

## The Idea of Pollution

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In 1966, Mary Douglas wrote a book entitled *Purity and Danger: A Cultural Analysis of Concepts of Pollution and Taboo*.<sup>1</sup> Douglas was a social anthropologist who explored the structure of culture, drawing both upon extensive fieldwork in Africa and a synthesis of ideas developed in many other scholarly disciplines. In *Purity and Danger*, Douglas considered the nature of pollution ideas in the context of traditional native cultures that were concerned about ritual cleanness. In doing so, she built upon the work of earlier anthropologists who had studied pollution beliefs, and her work is now recognized as one of the leading anthropological works of the twentieth century. In 2006, she became the rare scholar to be knighted for her work, shortly before her death last year.<sup>2</sup>

Legal scholars have employed the anthropological understanding of pollution to analyze a range of impacts upon human cultures and communities. William Eskridge has characterized opposition to gay rights as based upon pollution beliefs.<sup>3</sup> Dan Kahan and Donald Braman have relied upon *Purity and Danger* to propose a theory of “cultural cognition” regarding disputed factual beliefs that inform public policy.<sup>4</sup> Robin West has

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<sup>1</sup> MARY DOUGLAS, *PURITY AND DANGER: AN ANALYSIS OF CONCEPTS OF POLLUTION AND TABOO* (1966).

<sup>2</sup> See *New Year Honors 2006*, THE TIMES (London), Dec. 3, 2006, at 51 (noting that Douglas had been selected as a Dame Commander in the British Empire); *The Hundred Most Influential Books Since the War*, TIMES LITERARY SUPPLEMENT, Oct. 6, 1995, at 39 (listing *Purity and Danger*); see generally RICHARD FARDON, *MARY DOUGLAS: AN INTELLECTUAL BIOGRAPHY* (1999).

<sup>3</sup> See William N. Eskridge, Jr., *Pluralism and Distrust: How Courts Can Support Democracy by Lowering the Stakes of Politics*, 114 YALE L.J. 1279, 1296-98 (2005); William N. Eskridge, Jr., *Lawrence v. Texas and the Constitution of Disgust and Contagion*, 57 FLA. L. REV. 1011 (2005). Cf. *Paula Zahn Now* (CNN television broadcast, Feb. 15, 2007) (quoting former NBA basketball player John Amaechi’s remark that anti-gay comments “pollute the air”).

<sup>4</sup> Dan M. Kahan & Donald Braman, *Cultural Cognition and Public Policy*, 24 YALE L. & POL’Y REV. 149 (2006).

challenged feminist writings which suggest that women's sexual desires are polluted.<sup>5</sup> Geoffrey Miller has examined the alternating views of circumcision as remedying pollution or as pollution itself.<sup>6</sup> Mona Lynch has explored the picture of sex offenders as pollution, describing how "the sex offender's pollution inflicts not only the unfortunate, innocent victim, but the entire social body."<sup>7</sup> Daniel Sharfstein has described the antebellum belief that one drop of colored blood polluted the white race.<sup>8</sup> Ann Kibbey cited the 1996 murder of six-year-old JonBenet Ramsey as an example of illicit sex as pollution.<sup>9</sup> Walter Otto Weyrauch and Maureen Anne Bell have studied the pollution beliefs of the Gypsies (or Roma), including the contamination of men by menstruating or pregnant women, general taboos against sex, hygienic concerns about food and bodily functions, and socially disruptive behavior.<sup>10</sup>

But none of this scholarship has addressed how the work of Mary Douglas impacts the most familiar kind of pollution: the air and water pollution that is the subject of environmental law. A closer examination of the idea of pollution can help answer numerous legal questions raised by environmental law. Can a river or lake be polluted by the addition of water taken from another river or lake?<sup>11</sup> Is home heating oil leaking from an underground storage tank a "pollutant" whose cleanup is excluded from an insurance coverage?<sup>12</sup> How should the law respond to Chief Justice Burger's contention that "every large billboard . . . adds to the visual pollution of the city. Pollution is not limited to the air we breathe and the water we drink; it can equally offend the eye and the ear."<sup>13</sup>

The Supreme Court's most watched recent environmental case centered on the

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<sup>5</sup> Robin L. West, *Law's Nobility*, 17 YALE J. L. & FEMINISM 385 (2005).

<sup>6</sup> Geoffrey P. Miller, *Circumcision: Cultural-Legal Analysis*, 9 VA. J. SOC. POL'Y & L. 497 (2002);

<sup>7</sup> Mona Lynch, *Pedophiles and Cyber-predators as Contaminating Forces: The Language of Disgust, Pollution, and Boundary Invasions in Federal Debates on Sex Offender Legislation*, 27 LAW & SOCIAL INQUIRY 529 (2002).

<sup>8</sup> Daniel J. Sharfstein, *Crossing the Color Line: Racial Migration and the One-Drop Rule, 1600-1860*, 91 MINN. L. REV. 592 (2007).

<sup>9</sup> Ann Kibbey, *Trial by Media: DNA and Beauty-Pageant Evidence in the Ramsey Murder Case*, 43 N.Y.L. SCHOOL L. REV. 691 (1999-2000).

<sup>10</sup> Walter Otto Weyrauch, *Autonomous Lawmaking: The Case of the "Gypsies"*, 103 YALE L.J. 323, 342 (1993).

<sup>11</sup> See *infra* at note 148.

<sup>12</sup> Yes, according to *Nascimento v. Preferred Mut. Ins. Co.*, 2008 U.S. App. LEXIS 1051 (1st Cir. Jan. 18, 2008). See generally *infra* at text accompany notes 151-160 (describing litigation concerning pollution exclusion clauses in insurance contracts).

<sup>13</sup> *Metromedia, Inc. v. City of San Diego*, 453 U.S. 490, 560-61 (1980).

meaning of “pollution.” Carbon dioxide (CO<sub>2</sub>) is the greenhouse gas whose emission is most frequently blamed for global warming. But is CO<sub>2</sub> a “pollutant” that EPA must regulate pursuant to the Clean Air Act (CAA)? CO<sub>2</sub> does not have the toxic effects associated with exposure to most air pollutants; indeed, CO<sub>2</sub> is an essential component of the earth’s atmosphere – in the proper quantity. Numerous states and environmental organizations insisted that CO<sub>2</sub> satisfied the CAA’s definition of a “air pollutant” as “any air pollution agent . . ., including any physical, chemical, . . . substance . . . emitted into . . . the ambient air . . .”<sup>14</sup> EPA disagreed, and the D.C. Circuit deferred to the agency’s judgment. But a 5-4 majority of the Supreme Court held that CO<sub>2</sub> falls within the plain language of the statutory definition of “pollutant.” “On its face,” Justice Stevens explained, “the definition embraces all airborne compounds of whatever stripe, and underscores that intent through the repeated use of the word ‘any.’ Carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons are without a doubt ‘physical [and] chemical . . . substance[s] which [are] emitted into . . . the ambient air.’”<sup>15</sup> Dissenting, Justice Scalia contended that “EPA’s conception of ‘air pollution’ -- focusing on impurities in the ‘ambient air’ ‘at ground level or near the surface of the earth’ -- is perfectly consistent with the natural meaning of that term.”<sup>16</sup> Thus a closely divided Court’s competing understanding of the fundamental environmental law term “pollution” promises to shape the regulatory response to climate change.

Other questions about pollution arise outside the context of environmental law and anthropology. The 1999 shootings at Columbine High School and other schools elicited countless assertions that violent movies and video games were polluting the culture, and most of the other candidates for the 2000 presidential election made sure to include cultural pollution on their list of evils to combat.<sup>17</sup> Princeton’s Robert George and environmental attorney Patricia Hynes have each developed the analogy between pornography and pollution.<sup>18</sup> The idea that the effect of excessive campaign

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<sup>14</sup> 42 U.S.C. § 7602(g).

<sup>15</sup> *Massachusetts v. EPA*, 127 S. Ct. 1438, 1460 (2007).

<sup>16</sup> *Id.* at 1477 (Scalia, J., dissenting).

<sup>17</sup> See, e.g., 145 CONG. REC. S4421 (daily ed. Apr. 29, 1999) (statement of Sen. Brownback) (describing violent video games as “cultural pollution”); *Federal Trade Commission Report on Marketing Violent Entertainment to Children: Hearing Before the Senate Commerce, Science, and Transportation Comm.*, 106th Cong. (2000) (testimony of Sen. Hatch) (stating that “[i]n Utah, we reclaim abandoned coal mines. Why can’t we even acknowledge that there has been a mental and moral waste dump created from our over infatuation with television, movies, and music?”); *CNN Crossfire* (CNN television broadcast, May 10, 1999) (interview with Rob Reiner, who acknowledged that “there’s no question that these violent movies that are made, poison the soul. They pollute the culture.”).

<sup>18</sup> See H. Patricia Hynes, *Pornography and Pollution: An Environmental Analogy*, in *PORNOGRAPHY: WOMEN, VIOLENCE AND CIVIL LIBERTIES* 384-97 (Catherine Itzin ed., 1992); Robert P. George, *The Concept of*

contributions and spending is to pollute the political system, rather than corrupt it, can be attributed to D.C. Circuit Judge J. Skelly Wright, whose article *Money and the Pollution of Politics: Is the First Amendment an Obstacle to Political Equality?* offered the possibility of exploring an alternative lens for examining the concerns about campaign finance.<sup>19</sup> The work of Keith Aoki documents the description of nineteenth century Chinese immigrants to the United States as pollution that threatened valuable natural resources, public morals, and public health.<sup>20</sup> Again, the common usage of pollution imagery invokes comparisons to environmental law that could yield fruitful discussions of the appropriate response to each type of pollution claim.

Part I of this article reviews the history of “pollution.” It begins with the etymology of the word “pollution,” which shows that “pollution” always possessed dual meanings: a broader meaning that encompassed a wide variety of things, and a narrower meaning that was limited to unwanted influences upon the natural environment. Part I then reviews the actual usage of “pollution” in literature, political debates, and law before the twentieth century. The broader meaning of pollution dominated throughout that era. The current popular connotation of pollution as a phenomenon limited to the air, water, or land did not emerge until the second half of the twentieth century. Even so, Part I demonstrates that the broader meaning persists. Pollution imagery is common in hostile work environment cases, it is often employed with respect to the failure to attain the purity desired in the process of enforcing criminal law, and judges occasionally invoke it in cases ranging from business disputes to proper judicial practice. Pollution continues to play an especially important role in anthropology, as illustrated by the work of Mary Douglas. This broader meaning of pollution affirms that the idea of pollution extends well beyond the familiar subjects of environmental law, which necessitates a consideration of what, then, pollution really is.

Part II considers what we mean by “pollution” in formulating public policy today. Environmental statutes, regulations, and treaties contain hundreds of definitions of “pollution,” but each of them collapses into one of three unsatisfactory approaches.

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*Public Morality*, 45 AM. J. JURIS. 17, 17-19 (2000).

<sup>19</sup> J. Skelly Wright, *Money and the Pollution of Politics: Is the First Amendment an Obstacle to Political Equality*, 82 COLUM. L. REV. 609 (1982). See also John Copeland Nagle, *Corruption, Pollution, and Politics*, 111 YALE L.J. 293 (2000) (reviewing ELIZABETH DREW, *THE CORRUPTION OF AMERICAN POLITICS* (1999)).

