overly broad.⁷⁴ Because the waiver authority can only be exercised for the “narrow purpose prescribed by Congress,” the court found unremarkable the waiver provision’s failure to specify a certain set of laws that may be waived.⁷⁵ To bolster this holding, the court noted that delegation of legislative authority may be broader when it concerns areas where the executive branch already holds significant constitutional authority.⁷⁶ Because border fence construction relates to foreign affairs and immigration control and the executive branch typically exercises independent authority in those areas, the court reasoned that Congress’ delegation could be broader than might be acceptable if only domestic affairs were involved.⁷⁷ In light of this and its treatment of the environmental groups’ other separation of powers arguments, the court upheld the constitutionality of section 102.⁷⁸

Like section 102, the post-9/11 amendments to the MBTA, ESA, and MMPA are likely permissible delegations of authority to the executive branch. Although a waiver provision like section 102 may appear alarmingly broad, the nondelegation doctrine hinges largely on the premise that broad delegated authority is necessary for the government to operate efficiently. As a safeguard against potential abuses of this broad authority, nondelegation jurisprudence assumes that legislative actors who confer too much power on the executive branch will be held politically accountable for their actions at the ballot box. However, this safeguard fails to address bounded rationality and its potential to undermine the legislative process. Over approximately the last thirty-five years, advances in behavioral science have revealed that in many circumstances, humans fail to behave in ways that conform to rational actor theory.⁷⁹ If both Congress and the electorate are subject to the same bias-inducing influences, then political accountability alone cannot cabin delegation of authority to the executive branch. Avoiding potentially problematic delegations of authority therefore requires that we increase the rationality of congressional action. Increasing congressional rationality requires an understanding of the cognitive mechanisms at play when legislation like section 102 is created.

72. *Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457, 473 (2001).

73. *Id.* at 475 (internal quotations omitted).

74. *Defenders of Wildlife v. Chertoff*, 527 F. Supp. 2d 119, 128–29 (D.D.C. 2007).

75. *Id.* at 128 (internal quotations omitted).

76. *Id.* at 129.

77. *Id.*

78. *Id.*

79. *See infra* Part II.

II. HEURISTICS, BIAS, AND THEIR POTENTIAL ROLE IN THE LEGISLATIVE PROCESS

The rational actor model is a prevalent component of many legislative process theories.⁸⁰ It posits that individuals compare the costs and benefits of different courses of action, and then choose the course of action that allows them to accrue the maximum benefit while suffering the lowest costs.⁸¹ While the rational actor model has led to increased understanding of the legislative process, advances in our understanding of human behavior now require us to modify the classic rational actor model.⁸² Recognizing that humans are not perfectly rational all of the time, theorists developed the notion of bounded rationality and have studied both the reasons why we depart from rationality and the ways in which we do so.⁸³

Although some theorists are devoted to the rational actor model as a cornerstone of economic analysis, others acknowledge that “bounded rationality is not a departure from economic reasoning, but a needed extension of it.”⁸⁴ In other words, bounded rationality is not inconsistent with economic analysis; it actually increases the explanatory power of economic analysis. While the rational actor model attempts to explain the choices people make, studying the ways in which people depart from rationality is really a study of the processes that lead to a given choice.⁸⁵ Studies of instances where decision makers depart from rationality show that people are more likely to resort to shortcuts in the decision-making process when the costs of inquiry and decision-making are high.⁸⁶ For example, when little information exists to help a decision maker evaluate his choices, he is more likely to abbreviate or alter the decision-making process.

Because legislators likely face such decision-making challenges, understanding the legislative process requires consideration of the mechanisms that may affect decision-making when the costs of inquiry and decision-making are high. As will be discussed below, these mechanisms include the availability heuristic, which leads decision makers to judge easily recalled events as more likely to occur; availability cascades, which are feedback mechanisms in which the individual’s perception of how likely an event is to occur both influences and is influenced by society’s perception of that event’s likelihood; and

80. See, e.g., DANIEL FARBER & PHILIP FRICKEY, *LAW AND PUBLIC CHOICE: A CRITICAL INTRODUCTION* (1991).

81. See RICHARD POSNER, *ECONOMIC ANALYSIS OF LAW* 3 (7th ed. 2007).

82. Cass R. Sunstein, *Behavioral Analysis of Law*, 64 U. CHI. L. REV. 1175, 1175. For a discussion of several alternatives to the classic rational actor model, see Chris Starmer, *Developments in Non-Expected Utility Theory: The Hunt for a Descriptive Theory of Choice Under Risk*, 38 J. ECON. LIT. 332 (2000).

83. See generally, *BOUNDED RATIONALITY: THE ADAPTIVE TOOLBOX* (Gerd Gigerenzer & Reinhard Selten, eds., 2002).

84. John Conlisk, *Why Bounded Rationality?*, 34 J. ECON. LIT. 669, 672 (1996).

85. Starmer, *supra* note 82, at 350.

86. Sunstein, *supra* note 82, at 1187.

probability neglect, which leads decision makers to overestimate the probability of occurrence for events that create strong, negative emotional responses.

A. *Mechanisms Affecting the Decision-Making Process*

1. *The Availability Heuristic*

Heuristics are general inferential rules that people use to evaluate risk.⁸⁷ “[P]eople rely on a limited number of heuristic principles which reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations.”⁸⁸ For example, if instances of a certain event are easy to imagine or recall, then people often judge that event more likely to occur.⁸⁹ This effect is known as the availability heuristic.⁹⁰ When using the availability heuristic, people substitute easy questions like “Can I think of examples of this?” for more challenging questions like “What realities do the data actually show?”⁹¹ Availability affects the decision-making process by “influenc[ing] perceptions of the risk traits” that affect how acceptable a decision maker judges a risk to be.⁹²

Not only does the availability heuristic play a prominent role in decision-making,⁹³ its prominence makes intuitive sense:

Availability is an ecologically valid clue for the judgment of frequency because, in general, frequent events are easier to recall or imagine than infrequent ones. However, availability is also affected by various factors which are unrelated to actual frequency. If the availability heuristic is applied, then such factors will affect the perceived frequency of classes and the subjective probability of events. Consequently, the use of the availability heuristic leads to systematic biases.⁹⁴

The availability of an event is affected by retrievability, imaginability, memorability, and how compelling the event is in the mind of the decision maker.⁹⁵

The more easily retrievable an event, the more available it is to decision makers. Furthermore, the familiarity and salience of an event affect its

87. SLOVIC, *supra* note 19, at 105.

88. Tversky & Kahneman, *supra* note 20, at 1124.

89. SLOVIC, *supra* note 19, at 105.

90. *Id.*

91. Cass R. Sunstein, *What's Available? Social Influences and Behavioral Economics*, 97 NW. U. L. REV. 1295, 1297 (2002).

92. Timur Kuran & Cass R. Sunstein, *Availability Cascades*, 51 STAN. L. REV. 683, 712 (1998).

93. *Id.* (“The availability heuristic rules the roost.”).

94. Amos Tversky & Daniel Kahneman, *Availability: A Heuristic for Judging Frequency and Probability*, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 163, 164 (Daniel Kahneman et al. eds., 1982).

95. *Id.* at 178; Tversky & Kahneman, *supra* note 20, at 1127–28; SLOVIC, *supra* note 19, at 119.

retrievability.⁹⁶ For example, a decision maker is more likely to retrieve instances of an event if it involved someone she knows.⁹⁷ Similarly, if a decision maker sees an event, she is more likely to retrieve it than if she merely reads about the event.⁹⁸ We are also more likely to retrieve recent occurrences of an event than we are to retrieve earlier occurrences of an event.⁹⁹

Like retrievability, the more imaginable and compelling an event, the more available it is to decision makers.¹⁰⁰ For example, a compelling event like the 2004 tsunami in southeast Asia is likely to be highly available, in part because knowledge of the devastation caused by the tsunami powerfully affected many people. Because we are able to imagine certain events with an ease that does not reflect their actual probability of occurring, imaginability plays an important role in how we evaluate probability by making certain events disproportionately available.¹⁰¹ Behavioral scientists have found that compelling scenarios are likely to constrain future thinking so that it becomes difficult to conceive of scenarios that lead to different outcomes.¹⁰²

Studies have also revealed that, even when armed with full information, people are more likely to remember portions of that information that have been repeated.¹⁰³ For example, in one study participants received background information about several court cases and were either given no additional information, a reiteration of the background information favoring the plaintiff, a reiteration of the background information favoring the defendant, or reiterations of background information favoring both the plaintiff and defendant.¹⁰⁴ The participants who received only background information favoring one party were strongly biased in favor of that party.¹⁰⁵ Thus, when reiteration makes an event more memorable, it also makes it more available to the decision maker.

Media coverage of an event also often increases availability,¹⁰⁶ whether by making an event more retrievable, imaginable, compelling, or memorable.¹⁰⁷ For example, thanks to frequent media coverage of homicides, studies show that people judge murder to be a more frequent cause of death than disease when, in reality, disease takes fifteen times as many lives.¹⁰⁸

96. Tversky & Kahneman, *supra* note 20, at 1127.

97. *Id.*

98. *Id.*

99. *Id.*

100. *Id.* at 1128; Tversky & Kahneman, *supra* note 94, at 178.

101. Tversky & Kahneman, *supra* note 20, at 1128.

102. Tversky & Kahneman, *supra* note 94, at 178.

103. Amos Tversky & Daniel Kahneman, *Conflict Resolution: A Cognitive Perspective*, in BARRIERS TO CONFLICT RESOLUTION 44, 46 (Kenneth Arrow et al. eds., 1995).

104. *Id.*

105. *Id.*

106. SLOVIC, *supra* note 19, at 106.

107. *See id.* at 107.

108. *Id.*

2. *Availability Cascades*

The availability cascade model describes the complex interactions between individuals and society that influence availability. Inherent in this model is the assumption that “perceptions of a risk and its acceptability are framed socially.”¹⁰⁹ “Identifiable social mechanisms govern the availability of information,” which shapes both judgments about risk magnitude and acceptability.¹¹⁰ At the same time, “consequent individual actions and expressions affect the availability of information.”¹¹¹ In other words, society affects the way that individuals perceive risk and individuals affect the way risks are perceived by society. These two components, the effect of society on the individual and the effect of the individual on society, create a feedback mechanism that influences information availability.¹¹²

Through this feedback mechanism, society affects the individual largely through public discourse and media coverage.¹¹³ Public discourse includes the “ensemble of publicly expressed or conveyed sentiments, ideas, and information that individuals use as gauges of what others know and want,” and it influences our risk judgments, risk preferences, and policy preferences.¹¹⁴ While public discourse plays a more prominent role, media coverage of different risks also impacts how we perceive the likelihood of those risks.¹¹⁵ The way in which media coverage and public discourse portray a certain risk affects the public’s judgment of that risk’s acceptability.¹¹⁶ For example, if public discourse and media coverage do not adequately convey the significance of a loss of environmental integrity in border areas, then the public is less likely to see environmental integrity as something that should be preserved.¹¹⁷

The other half of this feedback loop is formed by the influence of the individual on society.¹¹⁸ Individuals influence others in society both by sharing information and exuding reputational pressure.¹¹⁹ When someone lacks the skills, background, or time to form his own judgments about a certain risk, he is more likely to accept the truth of the dominant opinion on the matter, as expressed to him by others.¹²⁰ Similarly, individuals may pressure others to accept a particular interpretation of a risk in order to preserve their reputation in

109. Kuran & Sunstein, *supra* note 92, at 711.

110. *Id.* at 712.