<sup>20</sup> Keith Aoki, “Foreign-ness” & Asian American Identities: *Yellowface, World War II Propaganda, and Bifurcated Racial Stereotypes*, 4 UCLA ASIAN PAC. AM. L.J. 1, 27-31 (1996). See also Stephen Lee, Note, *Citizen Standing and Immigration Reform: Commentary and Criticisms*, 93 CALIF. L. REV. 1479, 1479 (2005) (asserting that Mary “Douglas’ model provides a powerful analogy for understanding the United States’ federal immigration regime”).

One approach treats everything that is added to the environment as pollution, another approach tries to list every specific pollutant, while a third approach focuses upon the harms attributed to each purported pollutant. But each of these approaches fails to meaningfully distinguish pollution from its absence, as I explain in this section. Instead, I return to Mary Douglas and her conception of pollution beliefs as enforcing a society's desired boundaries. Indeed, Douglas and other anthropologists show that "pollution" is socially constructed: pollution means what we say it means. In environmental law, we often say that any harmful addition to the natural environment constitutes pollution. The task of analyzing pollution claims thus becomes the task of constructing our ideal environments and then describing which influences degrade them.

Part III demonstrates that claims of environmental pollution, cultural pollution, and the pollution beliefs analyzed by anthropologists each involve a "pollutant" entering an "environment" where it produces a harm. There is a very broad and variable understanding of the affected environments and the pollutants. What constitutes a clean environment is contested, as are the things that are said to pollute that environment. Part III first reviews the ways in which we conceive of different types of environments and the boundaries that surround them. I then consider the multiplicity of pollutants that can enter such environments, highlighting the many disparate pollution claims described in the anthropological literature.

This article concludes that a comprehensive understanding of the idea of pollution is only the beginning. The struggles of environmental law to identify the optimal response to pollution can be informed by how we think about – and how the law addresses – pollution claims in other contexts. Likewise, claims of cultural pollution from such things as hostile work environments, violent entertainment, and internet pornography can benefit from the lessons of nearly forty years of implementing the modern scheme of environmental laws. And in every instance, the law has much to learn from the problems of pollution that Mary Douglas examined so eloquently just over forty years ago.

## I. THE HISTORY OF POLLUTION

We have become accustomed to thinking of pollution exclusively in terms of environmental degradation. So accustomed, in fact, that references to cultural pollution, light pollution, spiritual pollution and other kinds of pollution besides

environmental pollution are sometimes dismissed as a mere rhetorical device. Consider the argument advanced by Kenneth Wilson, who complained in his acclaimed *Columbia Guide to Standard English* that the words “pollution” and “pollute” “are rapidly becoming overused” due to contemporary environmental concerns.<sup>21</sup> He contended that the literal definitions “invite figurative uses applied to any and all things that disgust or anger us. The literal senses of *pollute* and *pollution* are sufficiently varied to warrant our trying to protect them from the wear and tear of figurative overuse. *Noise pollution* and *polluting the thoughts of the young* or *the processes of government* are graphic figurative uses, but they’re becoming worn.”<sup>22</sup> Presumably Wilson would have been even more concerned that attorneys, gossip, postmodernism, the political atmosphere in Washington, and the Chicago Bulls without Michael Jordan have all been labeled “pollution.”<sup>23</sup>

But Wilson wrongly presupposed that the current understanding of pollution as a phenomenon involving the natural environment is the traditional core meaning of the word from which all outsiders should be excluded. “Pollution” has always had dual meanings: a broad reference to all sorts of effects upon human environments, and a more narrow focus upon natural environments. Historically, Wilson had it backwards: human environments were more likely than the natural environment to be described as “polluted” until less than a century ago. Even today, the more familiar connotation of pollution as involving the air or the water has not displaced the important role that the language of pollution plays in several areas of the law and in other scholarly disciplines, most notably anthropology. This historical and continued usage of “pollution” to describe a variety of objectionable influences rebuts any suggestion that any reference to pollution outside the environmental context is mere rhetoric.

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<sup>21</sup> KENNETH G. WILSON, *THE COLUMBIA GUIDE TO STANDARD AMERICAN ENGLISH* 336 (1993).

<sup>22</sup> *Id.* Similarly, a Scripps Institution of Oceanography official once speculated about “calorie pollution (too much sugar in one’s diet)” and “personnel pollution (too many half-occupied typists)”, warning that “as scientists and craftsmen, we should not misuse or overuse our tools or our words until they become so bent or so blunt that they lose their efficacy.” Ralph A. Lewin, *Pollution is a Dirty Word*, 231 *NATURE* 65 (1971).

<sup>23</sup> See Jay P. Moran, *Postmodernism’s Misguided Place in Legal Scholarship: Chaos Theory, Deconstruction, and Some Insights from Thomas Pynchon’s Fiction*, 6 *S. CAL. INTERDISC. L.J.* 155, 157, 165 (1997) (postmodernism); Richard Benedetto, *Next Senate Leader Must Cool It*, *THE TIMES UNION* (Albany, N.Y.), June 4, 2001, at A7 (the political atmosphere in Washington); Richard Cohen, *Cases of Imperfection in the Criminal-Justice System*, *SACRAMENTO BEE*, May 31, 1999, at B11 (attorneys); Jennifer Lock Oman, *Psychology Q and A Advice Column*, *GANNETT NEWS SERV.*, Dec. 16, 1997, at ARC (gossip); Peter May, *After Being on Top of the World, Ex-Bulls See Another Side*, *BOSTON GLOBE*, May 2, 1989, at D8 (the Chicago Bulls without Michael Jordan).

A. “Pollution” before the twentieth century

The word “pollution” was adopted by the Old French during the fourteenth century from the Latin word “polluere,” which means “to defile.”<sup>24</sup> By 1828, Noah Webster’s first dictionary listed five definitions of “pollution”:

1. The act of polluting.
2. Defilement; uncleanness; impurity; the state of being polluted.
3. In *the Jewish economy*, legal or ceremonial uncleanness, which disqualified a person for sacred services or for common intercourse with the people, or rendered any thing unfit for sacred use.
4. In *medicine*, the involuntary emission of semen in sleep.
5. In *a religious sense*, guilt, the effect of sin; idolatry, &c.<sup>25</sup>

The definitions of “pollute” and “polluting” were similar, with Webster citing Old Testament examples to illustrate three of the four meanings of “pollute.”<sup>26</sup> Effects upon the natural environment are at most implicit in these definitions of pollution. Conversely, Webster’s definitions easily accommodate the view that it is human environments that suffer from pollution.

References to “pollution” as occurring outside the natural environment dominated the usage of the word well into the twentieth century. For example, literary references to pollution nearly always involved an adverse affect upon humans or human environments. William Shakespeare’s plays contain numerous references to pollution. Joan La Pucelle accused King Henry VI of being “polluted with your lusts,”<sup>27</sup> Cassandra described “hot and peevish vows” as “polluted offerings,”<sup>28</sup> and Lucrece despaired of “my poor soul’s pollution” and advised that “no perfection is so absolute, That some impurity doth not pollute.”<sup>29</sup> Milton explained how God will “withdraw His presence from among” the sinful world “To leave them to their own polluted ways.”<sup>30</sup> In *Gulliver’s Travels*, Jonathan Swift described an ancient temple as “having been

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<sup>24</sup> See THE BARNHART CONCISE DICTIONARY OF ETYMOLOGY 582 (Robert K. Barnhart ed. 1995).

<sup>25</sup> 1 NOAH WEBSTER, AN AMERICAN DICTIONARY OF THE ENGLISH LANGUAGE 38 (1828) (emphasis original).

<sup>26</sup> *Id.*

<sup>27</sup> WILLIAM SHAKESPEARE, THE FIRST PART OF HENRY VI, act 5, sc. 4.

<sup>28</sup> WILLIAM SHAKESPEARE, TROILES AND CRESSIDA, act 5, sc 2.

<sup>29</sup> WILLIAM SHAKESPEARE, THE RAPE OF LUCRECE, in THE RIVERSIDE SHAKESPEARE 1732, 1735 (1974).

<sup>30</sup> JOHN MILTON, PARADISE LOST 651 (1667) (Alastair Fowler 2d ed., 1998) (Book XII, line 110).

polluted some years before by an unnatural murder.”<sup>31</sup> James Fenimore Cooper wrote that “heresies have polluted every church.”<sup>32</sup> Nathaniel Hawthorne’s *The Scarlet Letter* referred to “that mystery of a woman’s soul, so sacred even in its pollution.”<sup>33</sup> Henry Wadsworth Longfellow wrote of being “safe from sin’s pollution.”<sup>34</sup> Herman Melville referred to pollution in *Moby Dick*, where he extolled “sperm oil in its unmanufactured, unpolluted state” as “the sweetest of all oils.”<sup>35</sup> By contrast, there are few references to water pollution or air pollution in literary works before the twentieth century. In *Typee*, Melville described how “the savages” forced “the skipper” away from a stream because “his lips would have polluted it”<sup>36</sup> – hardly the kind of water pollution that inspired the Clean Water Act more than a century later. Perhaps the clearest suggestion of water pollution – or rather, its absence – appears in Hawthorne’s short story *Roger Malvin’s Burial*, where he described how a family “halted and prepared their meal on the bank of some unpolluted forest brook.”<sup>37</sup>

Theologians frequently employed the language of pollution. Indeed, one can view John Calvin’s entire theology through the lens of pollution, as revealed by the more than one hundred references to “pollution” in his sixteenth century *Institutes of the Christian Religion*.<sup>38</sup> Jonathan Edwards admonished that “[t]he fire of God is kindled by none so much as by the polluters of holy things.”<sup>39</sup> Timothy Dwight, the president of Yale, equated divorce with prostitution, writing that “To the Eye of God, those, who are polluted in each of these modes, are alike, and equally, impure, loathsome, abandoned wretches.”<sup>40</sup> Princeton seminary professor Charles Hodge wrote in his commentary on Paul’s letter to the Romans that “[s]in subjectively considered is pollution, a defilement of the soul.”<sup>41</sup> And the King James translation of the Bible itself – first published in 1611

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<sup>31</sup> JONATHAN SWIFT, *GULLIVER’S TRAVELS* ch. 1 (1726).

<sup>32</sup> JAMES FENIMORE COOPER, *THE PIONEERS* 129 (1823) (1991).

<sup>33</sup> NATHANIEL HAWTHORNE, *THE SCARLET LETTER* 66-67 (1850) (Oxford Univ. Press 1998).

<sup>34</sup> Henry Wadsworth Longfellow, *Resignation*, in *THE COMPLETE POETICAL WORKS OF HENRY WADSWORTH LONGFELLOW* 130 (1902).

<sup>35</sup> HERMAN MELVILLE, *MOBY DICK* 101 (1851) (Hershel Parker & Harrison Heyford, eds., 2002).

<sup>36</sup> HERMAN MELVILLE, *TYPEE* 327 (1846) (Quality Paperback Book, 1996).

<sup>37</sup> *Roger Malvin’s Burial* (1832), in NATHANIEL HAWTHORNE, *YOUNG GOODMAN BROWN AND OTHER TALES* 70 (Oxford Worlds Classics ed. 1998).

<sup>38</sup> See JOHN CALVIN, *INSTITUTES OF THE CHRISTIAN RELIGION passim* (1559) (Henry Beveridge trans., 1845).