111. *Id.*

112. *Id.* at 715.

113. *Id.*

114. *Id.*

115. *Id.* at 718.

116. *Id.* at 712.

117. *See id.*

118. *Id.* at 715.

119. *Id.* at 721, 727.

120. *Id.* at 721–22.

certain groups.¹²¹ Because of the influence of information sharing and reputational pressure, “millions of individuals may develop erroneous beliefs simply by giving each other reasons to adopt and preserve them.”¹²² In this way, availability cascades are a powerful tool used by interest groups, activists, and politicians to shape public views.¹²³

3. *Probability Neglect*

While availability affects risk perception by leading us to rank events that are more easily recalled as more likely to occur, probability neglect leads us to overestimate the risk of events that create a strongly negative emotional response. Probability neglect bias occurs when the emotional response generated by a certain outcome affects our perception of the likelihood of that outcome.¹²⁴ “[W]hen intense emotions are engaged, people tend to focus on the adverse outcome, not on its likelihood,” and this results in overestimation of the risk associated with that outcome.¹²⁵ Although there may be a normative distinction between the availability heuristic and probability neglect, they often lead to similar results and are indistinguishable from one another.¹²⁶

Nevertheless, probability neglect highlights the role that emotions play in the decision-making process. For example, a study of the effects of emotional response on willingness to pay to avoid certain outcomes found that emotional response to a given outcome influences our desire to avoid that outcome.¹²⁷ When asked about two events that both had a low probability of occurring, individuals were willing to pay more to avoid the event that elicited a strong negative emotional response.¹²⁸ Thus, “unfavorable [emotional] reactions may form the basis for judgments of high risk and low benefit, and favorable [emotional] reactions may form the basis for judgments of low risk and high benefit.”¹²⁹

Although it may be difficult to distinguish between probability neglect and the availability heuristic, “[a] good deal of legislation and regulation can be explained partly by reference to probability neglect when emotions are running high.”¹³⁰ Thus, thanks to the strong emotional response the 9/11 attacks elicit, probability neglect may bear heavily on the decision-making process in the

121. *Id.* at 727.

122. *Id.* at 713.

123. *Id.*

124. Cass R. Sunstein, *Probability Neglect: Emotions, Worst Cases, and Law*, YALE L.J. 61, 62–63 (2002).

125. *Id.* at 62; See Sunstein, *supra* note 91, at 1297–98.

126. Sunstein, *supra* note 124, at 82.

127. Yuval Rottenstreich & Christopher K. Hsee, *Money, Kisses, and Electric Shocks: On the Affective Psychology of Risk*, 12 PSYCHOL. SCI. 185, 188 (2001).

128. *Id.*

129. *Id.* at 189.

130. Sunstein, *supra* note 124, at 98.

post-9/11 Congress because “[t]errorist incidents create a severe risk of probability neglect.”¹³¹

B. The Impact of These Mechanisms on Decision Making

When availability effects and probability neglect alter the risk assessment process, they may also affect decisions about how to deal with the risks in question. For example, through “the biasing effects of memorability and imaginability,” the availability heuristic may curb objective discussions of risk or lull decision makers into complacency.¹³² People are also overly confident in judgments made using heuristics, and this overconfidence can pose yet another barrier to objective discussions of risk.¹³³ Moreover, the effects of probability neglect place decision makers in a position where they will pay an irrationally high cost to avoid a very low probability hazard that elicits a strong emotional response.¹³⁴

As a body of individual decision makers, Congress is vulnerable to the effects of heuristics, and this vulnerability has significant political implications.¹³⁵ For example:

[a]vailability cascades create serious problems for democracy and raise important issues for democratic theory. They create a danger that apparently democratic outcomes will rest on misinformation and be unrepresentative, in any normatively attractive sense, of citizens’ actual beliefs, desires, and judgments.¹³⁶

Because of the powerful effect heuristics can exert over the democratic process, individuals and groups may use political rhetoric to garner support for legislation by increasing the availability of certain risks.¹³⁷ Although “judgments about qualitative differences among risks”¹³⁸ hold a legitimate place in the political process, those judgments should be strongly grounded in “an accurate understanding of the facts.”¹³⁹

Given the potentially pervasive effect of availability and probability neglect on decision-making and the democratic process, inquiry into congressional decision-making should consider the role these mechanisms might play in the creation of new laws like the waiver provision at issue in *Defenders of Wildlife*. The next Part focuses on how and why availability and probability neglect might impact the democratic process more often when

131. *Id.* at 100.

132. SLOVIC, *supra* note 19, at 107.

133. *Id.* at 109; Tversky & Kahneman, *supra* note 103, at 46.

134. Sunstein, *supra* note 91, at 1304; Rottenstreich & Hsee, *supra* note 127, at 188–89.

135. See Kuran & Sunstein, *supra* note 92, at 751.

136. *Id.* at 736.

137. See Burke, *supra* note 10, at 809.

138. Kuran & Sunstein, *supra* note 92, at 738.

139. *Id.*

Congress must balance the often competing objectives of environmental protection and national security.

III. BALANCING ENVIRONMENTAL INTEGRITY AND NATIONAL SECURITY:
THE IMPLICATIONS OF HEURISTICS AND BIASES

Because they often trigger the use of heuristics and biases, traits associated with environmental and national security concerns increase both the likelihood that environmental concerns will be valued lowly and the likelihood that national security concerns will be valued highly.¹⁴⁰ This creates a systematic bias against environmental protection when environmental and national security concerns are in tension with one another, and the passage of section 102 provides an example of how this bias surfaces in Congress.