<sup>39</sup> Jonathan Edwards, *A Warning to Professors*, in Jonathan Edwards, 2 *THE WORKS OF JONATHAN EDWARDS* 185 (Edward Hickman, ed., 10th ed. 1865).

<sup>40</sup> 3 TIMOTHY DWIGHT, *THEOLOGY; EXPLAINED AND DEFENDED, IN A SERIES OF SERMONS* 434 (6th ed. 1829).

<sup>41</sup> CHARLES HODGE, *THE COMMENTARY ON THE EPISTLE TO THE ROMANS* (1835).

– contains nearly fifty references to pollution, almost all contained in the Old Testament. Exodus reports God’s commandment that “if thou wilt make me an altar of stone, thou shalt not build it of hewn stone: for if thou lift up thy tool upon it, thou hast polluted it.”<sup>42</sup> The regulations of Leviticus have often been studied as a pollution code, including a chapter entitled “The Abominations of Leviticus” in Mary Douglas’s *Purity and Danger*.<sup>43</sup> Numbers warns that death will result for those who “pollute the holy things of the children of Israel.”<sup>44</sup> The Psalms lament that “the land was polluted with blood” of innocent children sacrificed to the idols of Canaan.<sup>45</sup> More modern translations of the Bible are less likely to refer to pollution as such, but the word still appears in some places. The epistle of James, for example, teaches that the “[r]eligion that God our Father accepts as pure and faultless is this: to look after orphans and widows in their distress and to keep oneself from being polluted by the world.”<sup>46</sup>

Pollution imagery also appeared in political debates. Two months before the United States declared its independence, Francis Lightfoot Lee wrote that continued connection with Britain “wou’d be infamy & pollution.”<sup>47</sup> During the debates over the ratification of the United States Constitution, General Henry Knox argued that “the vile State governments are sources of pollution, which will contaminate the American name for ages.”<sup>48</sup> In 1805, John Randolph gave a speech in the United States House of Representatives denouncing the Georgia legislature’s fraudulent Yazoo River land claims as “one of those subjects which pollution has sanctified.”<sup>49</sup> Seven years of service as President of the United States provoked Thomas Jefferson to write, “Nothing can now be believed which is seen in a newspaper. Truth itself becomes suspicious by being put into that polluted vehicle.”<sup>50</sup> Jefferson also denounced a political opponent as “the most red-hot federalist, famous, or rather infamous for the lying and slandering which he vomited from the pulpit in the political harangues with which he polluted the place.”<sup>51</sup> The fourth stanza of Francis Scott Key’s *Star Spangled Banner* bragged that the

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<sup>42</sup> Ex. 20.25.

<sup>43</sup> See DOUGLAS, *supra* note 1, at 42-58.

<sup>44</sup> Num. 18:32. See also MARY DOUGLAS, *IN THE WILDERNESS: THE DOCTRINE OF DEFILEMENT IN THE BOOK OF NUMBERS* (1993).

<sup>45</sup> Ps. 106:38.

<sup>46</sup> James 1:27 (New International Version).

<sup>47</sup> Letter from Francis Lightfoot Lee to Landon Carter (May 21, 1776), in 4 *LETTERS OF DELEGATES TO CONGRESS* 58 (Paul H. Smith ed., 1979).

<sup>48</sup> F. S. DRAKE, *LIFE AND CORRESPONDENCE OF GEN. KNOX* 95 (1873).

<sup>49</sup> 14 *ANNALS OF CONG.* 1024 (1805).

<sup>50</sup> Letter from Thomas Jefferson to John Norvell, June 11, 1807, in 4 *MEMOIR, CORRESPONDENCE, AND MISCELLANIES, FROM THE PAPERS OF THOMAS JEFFERSON* 80-81 (Thomas Jefferson Randolph, ed., 1929).

<sup>51</sup> Letter from Thomas Jefferson to Joel Barlow, Jan. 24, 1810, in 9 *THE WRITINGS OF THOMAS*

blood of the defeated British forces “has wash'd out their foul footsteps' pollution.”<sup>52</sup> In 1841, Congress considered a resolution praising Andrew Jackson for destroying the Bank of the United States and thus saving the people of the nation from “the moral pollution which a longer connexion with that institution must have brought upon them.”<sup>53</sup> A bill proposed in Congress in 1860 would have annulled Utah's polygamy laws because “no principle of self-government or citizen sovereignty can require or justify the practice of such moral pollution.”<sup>54</sup> At the beginning of the twentieth century, Mark Twain voiced his objections to the Spanish-American War by describing the American government as polluted.<sup>55</sup> Again, references to air pollution, water pollution, and other kinds of environmental pollution are conspicuously absent from political debates before the end of the nineteenth century.

The same pattern appears in law. None of the earliest judicial decisions that mention “pollution” involved harms to the natural environment. Instead, the nine English cases decided before 1800 in which the court referred to pollution involved a variety of harms to the family, the church, the government, and other human institutions. In 1688, Justice Croke warned an accused murderer that blood “is a crying sin, which doth pollute the land.”<sup>56</sup> In 1757, Lord Wilmot wrote of a contested gift that “[l]et the hand receiving it be ever so chaste, yet if it comes through a corrupt, polluted channel, the obligation of restitution will follow it.”<sup>57</sup> He added in another case that a bond could not be given for illegal consideration because “[a]ll writers upon our law agree in this, no polluted hand shall touch the pure fountains of justice.”<sup>58</sup> A 1775 estate dispute found that a fraudulent transaction had “tainted and polluted the whole of the preceding transaction.”<sup>59</sup> The complaints against a minister included the charge that “he took the cups and other vessels of the church, consecrated to holy use, and employed them in his own house, and put barm in the cups, that they were so polluted, that the communicants of the parish were loath to drink out of them.”<sup>60</sup> A 1792

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JEFFERSON 268, 269 (Paul Leicester Ford ed., 1898).

<sup>52</sup> Francis Scott Key, *The Star Spangled Banner* (1814), available at <http://www.infoplease.com/ipa/A0194015.html>.

<sup>53</sup> 32 JOURNAL OF THE SENATE OF THE UNITED STATES OF AMERICA 1789-1873 258 (Washington, Gales & Seaton) (Sept. 13, 1841).

<sup>54</sup> H.R. 7, 36th Cong., 1st Sess. (1860).

<sup>55</sup> Mark Twain, *An Essay on the American Flag* (1901), in MARK TWAIN'S WEAPONS OF SATIRE: ANTI-IMPERIALIST WRITINGS ON THE PHILIPPINE-AMERICAN WAR 16-17 (Jim Zwick, ed., 1992).

<sup>56</sup> *King v. Taverner*, 81 Eng. Rep. 144, 146 (K.B. 1688).

<sup>57</sup> *Bridgeman v. Green*, 26 Eng. Rep. 22, 64 n.58 (K.B. 1757).

<sup>58</sup> *Collins v. Blantern*, 24 Eng. Rep. 850, 852 (K.B. 1767).

<sup>59</sup> *Hume v. Ely*, 3 Eng. Rep. 305, 314 (H.L. 1775).

<sup>60</sup> *Smith v. Clay*, 124 Eng. Rep. 294, 294 (C.P. 1657).

adultery suit in which the husband was alleged to have encouraged his wife's extramarital sexual activity rejected the notion that the husband "would consent to her pollution with a view of getting rid of her."<sup>61</sup> Another adultery case opined that a husband could not complain of his wife's behavior when he had done the same: "It is not unfit if he, who is the guardian of the purity of his own house, has converted it into a brothel, that he should not be allowed to complain of the pollution which he himself has introduced."<sup>62</sup>

Nineteenth century American judicial decisions referred to numerous types of pollution. There were a number of references to environmental pollution. As a federal court advised in 1886, "The right to pure air is incident to the land, – as much so as the right to the uninterrupted flow of a stream of pure water which runs through it, – and no one can be permitted to pollute either, to the injury and disadvantage of the owner."<sup>63</sup> But the first reference to water pollution in a reported American case did not occur until 1832, and the first reference to air pollution was in 1849.<sup>64</sup> Meanwhile, the courts invoked the image of pollution to describe numerous other harms throughout the nineteenth century and before. In 1793, the Virginia Supreme Court noted that no West Indian citizens "can wish to see the tribunals of their own country polluted" by judges biased against Americans.<sup>65</sup> Such worries about the pollution of legal or political processes were common. Likewise, several courts quoted Lord Wilmot's 1757 opinion stating that "[a]ll writers upon the law agree to this, no polluted hand shall touch the fountains of justice."<sup>66</sup> American courts and counsel also described such foreign

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<sup>61</sup> *Moorsom v. Moorsom*, 162 Eng. Rep. 1090, 1097 (E.A.P. & D. 1792).

<sup>62</sup> *Beeby v. Beeby*, 162 Eng. Rep. 755, 756 (E.A.P. & D. 1799). The other two eighteenth century English pollution cases are *Evans v. Evans*, 161 Eng. Rep. 466, 471 (E.A.P. & D. 1790) (denying any evidence that a lady is polluted by a degrading habit); and *Lord Audley's Case*, 123 Eng. Rep. 1140, 1141 (C.P. 1682) (indicating "that pollution and using of a man upon his belly sodomitically, without penetration, was buggery" under the statute).

<sup>63</sup> *Sellers v. Parvis & Williams Co.*, 30 F. 164, 166 (C.C.D. Del. 1886).

<sup>64</sup> See *Howell v. M'Coy*, 3 Rawle 256, 270 (Pa. 1832) (denying a right to pollute the water); *Hay v. Cohoes Co.*, 2 N.Y. 159, 162 (1849) (noting that a landowners "could not pollute the air upon the plaintiff's premises). See also *Tate v. Parrish*, 23 Ky. 325 (1828) (containing a headnote referring to an action as one "for polluting the water" where the plaintiff objected to the defendant's disposal of a dead hog into a spring).

<sup>65</sup> *Page v. Pendleton*, 1793 Va. LEXIS 53, Wythe 211 n. a (Va. 1793).

<sup>66</sup> *Adams v. Barrett*, 5 Ga. 404, 417 (1848) (quoting *Collins v. Blantern*, 2 Wils K.B. 342 (1767)). See also *State ex rel. Crow v. Bland*, 144 Mo. 534, 560 (1898) (describing a statute prohibiting corrupt election practices as designed to prevent activities that "pollute the fountain from which spring the liberties of the people"); *United States v. Sheldon*, 5 Blume Sup. Ct. Trans. 337, 364 (1829) (worrying that respectable attorneys would be unwilling "to enter upon such a scene of moral pollution as our Courts, would then exhibit" if slander of judges was permitted); *State v. Candler*, 10 N.C. 393, 397 (1824) (advising that the law will not allow a perjurer to testify "so that the stream of justice may not be polluted").

innovations as the French Revolution, the British Crown, and the Star Chamber as pollution that should not influence American law.<sup>67</sup> Moral pollution was another target of judicial scorn. The Indiana Supreme Court admonished in 1893 that “[f]ew greater crimes against society can be conceived than that of the moral pollution of our youth.”<sup>68</sup> The courts were especially concerned about the moral pollution of women by adulterous husbands, rapists, and consignment to prostitution.<sup>69</sup> The nineteenth century courts also saw pollution in such disparate sources as wrongful business practices and inmates.<sup>70</sup> At the beginning of the twentieth century, the United States

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<sup>67</sup> See *Holmes v. Jennison*, 39 U.S. 540, 615 (1840) (Baldwin, J., concurring) (approving the deportation of an alleged criminal to Quebec because “no political community . . . can be under any obligation to suffer a moral pestilence to pollute its air”); *Johnson v. Twenty-One Bales*, 13 F. Cas 855, 861 (C.C.D.N.Y. 1814) (advising that “[f]rom sources so agitated, if not polluted [as the French Revolution], nothing satisfactory can be drawn”); *Commonwealth v. Martin’s Ex’rs*, 19 Va. 117, 155 (1816) (remarking that “the fountain of justice is, perhaps, as pure in England, as in any part of the universe, yet we all know that the stream even there, has sometimes been polluted by the undue influence of the British crown”); *People v. Crowell*, 3 Johns. Cas. 337, 343 (N.Y. Sup. Ct. 1804) (counsel arguing against a doctrine because it “originated in a polluted source, the despotic tribunal of the Star Chamber”).

<sup>68</sup> *Hardesty v. Hine*, 34 N.E. 701, 702 (Ind. 1893). See also *State ex rel. Clark v. Osborne*, 24 Mo. App. 309, 312 (1887) (reversing a public school’s expulsion of a student for attending a prohibited party despite counsel’s argument that “the sources of corruption and moral pollution which endanger the life of any school of its class, lie without and beyond the school house walls”); *Wilson v. Young*, 31 Wis. 574, 580 (1872) (opinion of Lyon, J.) (indicating that evidence of a person’s reputation is admissible if it involves “vices . . . of a character which pollute the moral nature”); *People v. Muller*, 96 N.Y. 408 (1884) (stating that the purpose of an obscenity statute was “to protect the community against the contamination and pollution arising from [the] exhibition and distribution” of obscene and indecent pictures); *Kitchen v. Tyson*, 7 N.C. 314, 316 (1819) (overturning “[a] verdict founded upon the testimony of a witness who is destitute of all moral and religious obligation, and strongly tempted by interest to give to polluted principles the most mischievous operation”).

<sup>69</sup> See *Helmes v. Helmes*, 52 N.Y.S. 734, 738 (1898) (overturning a divorce obtained by a husband who conspired to cause his wife to commit adultery because “[t]his man has forfeited all right to legal relief from his marital obligations because of the unchastity of his wife by his anxiety to have her polluted”); *State v. Sudduth*, 30 S.E. 408, 409 (S.C. 1898) (upholding a rape conviction while observing that “a woman unwilling to receive the embraces of a brute would exert every power she could control to escape his polluting touch”); *Shattuck v. Hammond*, 46 Vt. 466, 470 (1874) (observing that a woman who commits adultery “is exorcised as a polluted and polluting thing”); *More v. Bennett*, 48 Barb. 229, 231 (N.Y. Sup. Ct. 1867) (referring to the efforts of those who sought to rescue prostitutes “from the horrors and pollution of their condition”); *Hair v. Hair*, 10 Rich. Eq. 163, 174 (S.C. App. Eq. 1858) (stating that a wife confronted with her husband’s obscene and indecent actions “would be held justifiable in fleeing from the polluting presence of that monster, with whom in an evil hour she had united her destinies”).

<sup>70</sup> See *Chemical Nat’l Bank of Chicago v. City Bank of Portage*, 40 N.E. 328, (Ill. 1895) (asking if a bank’s illegal purchase of its own stock “so pollute[s]” a transaction that it prevents the bank from money it had loaned); *Louisiana v. Louisiana Savings Co.*, 12 La. Ann. 568, 573 (1857) (concluding that a bank’s “conduct does not appear to be polluted with fraud”); *State v. Williams*, 7 Rob. (La.) 252, 272 (La. 1844) (articulating a hypothetical in which a prison is emptied “of its polluted inmates”); *Myers v. Wade*, 27 Va. 444, 452 (1828) (referring to “the possible pollution of common servitude”).

Supreme Court confirmed the congressional power to ensure that interstate commerce “shall not be polluted by the carrying of lottery tickets from one state to another.”<sup>71</sup>

The confluence of literary, political, religious, and legal references to pollution is best seen in the many nineteenth century descriptions of slavery and its effects. Senator Charles Sumner’s described slavery as a mistress “polluted in the sight of the world” in the speech that precipitated his caning on the Senate floor in 1856.<sup>72</sup> Frederick Douglass described slavery as “glaring frightfully upon us, with the blood of millions in his polluted skirts,” and a system “marked with blood and stained with pollution.” He also wrote of “the scenes of pollution which the slaveholders continually provide for most of the poor, sinking, wretched young women, whom they call their property.”<sup>73</sup> John Greenleaf Whittier characterized supporters of slavery as “bowed to an Idol polluted with blood.”<sup>74</sup> A Cincinnati minister asked, “What Christian father could endure, that his daughters, whom he had educated in virtue, should be subdued for pollution by the whip, or by the *customs* of the system?”<sup>75</sup> William Seward defended the Ordinance of 1787 as having “dedicated all of the national domain not yet polluted by slavery to free labor immediately, thenceforth and forever.”<sup>76</sup> Writing about his efforts to combat the slave trade, President John Tyler informed Congress “that our own coasts are free from its pollution. But the crime remains the same wherever perpetrated.”<sup>77</sup> John Quincy Adams objected that “so polluted are all streams of legislation in regions of slavery” that Congress approved the extension of slavery in the Missouri Compromise.<sup>78</sup> The Pennsylvania legislature resolved in 1820 that “the people of Pennsylvania . . . may boast that they were foremost in removing the pollution of slavery from amongst them.”<sup>79</sup> Harriet Beecher Stowe complained of “the pollution of the electoral franchise” in Kansas.<sup>80</sup> A delegate to the 1857 Iowa constitutional convention praised the Kansans who “have saved the territory probably from being

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<sup>71</sup> See *Champion v. Ames*, 188 U.S. 321, 356 (1903).

<sup>72</sup> Charles Sumner, *The Crime Against Kansas* (1856), reprinted in 4 THE WORKS OF CHARLES SUMNER 144 (1871).

<sup>73</sup> FREDERICK DOUGLASS, MY BONDAGE AND MY FREEDOM 282, 413, 444 (1857).

<sup>74</sup> JOHN GREENLEAF WHITTIER, POEMS OF JOHN G. WHITTIER 153 (1850).

<sup>75</sup> CHARLES ELLIOTT, 2 SINFULNESS OF AMERICAN SLAVERY (B.F. Tefft ed., 1850).

<sup>76</sup> William H. Seward, *The Irrepressible Conflict*, in WILLIAM HENRY SEWARD, POLITICAL SPEECHES 3 (1860).

<sup>77</sup> 36 JOURNAL OF THE SENATE OF THE UNITED STATES OF AMERICA 192 (Feb. 20, 1845) (message from President Tyler).

<sup>78</sup> JOSIAH QUINCY, MEMOIR OF THE LIFE OF JOHN QUINCY ADAMS 106 (1859).

<sup>79</sup> 96 JOURNAL OF THE SENATE OF THE UNITED STATES OF AMERICA 78 (Jan. 5, 1820) (reprinting the Pennsylvania legislature’s resolution).

<sup>80</sup> HARRIET BEECHER STOWE, WOMAN IN SACRED HISTORY: A SERIES OF SKETCHES 12 (1874).

polluted with the curse of slavery.”<sup>81</sup> Justice Joseph Story told a grand jury that he wished he “could say that New England, and New England men, were free from this deep pollution” of the slave trade.<sup>82</sup> Several English ministers approved a resolution upon the assassination of President Lincoln that characterized the Civil War “as a temporal judgment for the commencement, continuance, and defence of the polluted system of slavery.”<sup>83</sup> By 1878, even the Louisiana Supreme Court described the money earned by the sale of slaves in 1853 as “polluted gold.”<sup>84</sup>

## B. “Pollution” today

The familiar description of the natural environment as polluted did not become common until the twentieth century. One etymologist has observed that “[t]he sense of contamination of the environment by harmful substances appears sporadically in technical sources since 1877 but came into general use about 1955.”<sup>85</sup> References to all sorts of pollution continued to occur throughout that period. The environmental connotation of pollution did not become pervasive until the environmental protection movement of the 1960's and 1970's. Today the environmental connotation dominates popular discourse and the law. Even so, the idea of “pollution” continues to play an important role outside the environmental context in several areas of the law and in scholarly discussions in other academic disciplines.

Modern dictionaries, like Webster’s early nineteenth century dictionary, contain both the narrow definition of pollution as limited to effects on the natural environment and the broad view of pollution as encompassing a much larger group of harmful influences.<sup>86</sup> The law, however, is much more likely to describe the air or water as

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<sup>81</sup> THE DEBATES OF THE CONSTITUTIONAL CONVENTION; OF THE STATE OF IOWA, ASSEMBLED AT IOWA CITY, MONDAY, JANUARY, 19, 1857 709 (1857).

<sup>82</sup> *Fales v. Mayberry*, 8 F. Cas. 970, 971 (C.C.D.R.I. 1815) (Story, Circuit Justice).

<sup>83</sup> U.S. DEP’T OF STATE, THE ASSASSINATION OF ABRAHAM LINCOLN . . . AND THE ATTEMPTED ASSASSINATION OF WILLIAM H. SEWARD, SECRETARY OF STATE, AND FREDERICK W. SEWARD, ASSISTANT SECRETARY, ON THE EVENING OF 14TH OF APRIL, 1865. EXPRESSIONS OF CONDOLENCE AND SYMPATHY INSPIRED BY THESE EVENTS 421 (1867).

<sup>84</sup> *George v. Amacker*, 30 La. Ann. 390, 392 (La. 1878).

<sup>85</sup> BARNHART, *supra* note 24, at 582.

<sup>86</sup> *See, e.g.*, BLACK’S LAW DICTIONARY 1180 (7th ed. 1999) (defining “pollute” as “[t]o corrupt or defile; esp., to contaminate the soil, air, or water with noxious substances”); WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE UNABRIDGED 1756 (1993) (noting that “polluted” can mean “morally corrupt or defiled”); 12 THE OXFORD ENGLISH DICTIONARY 43 (2d ed. 1989) (defining “pollution” as “defilement, uncleanness or impurity caused by contamination (physical or moral),” and as “[t]he presence in the environment, or the introduction into it, of products of human activity which have harmful or objectionable effects”).

polluted instead of any human environments. By 2003, a federal court of appeals could casually refer to “the typical focus” of the word pollution “on harm to the environment.”<sup>87</sup> But the idea of pollution continues to play a significant role in several areas of law besides environmental law. Recall that Kenneth Wilson dismissed references to “noise pollution” as a “graphic” use of the word pollution that is becoming “worn.”<sup>88</sup> Wilson overlooked the significant role that concerns about noise pollution played during the environmental movement of the 1960's and 1970's. The public seemed just as worried about the sonic booms that drove the successful fight against the construction of the supersonic transport (SST) airplane as it was against the familiar images air pollution and water pollution. The first annual report of the Council on Environmental Quality grouped noise pollution with pesticides and radiation in a chapter on the pollution problems posed by such “relative newcomers to the public ken.”<sup>89</sup> The year 1970 alone yielded several treatises and law review articles analyzing the “major environmental problem” presented by noise pollution.<sup>90</sup> Congress responded by enacting a Noise Control Act (NCA) in 1972, a statute that anticipated state enforcement of federal noise levels in a manner similar to the state implementation of the air quality standards required by the Clean Air Act.<sup>91</sup> In each instance, noise was described as a pollution problem akin to similar concerns about air pollution and water pollution.