A. *Heuristics Cut Against Objective Consideration
of Environmental Concerns*

When something is difficult to value, decision makers are more likely to use heuristics when determining its worth because heuristics reduce the complexity of the evaluative process.¹⁴¹ “Valuing exposures to environmental losses is made more demanding by their uncertain impacts, by the lack of market prices, and by the rarity and delayed consequences of many potential effects.”¹⁴² Accordingly, Congress is likely to resort to heuristics when attempting to assign worth to environmental risks.¹⁴³

Because of the unique characteristics of environmental harms, they are often less available to decision makers than other types of harm like human, environmental, or economic harm.¹⁴⁴ For example, the physically and temporally distant nature of environmental harms makes them less available because we are more likely to retrieve more recent or salient events.¹⁴⁵ While environmental harms with high visibility like the Exxon Valdez oil spill or Love Canal are highly available because of their salience, most environmental

140. See Sunstein, *supra* note 19, at 537 (“Because of the attacks of 9/11, an available incident drives people’s probability judgments with respect to terrorism, whereas there is no such incident with respect to climate change. The vividness and salience of the incident helps to ensure continuing concern about terrorism-related concerns.”).

141. Sunstein, *supra* note 82, at 1187.

142. Robin Gregory et al., *Valuation and Risk: Valuing Risks to the Environment*, 545 ANNALS AM. ACAD. POL. & SOC. SCI. 54, 55. See also Richard J. Lazarus, *Restoring What’s Environmental About Environmental Law in the Supreme Court*, 47 U.C.L.A. L. REV. 703, 745–48 (noting that environmental harms are physically and temporally distant, highly uncertain, have multiple causes, and produce non-economic and non-human effects).

143. See Sunstein, *supra* note 82, at 1187.

144. See Gregory et al., *supra* note 142, at 55; Lazarus, *supra* note 142, at 745–48; Tversky & Kahneman, *supra* note 20, at 1127.

145. See Gregory, *supra* note 142, at 55; Lazarus, *supra* note 142, at 745–48; Tversky & Kahneman, *supra* note 20, at 1127. See also Sunstein, *supra* note 19, at 533 (noting that the idea of climate change may not conjure up any images of its effects).

harms do not fall into this category. The non-economic and non-human nature of environmental harms also decreases their salience and thus their availability.¹⁴⁶ Because environmental harms are not highly available to law makers,¹⁴⁷ they are unlikely to fare well when Congress crafts legislation that makes trade-offs between the acceptability of environmental harms and other, more available harms.

Although environmental groups work to create availability cascades focused on exposing the perils of environmental harms,¹⁴⁸ such cascades might be countered by reputational pressure that legislators may feel to appeal to certain groups.¹⁴⁹ For example, if a legislator perceives that supporting certain environmental legislation will risk alienating some of his supporters whose business interests would be negatively impacted by that legislation, then he might withhold his support, even if he sees the importance and validity of the legislation.¹⁵⁰ By continually reminding legislators of the downsides of environmental regulation, media coverage and public discourse focusing on recent or continuing environmental litigation may also thwart pro-environment availability cascades, either by enhancing reputational pressure to oppose regulation, or by creating a competing anti-regulation availability cascade, or both.¹⁵¹

*B. Heuristics and Biases Lead to High Valuation
of National Security Concerns*

Like environmental harms, it can be difficult to value national security risks. For example, it is extremely difficult to place a value on a human life.¹⁵² Similarly, it is likely difficult to estimate the non-human costs to the nation of suffering another terrorist attack. As a result of these difficulties, individuals are prone to resort to heuristics when assessing national security risks.¹⁵³

146. See Gregory, *supra* note 142, at 55; Lazarus, *supra* note 142, at 745–48; Tversky & Kahneman, *supra* note 20, at 1127.

147. See Sunstein, *supra* note 19, at 539 (“With climate change, by contrast, no salient incident triggers public concern.”).

148. Anytime a special interest group makes a press release or runs a publicity campaign, it is attempting to create an availability cascade that will result in greater public awareness of a certain issue. For example, in recent months, the Center for Biological Diversity (“CBD”) ran a vigorous publicity campaign against the Bush administration’s proposed changes to the Endangered Species Act. As part of this campaign, CBD filed numerous press releases and sent several electronic mail notices to its members informing them of the content of the proposed changes and the progress of the rule-making process employed to implement those changes. Center for Biological Diversity, http://www.biologicaldiversity.org/campaigns/esa_in_peril/index.html (last visited March 12, 2009).

149. See Kuran & Sunstein, *supra* note 92, at 727.

150. See *id.*

151. See *id.* at 712–13, 718.

152. See, e.g., W. Kip Viscusi & Joseph E. Aldy, *The Value of a Statistical Life: A Critical Review of Market Estimates Throughout the World*, 27 J. RISK & UNCERTAINTY 5 (2003).

153. See Sunstein, *supra* note 82, at 1187.

Because terrorist attacks also heighten the risk of probability neglect, the chance of objectively valuing national security risks is low.¹⁵⁴

Two factors make the threat of a terrorist attack highly available to Americans. First, images and memories of the 9/11 attacks are readily available to most Americans because, on some level, we personally experienced them in 2001.¹⁵⁵ Whether through media coverage or by actually seeing the twin towers fall in New York City or the Pentagon attacked, the 9/11 attacks were extremely visible to Americans. This visibility consequently increases the availability of the threat of a future terrorist attack in the minds of most Americans by making terrorist attacks highly salient.¹⁵⁶ Distinct from the visibility of 9/11, for Americans who were involved in the attacks, who knew others involved in the attacks, or who are familiar with New York City or Washington, D.C., the availability of the threat of a future terrorist attack is increased by their familiarity with the events of 9/11.¹⁵⁷