The law also addresses other claims of the pollution of our sensory environment. “Light pollution” is the subject of local ordinances, state laws, and national park management plans.<sup>92</sup> Occasionally the courts describe offensive smells as “odor pollution.”<sup>93</sup> The term visual pollution has been used by courts, academics, and

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<sup>87</sup> *Cleere Drilling Co. v. Dominion Exploration & Production, Inc.*, 352 F.3d 642, 651 (5th Cir. 2003).

<sup>88</sup> See WILSON, *supra* note 21, at 336.

<sup>89</sup> ENVIRONMENTAL QUALITY: THE FIRST ANNUAL REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY 123 (1970).

<sup>90</sup> See CLIFFORD R. BRAGDON, NOISE POLLUTION: THE UNQUIET CRISIS xvii (1970); NOISE POLLUTION AND THE LAW (James L. Hildebrand ed. 1970); Mark O. Hatfield, *Noise, The Gathering Crisis*, 1 ENVTL. L. 33 (1970) (U.S. Senator advising that “[n]oise pollution is reaching crisis proportions in the United States”); see also R. MURRAY SCHAFER, THE BOOK OF NOISE 2 (1998) (revised version of 1968 monograph describing “a world-wide epidemic of Noise Pollution”).

<sup>91</sup> See Noise Control Act, 42 U.S.C. §§ 4901-4918.

<sup>92</sup> See, e.g., *Texas Dep’t of Transp. v. City of Sunset Valley*, 146 S.W.3d 637 (Tex. 2004); Night Sky Protection Act, N.M. STAT. ANN. § 74-12; U.S. DEP’T OF THE INTERIOR, GRAND CANYON GENERAL MANAGEMENT PLAN 24 (1995).

<sup>93</sup> See, e.g., *Concerned Citizens of Bridesburg v. City of Philadelphia*, 1987 U.S. Dist. LEXIS 617, \*13, \*18 (E.D. Pa. Jan. 28, 1987); *Tulou v. Raytheon Serv. Co.*, 659 A.2d 796, 808 (Del. Superior Ct. 1995); *Wayne City Dep’t of Health v. Olsonite Corp.*, 263 N.W.2d 668, 686, 691, 698 (Mich. App. 1977).

environmental groups to explain their distaste for ugly buildings, cellular telephone towers, billboards, flags and signs, and numerous other images have been derided as polluting the visual landscape.<sup>94</sup>

These descriptions of noise, light, and visual pollution are not far distant from the idea of pollution that affects the air and water. A better indication of the continuing breadth of the idea of pollution in the law appears in those instances in which the law responds to concerns that other kinds of environments have been polluted. There are two instances that I have found in which that description of pollution has been codified. A South Carolina legal ethics rule that forbids attorneys from engaging “in conduct tending to pollute the administration of justice.”<sup>95</sup> The conduct that the courts have found to satisfy that standard includes misappropriation of a client’s funds, failure to disclose the unauthorized recording of telephone conversations, shoplifting, illegally obtaining prescription drugs, possession of cocaine, and violating a court order regarding permissible compensation.<sup>96</sup> How that conduct pollutes the administration of justice, and the proper test for identifying such pollution, is not explained by the courts. The second codified references to pollution outside the natural environment are no longer in force. Sodomy statutes in Indiana and Wyoming prohibited “self-pollution” – *i.e.*, masturbation – from the 1880's until they were repealed in the 1970's. The statutes reflected Webster’s early definition of pollution as the involuntary emission of semen. The few recent explanations of such laws refer to “the belief that exposed semen somehow contaminates the environment and taints its holiness.”<sup>97</sup> The laws against

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<sup>94</sup> See, e.g., *Ballen v. City of Redmond Planning & Community Develop. Dep’t*, 466 F.3d 736, 744 (9th Cir. 2006); *G.K. Ltd. Travel v. City of Lake Oswego*, 436 F.3d 1064, 1073 n.7 (9th Cir.), *cert. denied*, 127 S. Ct. 156 (2006); *Cleveland Area Bd. of Realtors v. City of Euclid*, 88 F.3d 382, 384 (6th Cir. 1996); *Kramer v. Government of Virgin Islands*, 479 F.2d 350, 352 (3d Cir. 1973); *Lamar Adver. Co. v. Township of Elmira*, 328 F. Supp. 2d 725, 729 (E.D. Mich. 2004); *People v. Amerada Hess Corp.*, 765 N.Y.S.2d 202, 205 (2003); *Arizona v. Watson*, 6 P.3d 752, 758 (Ariz. Ct. App. 2000); *John Donnelly & Sons, Inc. v. Outdoor Advertising Bd.*, 339 N.E.2d 709, 718 (Mass. 1975); *Mayor & City Council of Baltimore v. Mano Swartz, Inc.*, 299 A.2d 828, 833 (Md. Ct. App. 1973).

<sup>95</sup> See S.C. APP. CT. R. 413, 7(5).

<sup>96</sup> Recent examples of violations of that provision include *In re Green*, 2007 S.C. LEXIS 3 (S.C. 2007) (attorney convicted of driving under the influence of methamphetamine); *In re Poff*, 623 S.E.2d 642 (S.C. 2005) (attorney failed to attend a closing and lied about witnessing it); *In re Young*, 621 S.E.2d 359 (S.C. 2005) (attorney threatened to initiate a criminal prosecution in order to achieve a civil settlement); *witness*; *In re Nester*, 541 S.E.2d 538 (S.C. 2001) (attorney failed to disclose during ongoing divorce litigation that he had taped his own phone); *In re Tribert*, 540 S.E.2d 467 (S.C. 2000) (attorney possessed cocaine and drove under the influence of alcohol).

<sup>97</sup> Elliot N. Dorff, *Jewish Response in Symposium on Religious Law: Roman Catholic, Islamic, and Jewish Treatment of Familial Issues, Including Education, Abortion, In Vitro Fertilization, Prenuptial Agreements, Contraception, and Marital Fraud*, 16 LOY. L.A. INT’L & COMP. L.J. 9, 82 (1993). See also DAVID M. FELDMAN, *MARITAL RELATIONS, BIRTH CONTROL, AND ABORTION IN JEWISH LAW* 120 (1974) (quoting a rabbi who

self-pollution were also part of a more general nineteenth century view that certain sexual practices were associated with mental illnesses. As that view faded, the laws disappeared as well.

These rare statutory references to the pollution of humans or human environments are joined by more numerous judicial descriptions of such pollution. The most frequent such use of pollution occurs in the more than one hundred civil rights cases in which courts have described hostile work environments as polluted by racism, sexism, or other kinds of discrimination. The first judicial acceptance of the theory that employers could be liable under the federal Civil Rights Act for countenancing a hostile work environment occurred in 1971. Josephine Chavez complained that her employer, Texas State Optical, discriminated against her by segregating its patients so that she would not have contact with people of other races. The crucial passage in Judge Irving Goldberg's opinion sustaining the EEOC's authority to investigate the matter asserted that "[o]ne can readily envision working environments so heavily polluted with discrimination as to destroy completely the emotional and psychological stability of minority group workers, and I think Section 703 of Title VII was aimed at the eradication of such noxious practices.<sup>98</sup> Thrice the pollution language of *Rogers* has been quoted in the Supreme Court, most recently when Justice Thomas described *Rogers* as a "landmark case."<sup>99</sup> More than one hundred other cases have referred to hostile work environments as polluted by racism, sexism and other forms of discrimination.<sup>100</sup>

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explained that self-pollution "adds to the forces of uncleanness in the world"); *Locke v. State*, 501 S.W.2d 826, 829 (Tenn. Ct. Crim. App. 1973) (Galbreath, J., dissenting) (asking "[w]ould we go as far as has the legislature of Indiana which has proscribed masturbation or self pollution and thus condemn a practice that is so universally accepted now as normal under certain circumstances that the mature person who has never engaged in this type of activity would in all likelihood be considered biologically quite abnormal?"); Randy E. Barnett, *Bad Trip: Drug Prohibition and the Weakness of Public Policy*, 103 YALE L.J. 2593, 2606-07 & nn. 38-39 (1994) (reviewing STEVEN B. DUKE & ALBERT C. GROSS, *AMERICA'S LONGEST WAR: RETHINKING OUR TRAGIC CRUSADE AGAINST DRUGS* (1993)) (quoting the Indiana and Wyoming statutes and describing the historical context in which they were enacted).

<sup>98</sup> *Rogers v. EEOC*, 454 F.2d 234, 238 (5th Cir. 1971) (opinion of Goldberg, J.) (emphasis added), *cert. denied*, 406 U.S. 957 (1972).

<sup>99</sup> *Burlington Indus., Inc. v. Ellerth*, 524 U.S. 742, 767 (1998) (Thomas, J., dissenting); *see also* *Harris v. Forklift Systems, Inc.*, 510 U.S. 17, 22 (1993); *Meritor Savings Bank, FSB v. Vinson*, 477 U.S. 57, 66 (1986).

<sup>100</sup> *See, e.g.*, *Harsco Corp. v. Renner*, 475 F.3d 1179 (10th Cir. 2007); *Schiano v. Quality Payment Sys.*, 445 F.3d 597, 606 (2d Cir. 2006); *McGinest v. GTE Serv. Corp.*, 360 F.3d 1103, 1113, 1117-18 (9th Cir. 2004); *Anderson v. G.D.C., Inc.*, 281 F.3d 452, 458 (4th Cir. 2002); *Jackson v. Quanex Corp.*, 191 F.3d 647, 660 (6th Cir. 1999); *Gudenkauf v. Stauffer Communs.*, 158 F.3d 1074, 1081 (10th Cir. 1998) (quoting congressional testimony that "[i]t is in the interest of American society as a whole to assure that equality of opportunity in the workplace is not polluted by unlawful discrimination"); *Daniels v. Essex Group, Inc.*, 937 F.2d 1264, 1273 n.2 (7th Cir. 1991) (citing Mari J. Matsuda, *Public Response to Racist Speech: Considering the Victim's Story*, 87 MICH. L. REV. 2320, 2336, 2340 & n.84 (1989)).

The idea of pollution has been used by courts to judge such questions as the nature of an unpolluted work environment, the discriminatory acts or speech that operate as pollutants, and when the pollution of the workplace with discrimination becomes sufficiently pervasive to impose liability upon the employer. These cases are supplemented by more general descriptions of discrimination as pollution. A House committee report proclaimed that “[i]t is in the interest of American society as a whole to assure that equality of opportunity in the workplace is not polluted by unlawful discrimination.”<sup>101</sup> As Congressman Earl Hilliard later explained, “The effects of racism spread quickly and can soon pour into every community, harden and form the foundation of social institutions; and every mind of every person becomes polluted.”<sup>102</sup> Twenty-five years after the first reference to polluted workplaces in *Rogers*, Judge Lewis wrote for the Third Circuit that “[d]iscrimination continues to pollute the social and economic mainstream of American life, and is often simply masked in more subtle forms.”<sup>103</sup>

Criminal law offers another line of cases employing the idea of pollution. The attention here is upon the actions that interfere with the pure administration of justice. Thus, in a 1956 case in which the Supreme Court reversed a criminal conviction obtained through perjured testimony, Chief Justice Warren explained that the witness

by his testimony, has poisoned the water in this reservoir, and the reservoir cannot be first cleansed without first draining it of all impurity. This is a federal criminal case, and this Court has [a duty] to see that the waters of justice are not polluted. Pollution having taken place here, the condition should be remedied at the earliest opportunity.<sup>104</sup>

Such concerns about the pollution of the institutions of justice appear in numerous recent decisions. Judge Wilkinson expressed the Fourth Circuit’s opinion that “perjury . . . pollutes the judicial process.”<sup>105</sup> The Pennsylvania federal district courts frequently

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<sup>101</sup> See H.R. REP. NO. 102-40(I) at 46-47, 1991 U.S.C.C.A.N. at 584-85 (quoting Jane Lang, former General Counsel of the United States Department of Housing and Urban Development).

<sup>102</sup> 147 CONG. REC. E1154 (daily ed. June 19, 2001) (statement of Rep. Hilliard).

<sup>103</sup> *Aman v. Cort Furniture Rental Corp.*, 85 F.3d 1074, 1082 (3d Cir. 1996). For additional references to racism as pollution, see Peter H. Schuck, *Alien Ruminations*, 105 YALE L.J. 1963, 1965 (1996) (asserting that “[u]ntil the 1950’s, racism pervaded and polluted American public law”); Anthony Appiah, *Racism and Moral Pollution*, 18 PHILOSOPHICAL F. 185 (1986-87).

<sup>104</sup> *Mesarosh v. United States*, 352 U.S. 1, 14 (1956).

<sup>105</sup> *United States v. Kennedy*, 372 F.3d 686, 695 (4th Cir. 2004), *cert. denied*, 543 U.S. 1123 (2005). *Accord* *United States v. Low*, 2006 U.S. Dist. LEXIS 90944, \*40 (D. Hawai’i 2006) (warning that a lawyer “may knowingly present lies to a jury and then sit idly by while opposing counsel struggles to contain

instruct juries that certain testimony or evidence comes from a “corrupt and polluted source.”<sup>106</sup> The Connecticut Supreme Court has held that serious prosecutorial misconduct mandated the retrial of a doubtless guilty defendant because “[t]he prosecutor cannot pollute the waters and then claim that we should ignore his actions because the fish are not worth saving.”<sup>107</sup> The federal government worried about “the polluting of any potential local jury pool” from media coverage of the trial of accused abortion doctor murderer James Kopp.<sup>108</sup> The many additional descriptions of the pollution of the legal process include a defense attorney’s explanation that she did not conduct individual voir dire on potential jury members because “no one made a statement that raised enough concern for her to believe that ‘they might pollute the jury,’”<sup>109</sup> and a trial judge’s instruction that “it would no longer permit the victims’ families to be present during voir dire ‘if there are efforts made to pollute the jury pool.’”<sup>110</sup>

Courts have described a number of other things as polluted without engaging in any effort to develop the implications of that description. Courts decry polluted business practices. In their famous antitrust case, New York and other states charged Microsoft with “polluting” software industry standards.<sup>111</sup> The remedies for violations

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this pollution of the trial”) (quoting *United States v. LaPage*, 231 F.3d 488, 492 (9th Cir. 2000)); Barbara Allen Babcock, *The Duty to Defend*, 114 YALE L.J. 1489, 1511 (2005) (reciting “the old saying” that “perjury ‘pollutes the fountain of justice’”).

<sup>106</sup> See *Jordan v. Beard*, 2003 U.S. Dist. LEXIS 22261, \*3 (E.D. Pa. 2003); *Bronshtein v. Beard*, 2003 U.S. Dist. LEXIS 24981, \*5, \*30-34 (E.D. Pa. 2003); *Priester v. Vaughn*, 2003 U.S. Dist. LEXIS 20032, \*56 n.16 (E.D. Pa. 2003); *Young v. Vaughn*, 2002 U.S. Dist. LEXIS 4094, \*29 (E.D. Pa. 2002); *Pursell v. Horn*, 187 F. Supp. 2d 260, 320 (W.D. Pa. 2002); but see *United States v. Bobb*, 2006 U.S. App. LEXIS 32023, \*21 (3d Cir. 2006) (noting that “there is ‘[n]o mandatory requirement that accomplice testimony be described as emanating from a corrupt or polluted source’”) (quoting *United States v. DeLarosa*, 450 F.2d 1057, 1061 (3d Cir. 1971)).

<sup>107</sup> *State v. Couture*, 482 A.2d 300, 318 (Conn. 1984).

<sup>108</sup> *People v. Kopp*, 756 N.Y.S. 2d 830 (N.Y. County Ct. 2003). Similar concerns about the impact of outside information upon a jury appear in *People v. Stanley*, 140 P.3d 736, 762 (Cal. 2006) (approving a trial judge’s advising the jury that “we don’t want you to be polluted by some outside information that may or may not be correct”); *Alex v. State*, 2006 Tex. App. LEXIS 1660, \*7 (Tex. Ct. App. 2006) (rejecting a defendant’s claim that “newspapers articles ‘polluted’ the jury pool so that they would assume appellant’s guilt); and *Holt v. State*, 2006 Tenn. Crim. App. LEXIS 107, \*14 (Tenn. Ct. Crim. App. 2006) (noting the absence of media “that barrages people day to day about cases that . . . tend to pollute the juries”).

<sup>109</sup> *State v. Deschon*, 85 P.3d 756, 761 (Mont. 2004).

<sup>110</sup> *United States v. Campa*, 459 F.3d 1121, 1136 (11th Cir. 2006).

<sup>111</sup> *New York v. Microsoft*, 224 F. Supp. 2d 76, 263 (D.D.C. 2002). See also *In re Host America Corp. Securities Litig.*, 236 F.R.D. 102, 108 (D. Conn. 2006) (worrying about securities markets “polluted by false information”) (quoting *In re Oxford Health Plans, Inc. Securities Litig.*, 182 F.R.D. 42, 124 (S.D.N.Y. 1998)); *Kennedy Indus., Inc. v. Aparo*, 416 F. Supp. 2d 311, 316 (E.D. Pa. 2005) (characterizing false advertising as pollution).

of trademark law must “provide a sufficient deterrent to ensure that the guilty party will not return to its former ways and once again pollute the marketplace.”<sup>112</sup> “Too often the vagaries of an oral agreement cloud and pollute the true intent of the parties,” cautioned a federal judge in New York in 2006.<sup>113</sup> Likewise, the Pennsylvania Supreme Court “reject[ed] the argument that the intended user doctrine will somehow pollute strict liability with privity requirements.”<sup>114</sup> Judge Aldisert has warned that appellate arguments “cannot afford to . . . pollute, the good with the bad.”<sup>115</sup> The twenty-first century counterpart to the nineteenth century decisions voicing concerns about the moral pollution of youth appears in a New York court’s reversal of a child custody order because the order failed to consider that a teenage girl “has lived in the polluted environment of domestic violence all of her life.”<sup>116</sup>

All of these cases illustrate that the idea of pollution continues to play a role in the law outside of environmental law, especially with respect to hostile work environments and the proper administration of criminal justice. But these broad legal understandings of pollution pale in comparison to the critical place that the idea of pollution occupies in anthropology. The classic treatment is Mary Douglas’s *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. Her study led her to see two ways in which the idea of pollution operates as a response to violations of societal boundaries. First, characterizing something as pollution seeks to influence the behavior of others. Second, the label of pollution can defend general views of the social order. In either instance, “[a] polluting person is always in the wrong.”<sup>117</sup> Douglas elaborated these views sixteen years later in *Risk and Culture*, which she wrote with Aaron Wildavsky. That book investigated “the sudden, widespread, across-the-board concern about environmental pollution and personal contamination that has arisen in the Western world in general and with particular force in the United States.”<sup>118</sup> Douglas and Wildavsky identified two senses in which the term “pollution” is employed: a technical sense typical of air and water pollution “when the physical adulteration of an earlier state can be precisely measured,” and a non-technical sense connoting moral defect in which “pollution is a contagious state, harmful, caused by outside

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<sup>112</sup> Sands, Taylor & Wood v. Quaker Oats Co., 34 F.3d 1340, 1348 (7th Cir. 1994).

<sup>113</sup> In re Deposition, 2006 U.S. Dist. LEXIS 90345, \*38 n.41 (N.D.N.Y. 2006). Accord *Lugosch v. Congel*, 219 F.R.D. 220, 237 (N.D.N.Y. 2003).

<sup>114</sup> Phillips v. Cricket Lighters, 841 A.2d 1000, 1006 (Pa. 2003).

<sup>115</sup> Ruggero J. Aldisert, *Perspectives from the Bench on the Value of Clinical Appellate Training of Law Students*, 75 Miss. L.J. 645, 653 (2006).

<sup>116</sup> In re Wissink, 301 A.D.2d 36, 40 (N.Y. Sup. Ct. App. Div. 2002).

<sup>117</sup> DOUGLAS, *supra* note 1, at 114.

<sup>118</sup> MARY DOUGLAS & AARON WILDAVSKY, *RISK AND CULTURE* 10 (1982).

intervention, but mysterious in its origins.”<sup>119</sup> These latter pollution beliefs “uphold conceptual categories dividing the moral from the immoral and so sustain the vision of the good society.”<sup>120</sup> The four questions that Douglas and Wildavsky asked about such moral pollution are equally applicable to environmental pollution: what is being judged impure, who is accused of causing the impurity, who are the victims, and how can the impurity be removed? They first addressed those questions in the context of the Hima, a people who hold a pollution belief “that contamination by contact with women causes cattle to sicken and die,”<sup>121</sup> an instance of a common traditional treatment of sex and gender roles as constrained by ideas about pollution. Douglas and Wildavsky readily admitted that the application of pollution ideas to sexuality is strange to modern societies who see no need to rely upon rituals to explain what science can now answer. But they explored the manner in which concerns about environmental pollution are misunderstood as well, emphasizing the extent to which much air and water pollution exists naturally. In both instances, the idea of pollution operates to stigmatize the pollutant and the polluter, despite lingering scientific uncertainty about exactly what is happening.

This understanding of pollution has inspired many other anthropologists and other scholars in a variety of disciplines to employ pollution as a framework for analyzing a variety of historical efforts to attain societal purity. Death rituals, the segregation of menstruating women, the effects of biotechnology, illicit sexual activities, and the exclusion of undesirable people are just a few of the practices that have been analyzed through the lens of pollution, as I will detail below.<sup>122</sup> And, of course, Douglas herself drew upon pollution ideas that were expressed before her. In *Miasma: Pollution and Purification in Early Greek Religion*, Robert Parker asserts that “[a]nyone who has sampled a few of the most commonly read Greek texts will have encountered pollution,” citing examples from Thucydides, Aeschines, and numerous other authors.<sup>123</sup> Edward Harper described the concept of ritual pollution as “fundamental to such well-known aspects of Indian culture as untouchability, limited access to wells, and the setting apart of a priestly caste.”<sup>124</sup> Harvard sociologist Barrington Moore, Jr., has examined the Old Testament, sixteenth-century France, the French Revolution, and Asiatic civilizations to determine “when and why human beings kill and torture other human beings who, on account of their different religious, political, and economic

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<sup>119</sup> *Id.* at 36.

<sup>120</sup> *Id.* at 37.