Second, public discourse and media coverage of the 9/11 attacks and subsequent war on terror likely fueled an availability cascade that increased the availability of a terrorist attack and therefore inflated the probability assigned to the threat of a future attack.¹⁵⁸ For members of Congress, this availability cascade could be particularly powerful due to prevalent discussion in the executive branch of the threat of future terrorist attacks,¹⁵⁹ the political pressure exerted by the executive and other members of Congress to be “tough on terror,” and the similar reputational pressure exerted by constituents.¹⁶⁰ The military’s repeated claims that encroachment impedes its ability to provide for our national security could also contribute to this availability cascade by making the country appear more vulnerable to future terrorist attacks.¹⁶¹

C. *These Concepts Applied to the Passage of REAL ID Act Section 102*

Inspection of post-9/11 media coverage of the threat of terrorist attack and congressional deliberation over section 102 shows that heuristics and biases likely influenced Congress’ decision to draft section 102. First, post 9/11 media coverage was replete with stories about the threat of future terrorist attacks.¹⁶² Coverage dealt with a broad array of terrorism-related issues, and several

154. Sunstein, *supra* note 124, at 100 (“Terrorist incidents create a severe risk of probability neglect.”).

155. Sunstein, *supra* note 19, at 534.

156. *See id.* at 537; Tversky & Kahneman, *supra* note 20, at 1127.

157. *See* Sunstein, *supra* note 19, at 537.

158. Kuran & Sunstein, *supra* note 92, at 718, 721, 727, 751.

159. Sunstein, *supra* note 19, at 539 (noting the Bush White House’s repeated references to 9/11).

160. For evidence of these pressures, see *infra* Part IV.C.

161. *See supra* Part II.B; Kuran & Sunstein, *supra* note 92, at 713.

162. *See, e.g., CNN Breaking News: Terrorist Threat High* (CNN broadcast Oct. 18, 2002); Daniel Pipes, Editorial, *Terrorist Threat is Bigger Than Al-Qaeda: The Ultimate Worry is Not Al-Qaeda, But a Diffuse, Global Militant Islamic Ideology*, CHI. SUN-TIMES, May 28, 2003, at 49.

highlighted ways in which either the government or U.S. citizens were not prepared for a future terrorist attack. For example, in March of 2005, ABC News covered the threat of terrorist attack by small, private airplanes.¹⁶³ A year earlier, *The Washington Post* published a piece detailing the ways in which Americans were simply denying the real possibility of a future terrorist attack on the United States.¹⁶⁴ Although these are only two instances, they outline a broader theme in post-9/11 media coverage: highlighting the threat of future terrorist attacks on the United States. The high availability of the threat of future attacks created by media coverage may have led legislators to overvalue the risk that terrorists might sneak across the United States-Mexico border.¹⁶⁵ It also may have led constituents to place excessive pressure on legislators to guard against future terrorist attacks by passing legislation like section 102.

Debate over section 102 in Congress also reveals the role that availability cascades may have played in the drafting and passage of section 102. In discussion of section 102 on the floor of the Senate, Senator Robert Byrd quoted then-National Security Advisor Condoleezza Rice's statement that "[t]here is no secret that al-Qaida will try to get into this country They're going to keep trying on our southern border. They're going to keep trying on our northern border."¹⁶⁶ Senator Byrd also quoted then-Deputy Secretary of Homeland Security Admiral James Loy's statement that intelligence "strongly suggest[s]" that al-Qaida "has considered using the Southwest border to infiltrate the United States. Several al-Qaida leaders believe operatives can pay their way into the country through Mexico and also believe illegal entry is more advantageous than legal entry for operational security reasons."¹⁶⁷ Congressional discussion of executive branch comments on the risk that terrorists might enter the United States unlawfully via our border with Mexico highlights the role that availability cascades may play in increasing the perceived threat of future terrorism in the United States in the minds of legislators.¹⁶⁸

The Committee Conference Report on the REAL ID Act indicates that concerns over project-halting litigation also influenced the drafting and passage of section 102:

Despite the existing [IIRIRA] waiver provision [which allows for waiver of ESA and NEPA to the extent the Attorney General deems necessary to ensure expeditious construction of border barriers and roads], construction

163. *ABC World News Tonight: The Terrorist Threat to U.S. Air Traffic* (ABC broadcast, Mar. 15, 2005).

164. Stanley I. Greenspan, Editorial, *We're Not Ready for A New 9/11*, WASH. POST., July 12, 2004, at A17.

165. See Tversky & Kahneman, *supra* note 20, at 1127.

166. 151 Cong. Rec. S3983 (daily ed. Apr. 20, 2005) (statement of Sen. Byrd).

167. *Id.*

168. See Kuran & Sunstein, *supra* note 92, at 713.

of the San Diego area barriers has been delayed due to a dispute involving other laws Continued delays caused by litigation have demonstrated the need for additional waiver authority with respect to other laws that might impede the expeditious construction of security infrastructure along the border¹⁶⁹

As the statement shows, prior litigation made the possibility of future litigation over fence construction very real, thus making a potentially negative aspect of environmental regulation highly available to legislators and increasing the likelihood that Congress might heavily weigh this risk.¹⁷⁰

Despite the potentially overwhelming effect of heuristics and biases working in favor of passage of section 102, some legislators expressed concern about the remarkable breadth of the waiver provision. For example, in Senate discussion of the REAL ID Act Conference Report, Senator Hillary Clinton (D-NY) noted that

The REAL ID Act also gives total control to the Secretary of Homeland Security to waive legal requirements that stand in the way of constructing barriers and roads along the border This is quite a tremendous grant of authority to one person in our Government. I am sure there are some reasons why we would want to expedite a process to try to have better security along our borders. But to give this unchecked responsibility to the Secretary, with limited judicial review, that is a slippery slope, my friends. We are sliding further and further toward absolute power and the removal of our checks and balances.¹⁷¹

Ultimately, this concern did not resonate with enough members of Congress to override the effects of heuristics and biases on Congress' risk assessment.