<sup>121</sup> *Id.* at 40.

<sup>122</sup> See *infra* at text accompanying notes 238-256.

<sup>123</sup> ROBERT PARKER, *POLLUTION AND PURIFICATION IN EARLY GREEK RELIGION* 1-4, 121 (1983).

<sup>124</sup> Edward B. Harper, *Ritual Pollution as an Integrator of Caste and Religion*, 23 J. ASIAN STUDIES 151 (1964).

ideas, appear as a threatening source of 'pollution.'"<sup>125</sup>

Even claims of cultural pollution, often dismissed as rhetorical flourishes or political jargon, have inspired a careful analysis of violent entertainment. Duke political scientist and economist James Hamilton's book *Channeling Violence* explores why "television violence is fundamentally a problem of pollution."<sup>126</sup> Hamilton explains that violent television is analogous to the cancer risk that an individual faces from a toxic chemical at a Superfund site. A violent program is the toxic chemical, the nature and extent of the violence establishes the program's toxicity, and the amount of programming that is viewed is the exposure amount. Hamilton's economic analysis explains why there is a commercial market for violent programming even though it is harmful to society. "Television violence generates negative externalities," Hamilton writes, just as environmental pollution does.<sup>127</sup> Specifically, "broadcasters attempting to deliver audiences to advertisers or attract viewers to a cable system may not fully incorporate the costs to society of their violent programming if these costs include such factors as increased levels of aggression and crime."<sup>128</sup> The externality argument is easily demonstrated by the millions of children who watch violent television that is not directed at them but to which they are exposed anyway. The externalities manifest themselves in the costs of the actual violence and increased aggression that is associated with exposure to violent television. "If broadcasters were led to internalize the costs to society of violent programming, fewer violent programs would be offered."<sup>129</sup> Hamilton concludes his book with the suggestion that many of the tools used to combat environmental pollution could also be employed against violent entertainment.<sup>130</sup>

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History shows that "pollution" always possessed dual meanings: a broader meaning that encompassed a wide variety of things, and a narrower meaning that was limited to unwanted influences upon the natural environment. The broader meaning dominated until the second half of the twentieth century, and it has since been overwhelmed by the popular connotation of pollution as a phenomenon limited to the air, water, or land. But the broader meaning never disappeared, and it continues to play an important role in law and in the academy, especially in anthropology. This

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<sup>125</sup> BARRINGTON MOORE, JR., *MORAL PURITY AND PERSECUTION IN HISTORY* (2000).

<sup>126</sup> JAMES T. HAMILTON, *CHANNELING VIOLENCE* xvii (1998).

<sup>127</sup> *Id.* at 3.

<sup>128</sup> *Id.* at 37.

<sup>129</sup> *Id.*

<sup>130</sup> *See id.* at 295-322.

broader meaning of pollution affirms the description of things besides the air and water as polluted, and negates the claim that any such references are simply a cute rhetorical device. The idea of pollution extends well beyond the familiar subjects of environmental law, which necessitates a consideration of what, then, pollution really is.

## II. THE MEANING OF POLLUTION

The history of “pollution” establishes that the term was, and is, applied to many more kinds of harms beyond the now familiar images of smoky air and oily water. Modern dictionaries continue to define “pollution” in two ways: narrowly to refer to harmful influences upon the natural environment, and broadly to include harmful influences of all sorts upon the natural environment, human environments, and humans alike. But the very breadth of pollution claims makes it difficult to understand the meaning of the term. What is pollution? Equally importantly, what is *not* pollution? If everything constitutes pollution, then the idea adds little to analyzing any particular problem. Obviously, an article about the idea of pollution must offer some idea of what is meant by pollution and what is not. But these questions are difficult to answer. Indeed, I struggled for several years to craft a definition of pollution that would grasp the central meaning of the term so that it could be applied to disparate societal concerns. That effort failed, for reasons that will become apparent in this section. What I learned, though, is that a universal *definition* of pollution is not just impossible, but it is also unnecessary for an analysis of how the idea of pollution can aid in analyzing hostile work environments, violent entertainment, objectionable sights and smells, pornography, unwanted people, campaign moneys, and the like.

The lesson starts with the frequent definitions of “pollution” and “pollutant” in hundreds of federal and state statutes, local ordinances, international treaties, and private sources of law such as contracts and insurance policies. The frequency with which environmental law must define “pollution” and “pollutant” would suggest that it should be relatively easy to construct a uniform definition. The reality is far different. The three kinds of approaches that environmental law takes to defining pollution demonstrate multiple obstacles to reaching a uniform definition. The first obstacle is that the detailed definitions contained in environmental law often fail to distinguish between what is pollution and what is not. Another obstacle arises because it is far easier to explain what pollution is than what it is not. And environmental law’s definitions of pollution are often so vague or overbroad that they would be invalidated in other contexts. Nor is the definitional confusion unique to environmental law, for discussions of pollution beliefs in anthropology are even less susceptible of precise

definitions. All of these failings could confound the effort to examine various claims of pollution before it really begins.

What saves the project is the work of Mary Douglas, and those writing after her, which sees pollution as a violation of each society's designated boundaries. Pollution is socially constructed, equally so in environmental law, anthropology, and in other contexts. Pollution beliefs share a common concern with all types of environments and the pollutants which enter them, again allowing each society to determine what it regards as a pollutant and which environments are in need of protection, as I will detail in Part III. Most pollution beliefs share several other characteristics that I will describe at the end of this section, though these characteristics do not fit all pollution beliefs. This way of looking at the typical characteristics of pollution beliefs suggests that while "pollution" confounds precise definition, the enterprise of understanding and comparing pollution claims remains worthwhile.

#### A. Defining "pollution"

Environmental law has ample occasion to define the "pollution" that is subject to legal controls. Nearly all of the definitions apply to what I have described as environmental pollution, with a much smaller group of statutes addressing sensory pollution such as noise pollution and light pollution. The other uses of pollution imagery in the law – such as the hostile work environments "polluted" by discrimination – leave "pollution" undefined. Generally, environmental law relies upon three alternative solutions to the problem of defining pollution: it treats everything that is added to the environment as pollution (*the comprehensive solution*), it relies upon detailed lists of pollutants or polluters (*the listing solution*), or it relies upon the effects of an alleged pollutant (*the effects solution*). But these three approaches to defining pollution have failed to identify what is pollution and what is not. Let me describe each approach, then explain their common failings.

The *comprehensive solution* is illustrated by statutes that treat everything that is added to the environment as pollution. The Clean Air Act (CAA) defines "air pollutant" to include "any physical, chemical, biological, [or] radioactive . . . substance or matter which is emitted into or otherwise enters the ambient air."<sup>131</sup> That definition encompasses the bubbles that my young daughters blow toward the sky, smoke rising from the candles lighting my deck, butterflies released in my backyard, and many other things that are rarely perceived as pollutants. Indeed, it is difficult to imagine anything that enters the air that is not an "air pollutant" according to the CAA. (The uncertain status of carbon dioxide as a CAA pollutant offers one notable exception, but the

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<sup>131</sup> 42 U.S.C. § 7602(g).

argument against treating CO<sub>2</sub> depends upon theories of statutory interpretation rather than chemistry). The comprehensive solution is also illustrated by some statutes that purport to list pollutants rather than defining everything as a pollutant. An Arizona air pollution statute, for example, defines “air contaminants” to include “smoke, vapors, charred paper, dust, soot, grime, carbon, fumes, gases, sulfuric acid mist aerosols, aerosol droplets, odors, particulate matter, windborne matter, radioactive materials, or noxious chemicals, or any other material.”<sup>132</sup> Here the breadth of the list of specific pollutants operates to deem a pollutant any imaginable material that is released into the air.

The *listing solution* is embodied in many environmental statutes that contain lengthy lists of specific “pollutants.” Nebraska follows this approach by defining land pollution as the presence of “refuse, garbage, rubbish, or junk,” with “junk” further defined as “old scrap, copper, brass, iron, steel, rope, rags, batteries, paper, trash, rubber debris, waste, dismantled or wrecked automobiles, or parts thereof, and other old or scrap ferrous or nonferrous material.”<sup>133</sup> Federal environmental law also provides examples of lengthy lists of pollutants. EPA has listed 126 toxic pollutants and 22 “nonconventional” pollutants under the Clean Water Act (CWA).<sup>134</sup> The CAA identifies six “criteria” pollutants subject to extensive regulation.<sup>135</sup> The Emergency Planning and Community Right-to-Know Act (EPCRA) established a Toxics Release Inventory (TRI) that requires manufacturers to report the amounts of 588 toxic chemicals and 27 chemical categories that they release into environment.<sup>136</sup> All told, five federal statutes – the CAA, the CWA, EPCRA, the Occupational Safety and Health Act (OSHA), and the Resource Conservation and Recovery Act (RCRA) – list 1,134 different pollutants.<sup>137</sup>

But the lists in each statute are inconsistent. As John Dernbach has shown, each list contains pollutants that are also found on all of the other lists, and each list contains pollutants that are only found on that list. Dernbach concludes that “[e]ach list alone can be explained reasonably, but there is not a rationale that explains how the different lists fit together.”<sup>138</sup> Some of the differences between the lists is attributable to the different properties of the substances involved, but Dernbach concludes that such differences fail to explain most of the differences. The best explanation for the content

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<sup>132</sup> ARIZ. REV. STAT. ANN. § 49-421 (1998) (emphasis added).

<sup>133</sup> NEB. REV. STAT. § 81-1502(19).

<sup>134</sup> See 40 C.F.R. pt. 423, app. A (toxics); 40 C.F.R. pt. 122, app. D, tbl. IV (nonconventional pollutants).

<sup>135</sup> See 40 C.F.R. pt. 50.

<sup>136</sup> See 40 C.F.R. § 372.65.

<sup>137</sup> See John C. Dernbach, *The Unfocused Regulation of Toxic and Hazardous Pollutants*, 21 HARV. ENV'T L. REV. 1, 15, 27-42 (1997).

<sup>138</sup> *Id.* at 27.

of each list is the happenstance of how the list was assembled, a result that belies the assumption that there is a principled, consistent way in which to identify environmental pollution.

The *effects solution* identifies pollution by its effects rather than by specifying particular pollutants. The CWA defines “pollution” (as opposed to “pollutants”) as the “man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of the water.”<sup>139</sup> A New Mexico statute defines “water contaminant” as “any substance that could alter if discharged or spilled the physical, chemical, biological or radiological qualities of water.”<sup>140</sup> Wisconsin defines “toxic pollutants” by reference to whether they “cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction or physical deformations, in such organisms or their offspring.”<sup>141</sup> The effects solution is also evidenced in state statutes that define pollution by reference to a threshold amount of a particular substance. Thus an Arkansas statute indicates that pollution exists when a substance is present “in quantities, of characteristics, and of a duration” which are harmful.<sup>142</sup> A more stringent Idaho statute provides that a substance is an “air contaminant” if it exceeds its natural composition in the atmosphere.<sup>143</sup> Or a statute might rely upon a specific numeric level above which pollution is said to exist and below which it does not. These and many other statutes finesse the identification problem by providing that “pollution” has occurred if certain harms have occurred, thus transferring the inquiry from a threshold investigation of what constitutes pollution to a factual inquiry into the effect of certain substances on the relevant environment.