While section 102 could represent a rational choice by Congress to counter a threat of terrorist entry into the United States via its border with Mexico, the legislative history does not support this hypothesis. Rather than relying on information suggesting that fence construction posed only slight potential environmental harm, that the chance of actual terrorist entry via the United States-Mexico border was high, or that the potential delays posed by environmental litigation or compliance would delay fence construction in a way that would increase the border's vulnerability to terrorist entry, Congress instead relied on incendiary remarks from executive branch officials.

Importantly, these remarks do not bear directly on the question of whether broad waiver authority is actually necessary to reduce the threat of terrorist entry into the United States; they revealed little, if anything, about the real probability of terrorist entry from Mexico or whether fence construction would reduce that probability. Instead, they focused only on the executive branch's idea that Al Qaeda considered the United States-Mexico border a vulnerable

169. 151 Cong. Rec. H2871 (daily ed. May 3, 2005).

170. See SLOVIC, *supra* note 19, at 105.

171. 151 Cong. Rec. S4815 (daily ed. May 10, 2005) (statement of Sen. Clinton).

area where its operatives could gain entry into the United States. Thus, Congress's reliance on this information makes it seem likely that passage of section 102, while potentially rational, was not the product of rational legislative behavior.

"Risk-reduction legislation is often fueled by identifiable crises,"¹⁷² and the passage of section 102 exemplifies the ways in which availability and probability neglect could influence the legislative process. Ideally, we could rely on the political process to curb the passage of sweeping delegations of authority to the executive branch, but both Congress and the electorate are subject to the influence of probability neglect and availability. Therefore, other mechanisms that might increase congressional rationality are required when heuristics and biases may taint the legislative process. Although it is probably impossible, and perhaps even undesirable, to achieve full rationality in Congress, certain improvements in the legislative process might minimize the harm done in situations where heuristics and biases are likely to play a role in the legislative process.

IV. INCREASING RATIONALITY IN CONGRESS

Given the military's vast landholdings, the role that land often plays as a haven for wildlife, and the ecosystem services provided by that land, there are a multitude of opportunities for national security and environmental concerns to clash with one another.¹⁷³ Although tension between the military and environmentalists is certainly not new, the 9/11 attacks and the government's response to those attacks rekindled the longstanding clash between these old foes.¹⁷⁴ Because of the effects of availability and probability neglect on the valuation of environmental and national security risks, "elected officers ordinarily face strong incentives to respond to excessive fear, perhaps by enacting legislation that cannot be justified by any kind of rational accounting."¹⁷⁵ While resolution of environmental/national security conflicts may result in sacrificing the environment in some instances, it need not happen in every instance. To avoid continual subordination of environmental concerns, Congress must use the legislative process to attempt to identify a "workable balance" between environmental protection and providing for our national defense.¹⁷⁶ Commentators have noted a few possible strategies that might result in proper valuation of environmental and national security risks.

172. Sunstein, *supra* note 19, at 537.

173. The military owns and/or manages over 37 million acres in the United States. Wheeler, *supra* note 5, at 441.

174. Babcock, *supra* note 5, at 107.

175. Sunstein, *supra* note 124, at 102. *See also* Kuran & Sunstein, *supra* note 92, at 727.

176. Babcock, *supra* note 5, at 109.

A. *The Precautionary Principle*

Professor Marcilynn Burke discusses the possibility that Congress might effectively balance national security and environmental concerns by applying the precautionary principle.¹⁷⁷ Burke distinguishes between “stronger” and “weaker” forms of the principle.¹⁷⁸ According to Burke, the strongest form of the precautionary principle mandates that “when a government is balancing and integrating scientific, economic, political, and social values for the purpose of risk management, environmental protection is to be paramount.”¹⁷⁹ In its weaker form, the precautionary principle provides that legislators should “take account of the consequences, good and bad, of right or wrong decisions on all key variables where the actual value is known” and ask both what will happen if they guess wrong about all the unknowns, and what will happen if they guess correctly about all of the unknowns.¹⁸⁰

Use of the precautionary principle when balancing environmental and national security concerns is ultimately untenable for a number of reasons. Although it might encourage more weighty consideration of environmental concerns, it will not negate weighty consideration of national security concerns.¹⁸¹ In fact, use of the precautionary principle arguably led to passage of section 102 and the post-9/11 amendments to the ESA, MMPA, and MBTA.¹⁸²

Because of the uncertainty inherent in any analysis of environmental and national security risks, the precautionary principle cannot identify a “workable balance” between the two. Rather, use of the principle would dictate maximizing both objectives, but maximizing one will inevitably lead to sacrificing the other, to some degree. Accordingly, any attempt to employ the precautionary principle when both environmental and national security concerns are involved would likely lead to legislative paralysis.¹⁸³ As noted by Professor Sunstein, “it stands as an obstacle to regulation and nonregulation, and to everything in between.”¹⁸⁴

177. Burke, *supra* note 10, at 870.

178. *Id.* at 870–72.

179. *Id.* at 870–71 (quoting Phil Kannan, *The Precautionary Principle, More than a Cameo Appearance in United States Law?*, 31 WM. & MARY ENVTL. L. & POL’Y REV. 409, 418 (2007)).

180. Burke, *supra* note 10, at 872 (quoting JOHN KUNICH, *ARK OF THE BROKEN COVENANT: PROTECTING THE WORLD’S BIODIVERSITY HOTSPOTS* 173–84 (2003)).

181. This premise of this argument is that Congress already employs the precautionary principle when considering national security issues. *See* Burke, *supra* note 10, at 872.

182. Professor Burke suggests that DOD implicitly urged Congress to apply the precautionary principle when it argues that “in the face of unspecified, yet inevitable terrorist attacks...the military should be free of certain obligations to engage in uninhibited training.” *Id.*

183. Cass R. Sunstein, *Beyond the Precautionary Principle*, 151 U. PA. L. REV. 1003, 1008 (2002) (“[R]isks are on all sides of social situations. Any effort to be universally precautionary will be paralyzing, forbidding every imaginable step, including no step at all.”).

184. *Id.* at 1028.

When evaluating environmental and national security concerns, where risks are often uncertain, the heightened level of certainty required under the precautionary principle would act to magnify the already uncertain nature of the risks involved and thus increase the likelihood the legislators would use heuristics and biases when evaluating those risks.¹⁸⁵ Aware of the uncertainty surrounding environmental and national security concerns, yet forced to make a trade-off decision between two very different types of risks, legislators would be forced to resort to heuristics and biases to manufacture the certainty required to support legislation under the precautionary principle. Because of the increased availability of national security concerns, resorting to heuristics and biases would likely favor those concerns over environmental integrity.¹⁸⁶

B. Risk Oversight Committee

Professors Timur Kuran and Cass Sunstein suggest a few strategies aimed at minimizing the effects of the availability heuristic on Congress. First, they suggest that Congress create a risk oversight committee that would compile information and prioritize risks.¹⁸⁷ This committee would operate as a check on short-term pressures, and its goals would be to rank risks, publicize misallocations, and initiate legislative corrections.¹⁸⁸

While a congressional risk oversight committee might reduce uncertainty and increase accountability in some ways, this committee would still be subject to the same pressures other congressional committees experience. Without expertise in risk evaluation, committee members could easily fall prey to availability cascades created by interest groups. Kuran and Sunstein argue that the effect of special interest groups would be minimized because the committee would rank risks relative to one another.¹⁸⁹ According to this idea, the relative ranking of risks would incentivize other interest groups to organize around neutralizing the availability cascades created by the groups that are perceived to dominate the committee.¹⁹⁰

However, this argument fails on three grounds. First, it relies on interest group pressure to maintain a neutral balance, but this approach cannot stand where disparately situated interest groups fall on either side of an issue. Where national security and environmental interests are pitted against one another,

185. *Id.* at 1043.

186. Professor Sunstein notes that the precautionary principle appeals to people in part because of the effect of the availability heuristic on risk assessment. *Id.* at 1009. Because availability makes certain risks “stand out,” like the threat of a terrorist attack, a precautionary Congress may be more willing to legislate in ways that it perceives will negate such risks. In that scenario, environmental concerns will frequently lose out.

187. Kuran & Sunstein, *supra* note 92, at 752.

188. *Id.* at 752–53.

189. *Id.*

190. *Id.* at 753.

environmental groups will likely fail to counteract pressure exerted by the executive branch because environmental groups lack the resources and access available to entities like DOD or DHS. If anything, relying on interest groups to maintain a neutral balance in the committee would merely preserve the current status quo.

Second, it relies on an implicit assumption that the committee would be able to gather enough information so that it can accurately rank risks relative to one another. However, if risks are difficult to characterize, as environmental and national security risks are, there will likely be substantial ambiguity in how those risks might be characterized relative to one another. Through the use of availability cascades, interest groups could capitalize on this ambiguity to obtain favorable risk assessments, thus defeating the risk committee's purpose.

Finally, if risk oversight committee members were also members of other congressional committees subject to interest group pressure, those committee members could be under extreme pressure to sway risk judgments in favor of those interest groups. This possibility, in concert with the other ways in which a risk oversight committee could fall capture to interest group politics, illustrates a key weakness in Kuran and Sunstein's proposal: because of their political vulnerability, members of Congress are not well-positioned to objectively assess and rank risks relative to one another.

C. *Cost-Benefit Analysis*

Professors Kuran and Sunstein also see cost-benefit analysis ("CBA") as a valuable tool to neutralize the effects of availability on risk valuation.¹⁹¹ According to Kuran and Sunstein, CBA is "an instrument for producing relevant information and a common-sensical brake on measures that would do little good and possibly considerable harm."¹⁹² Like a risk oversight committee, CBA might help reduce uncertainty, but it is also subject to several problems. For example, as Professor Sunstein acknowledges, CBA can easily be manipulated because of uncertainty in the valuation of variables frequently used in the analyses.¹⁹³ When risks involving a high degree of uncertainty are involved, such as environmental and national security risks, the potential for manipulation would increase. Furthermore, in subject areas with a high potential for manipulation like environmental and national security risks, CBA could insulate Congress from criticism by providing seemingly empirical reasons for action that may be quite arbitrary.

Beyond its potential for manipulation, CBA is also criticized for its reliance on questionable valuations of human life and its use of "willingness to

191. *Id.*

192. *Id.*

193. See Cass R. Sunstein, *The Arithmetic of Arsenic*, 90 GEO. L.J. 2255, 2290-92 (2002).

pay” to estimate risk severity.¹⁹⁴ Human life valuation has obvious implications in the context of analyzing national security risks, and using willingness to pay to estimate risk severity also invites reliance on heuristics and biases. As noted by Professor Sunstein, willingness to pay to reduce a risk does not track the probability of occurrence of that risk.¹⁹⁵ The nature of both environmental and national security risks increases the chance that heuristics and biases would influence willingness to pay estimates.¹⁹⁶ Accordingly, if heuristics and biases permeate the CBA process, then any cost-benefit estimates Congress might use to evaluate national security and environmental risks would appear objective yet still be based on highly subjective risk valuations. Thus, CBA cannot escape the pitfalls of heuristics and biases, but it can create the false appearance of objectivity and rational risk assessment.

While the three approaches reviewed above might encourage information gathering and focused consideration of risks, they do little to minimize the role of heuristics and biases in the legislative process. Kuran and Sunstein’s suggestion of creating a risk oversight committee is most promising because of its focus on information generation and risk prioritization, but their envisioned structure of the committee could severely restrict its usefulness. Alternatively, the effect of heuristics and biases on the legislative process could be reduced either by increasing objectivity in congressional risk assessment or by legislating under the presumption that waiver provisions should include certain checks on unrestrained executive power, such as time limits and reporting requirements.

D. Potential Heuristic and Bias-Reducing Mechanisms

1. Standing Risk Assessment Council

Congress should create a standing risk assessment council in the National Academy of Sciences that would collect information and characterize risks. The council should be composed primarily of experts in risk assessment, but it should also draw on the Academy’s members with expertise in particular fields, depending on the nature of the risks being assessed. Either Congress or the council itself could identify risks requiring council assessment. Information and risk assessments produced by the council should be made available to both Congress and the general public.

Creating a standing risk assessment council in this way would build on the positive aspects of Kuran and Sunstein’s risk oversight committee model, yet avoid potential pitfalls caused by its reliance on the political process to control

194. *E.g.*, Lisa Heinzerling, *Markets for Arsenic*, 90 GEO. L.J. 2311 (2002).

195. Sunstein, *supra* note 124, at 72.

196. *See infra* Parts IV.A.–B.

committee capture. Although the council could experience interest group pressure, the members' status as risk assessment experts and scientists could partially combat this problem. While it may be necessary to institute certain "abstention" rules to ensure that council members do not participate in risk assessment when it would present a conflict of interest, the council's permanent nature and lack of political accountability should leave it relatively insulated from interest group pressure.

The effectiveness of the risk assessment council as a check on heuristics and biases largely depends on the role information access plays in determining when we rely on heuristics and biases. While the information and risk assessments produced by the council would provide no guarantee against the use of heuristics and biases in Congress, it could minimize the frequency of their use. Because the information and risk assessments produced by the council would also be available to the public, reputational pressure felt by legislators might also be reduced.

2. *Role of Traditional Waiver Provision Elements*

Congress should look to previous delegations of waiver authority to the executive branch for guidance on how waiver provisions should be structured. Although they certainly do not ensure rationality, waiver provision elements like time limits and reporting requirements act as a functional safeguard against the effects of potentially irrational legislative behavior. Thus, in the face of doubt, waiver provisions should be drafted to include time limits and recording or reporting requirements in order to guard against executive abuse of the delegated power. Congress should only consider omission of time limits and reporting or recording requirements when it can clearly characterize a grave threat posed by inclusion of these characteristics.

3. *Accurate Characterization of Risks to be Considered*

In instances where the executive branch officer charged with waiver authority is being asked to consider certain risks, those risks should be explicitly identified in the waiver provision. For example, in section 102, the Secretary of Homeland Security is given the authority to "waive all legal requirements [he] determines necessary to ensure expeditious construction of the barriers and roads" along the United States' border with Mexico.¹⁹⁷ Although Congress was actually concerned with the threat of illegal terrorist entry via the Mexican border, section 102 is phrased so that the Secretary must consider a risk one step removed from the threat of illegal terrorist entry: failure to expeditiously construct the border fence. Phrasing the provision to acknowledge Congress's ultimate concern could lessen the probability that the

197. Real ID Act § 102(c), 8 U.S.C. § 1103 note (2006).

waiver would be invoked unnecessarily. Recording and reporting requirements should also be crafted so that the waiver-invoking authority must explain how her decision to invoke the waiver relates to the risk Congress hoped to avoid. This reporting requirement can encourage accurate characterization of risks, which in turn could act as a functional safeguard against potentially irrational legislative action.

CONCLUSION

Section 102 of the REAL ID Act provides a lens through which one can examine the legislative process and the ways that our cognitive limitations may corrupt that process. Although this Note's analysis focused on the role of human behavior in the crafting of legislation, it did not fully consider the role that interest group politics and rent-seeking might play in the development of waiver provisions like section 102. Consideration of reputational pressures that function in availability cascades partially accounts for the effects of interest groups and rent-seeking, but that certainly does not provide a full analysis of their potential impact.

Those concerns aside, this Note highlights the potentially pervasive role of heuristics and biases in the legislative process. Evidence showing the prevalence of heuristics and biases in human decision-making dictates that we address their role in the legislative process. In the age of the administrative state, where congressional delegations of authority abound, their potential impact is even greater. To ensure good governance and instill voter confidence in Congress's ability to effectively solve complex problems, we must take steps to increase congressional rationality or implement functional safeguards to mitigate the effects of irrational legislative action.

When a certain risk elicits a strong emotional reaction, or when Congress must legislate around a risk about which we know very little, the use of heuristics and biases in the deliberative process may lead to unnecessarily broad grants of authority to the executive branch. Because we are more likely to resort to the use of heuristics and biases when risks are highly uncertain, increasing the information available to Congress by creating and using a standing risk assessment council may reduce the effect of heuristics and biases on the legislative process. In the absence of adequate information, exercising caution by including time limits and reporting or recording requirements in waiver provisions can act to minimize the negative impact of heuristics and biases. Accurate characterization of risks may also minimize their negative impact by reducing unnecessary invocation of waivers. Although none of these solutions can fully counteract the effects of heuristics and biases, they bring

focus to questions we should consider and may put us on the path to more rational lawmaking.

We welcome responses to this Note. If you are interested in submitted a response for our online companion journal, *Ecology Law Currents*, please contact ecologylawcurrents@boalt.org. Responses to articles may be viewed at our website, <http://www.boalt.org/elq>.