### 1. *Everything is pollution*

Each of environmental law’s three approaches to defining pollution fails to aid the effort to identify a more general meaning of “pollution.” The first reason for that failure is that the approaches often result in everything being described as pollution. Consider the example of the CWA, which provides separate definitions for its operative terms “pollutant” and “pollution.” The CWA defines “pollutant” by listing fifteen specific substances: “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and

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<sup>139</sup> See 33 U.S.C. § 1362(19).

<sup>140</sup> See N.M. STAT. ANN. § 74-6-2.

<sup>141</sup> See WIS. STAT. § 283.01 (West 1998).

<sup>142</sup> ARK. CODE ANN. § 8-4-303(5).

<sup>143</sup> See IDAHO CODE § 39-103 (1).

agricultural waste.”<sup>144</sup> The definition appears to rely upon the listing solution to the problem of identifying pollution, but the statute actually operates more like the comprehensive solution by assuming that virtually anything placed into the relevant environment – the water – is a pollutant subject to regulation. As William Rodgers has observed, “[d]espite the absence of an indisputable catch-all (e.g., ‘any other stuff whatever’), there is little doubt that the recitation of categories in the definition of ‘pollutant’ is designed to be suggestive not exclusive.”<sup>145</sup>

Three lines of decided cases confirm that there is very little that can be added to the water without being regarded as a pollutant for purposes of the CWA. The first line of cases holds that fish can be pollutants in some circumstances.<sup>146</sup> A second line of cases questions whether the intentional application of chemicals – *i.e.*, pesticides – by farmers, mosquito control districts, and individual homeowners who seek to kill unwanted pests are properly characterized as pollutants.<sup>147</sup> The third line of cases considers whether water itself can be a pollutant when two bodies of water containing different pollutants or different amounts of those pollutants are combined.<sup>148</sup>

“Pollution,” as opposed to “pollutants,” receives an even broader definition under the CWA. Pollution “means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.” Robert Adler has written that this definition and the CWA’s goals “suggest a far broader array of human activities not typically included in the lay understanding of water pollution.”<sup>149</sup> Adler listed the construction of levies and culverts, the introduction of non-native species, the impoundment of rivers by dams, and irrigation that diminishes instream flows as examples of activities that could qualify as pollution under the CWA’s definition. Indeed, Adler observes that the CWA’s definition of pollution “would imply the elimination of every type of human alteration of the chemical, physical, and biological integrity of the nation’s waters.”<sup>150</sup> According to Adler, this distinction between a broad view of pollutants and an even broader view of pollution is essential to

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<sup>144</sup> 33 U.S.C. § 1362(6).

<sup>145</sup> WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 300 (2d ed. 1994).

<sup>146</sup> See *Association to Protect Hammersley, Eld, & Totten Inlets v. Taylor Resources, Inc.*, 299 F.3d 1007 (9th Cir. 2002); *U.S. Public Interest Group v. Atlantic Salmon of Me.*, 215 F. Supp. 2d (D. Me. 2002); see generally Jeremy Firestone & Robert Barber, *Fish as Pollutants: Limitations of and Crosscurrents in Law, Science, Management, and Policy*, 78 WASH. L. REV. 693 (2003).

<sup>147</sup> See, e.g., *No Spray Coalition, Inc. v. City of New York*, 351 F.3d 602 (2d Cir. 2003).

<sup>148</sup> See *Greenfield Mills, Inc. v. Macklin*, 361 F.3d 934 (7th Cir. 2004) (water moved from a millpond to a river); *DuBois v. U.S. Dep’t of Agriculture*, 102 F.3d 1273 (1st Cir. 1996) (snowmaking); *Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York*, 273 F.3d 481 (2d Cir. 2001) (water diverted from one reservoir to another).

<sup>149</sup> Robert W. Adler, *The Two Lost Books in the Water Quality Trilogy: The Elusive Objectives of Physical and Biological Integrity*, 33 ENVTL. L. 29, 35 (2003).

<sup>150</sup> *Id.* at 46.

understanding the different types of regulatory measures and other responses that the CWA employs to combat “pollutants” and “pollution.” So construed, the scope of the CWA becomes even broader, and the effort to identify what is *not* a pollutant becomes still more difficult.

## 2. *Uncertainty regarding a “pollutant”*

A second reason for environmental law’s failure to provide a universal definition of pollution emerges from those instances in which even detailed definitions fail to distinguish what is pollution from what is not. The best illustration of this failure comes from insurance law. Since 1970, insurers have sought to deny liability coverage for many of the injuries caused by pollution. The 1985 version of the so-called absolute pollution exclusion clause contained in comprehensive general liability policies excludes “bodily injury or property damage arising out of the actual, alleged or threatened discharge, dispersal, release or escape of pollutants.”<sup>151</sup> The clause defines “pollutants” to mean “any solid, liquid, gaseous, or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, and waste,” with “waste” further defined as including “materials to be recycled, reconditioned or reclaimed.”<sup>152</sup> Insurance companies seeking to avoid liability have sought to extend that clause to broad range of events that are literally within the meaning of those terms, while the insured parties have responded that the clause should be restricted to the standard understanding of pollution.

“To say there is a lack of unanimity as to how the clause should be interpreted is an understatement.”<sup>153</sup> The California Supreme Court offered that observation in 2003 when it first considered the application of an absolute pollution exclusion clause. The court sided with the view of such clauses articulated by the insured party, rejecting the clause’s literal language in favor of the clause’s more general history and purposes. The court opined that “[v]irtually any substance can act under the proper circumstances as an ‘irritant or contaminant,’” which made those words “too broad to meaningfully define ‘pollutant.’”<sup>154</sup> Instead, the court found it “far more reasonable that a policyholder would understand [the clause] as being limited to irritants and contaminants *commonly thought of as pollution* and not as applying to every possible irritant or contaminant imaginable.”<sup>155</sup>

Many other courts, by contrast, have read the absolute pollution exclusion clause

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<sup>151</sup> See, e.g., *Bituminous Cas. Corp. v. Advanced Adhesive Tech.*, 73 F.3d 335, 336 (11th Cir. 1995).

<sup>152</sup> *Id.*

<sup>153</sup> *MacKinnon v. Truck Ins. Exch.*, 73 P.3d 1205, 1208 (Cal. 2003).

<sup>154</sup> *Id.* at 1216.

<sup>155</sup> *Id.* (emphasis original).

to encompass whatever falls within the literal description of the pollutant's listed in the clause. Moreover, the reported cases question whether there is any consensus about what is "commonly thought of as pollution." Courts have divided on the status of adhesives, ammonia, asbestos, carbon dioxide, carbon monoxide, cleaners, construction debris, gasoline, lead paint, nitrogen dioxide, radioactive materials, sealants, sewage, smoke, solvents, and vegetation, with decisions saying each of those materials did or did not qualify as a pollutant for purposes of a pollution exclusion clause. The carbon monoxide cases are illustrative.<sup>156</sup> Carbon monoxide is a poisonous gas that is listed as a pollutant under the federal Clean Air Act. In numerous cases, insurance companies have denied coverage for injuries sustained from the inhalation of carbon monoxide that was released from such activities as construction in a shopping mall, a building's defective heating system, and the operation of a Zamboni machine during an ice hockey game. The courts which have held that carbon monoxide is a pollutant, and thus denied insurance coverage for injuries resulting from carbon monoxide, have emphasized that the gas falls within the literal meaning of "contaminant" and "irritant" in the pollution exclusion clause. One such court added that the clause "draws no distinction between intentional and non-intentional discharge of pollutants; nor does it in any manner suggest that only chronic emission of the defined pollutants is excluded from coverage."<sup>157</sup> By contrast, the Illinois Supreme Court refused to apply the clause "to cases which have nothing to do with 'pollution' in the conventional, or ordinary, sense of the word," or "traditional environmental pollution," which the court held without explanation to not encompass the accidental release of carbon monoxide from a broken furnace.<sup>158</sup> Or, as the Tenth Circuit explained, "a reasonable person of ordinary intelligence might well understand [that] carbon monoxide is a pollutant when it is emitted in an industrial or environmental setting," but "an ordinary policyholder would not reasonably characterize carbon monoxide emitted from a residential heater which malfunctioned as 'pollution.'"<sup>159</sup> For these courts, the meaning of "pollution" depends upon the context, and it depends upon assumptions of social meaning that conflict with the courts that have described carbon monoxide released from heating

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<sup>156</sup> For the conflicting cases concerning carbon monoxide, compare *United States Fidelity & Guaranty Co. v. Lehigh Valley Ice Arena, Inc.*, 2004 U.S. Dist. LEXIS 6100 (E.D. Pa. 2004) (carbon monoxide a pollutant); *Essex Ins. Co. v. Tri-Town Corp.*, 863 F. Supp. 38 (D. Mass. 1994) (same); *Bituminous Cas. Corp. v. Sand Livestock Sys., Inc.*, 2007 Iowa Sup. LEXIS 23 (Iowa 2007) (same); *Bernhardt v. Hartford Fire Ins. Co.*, 648 A.2d 1047 (Md. Ct. Spec. App. 1994) (same); with *Matcon Diamond, Inc. v. Penn National Ins. Co.*, 815 A.2d 1109 (Pa. Superior Ct. 2003) (carbon monoxide not a pollutant); *Regional Bank of Colorado, N.A. v. St. Paul Fire & Marine Ins. Co.*, 35 F.3d 494, 498 (10th Cir. 1994) (same); *American States Ins. Co. v. Koloms*, 687 N.E.2d 72, 79 (Ill. 1997) (same); *Andersen v. Highland House Co.*, 757 N.E.2d 329 (Ohio 2001) (same). See also 42 U.S.C. § 7408(a)(1); 40 C.F.R. Part 50 (carbon monoxide listed as a pollutant under the CAA).

<sup>157</sup> *Bernhardt*, 648 A.2d at 1051.

<sup>158</sup> *American States Ins. Co.*, 687 N.E.2d at 79.

<sup>159</sup> *Regional Bank of Colorado, N.A.*, 35 F.3d at 498.

systems as pollution.

The contested nature of the pollutants identified by the pollution exclusion clause is further revealed in the 2003 California case itself. The dispute there concerned an apartment tenant who died after the landlord contracted to spray pesticides to eradicate bees in the building. The court held that the pesticide spraying was outside the pollution exclusion clause – and thus within the scope of the liability insurance coverage – because the pesticides were not “discharged,” a term that the court found to be “commonly used with pesticides to describe pesticide runoff behaving as a traditional environmental pollutant rather than pesticides being normally applied.” Continuing, the court explained that “the ‘common understanding of the word ‘pollute’ indicates that it is something creating impurity, something objectionable and unwanted.’ The normal application of pesticides around an apartment building in order to kill yellow jackets would not comport with the common understanding of the word ‘pollute.’”<sup>160</sup>

That is a very narrow view of pollution. No doubt Rachel Carson would be surprised to learn that pesticides produce pollution only when they are negligently applied. For pesticides offer a mirror image to the pollution problem presented by solid, hazardous, or nuclear wastes. Any pollution resulting from the disposal of wastes occurs when a substance that is no longer wanted is discarded into the environment. Pesticides, by contrast, are manufactured precisely so that they can be released into the environment. As William Rodgers explains:

While pollution is chiefly a subject of the unintended consequences of technological undertakings, pesticides are unequivocally designed to disrupt, defeat, or destroy nature’s choice. That the essence of the exercise is to pollute purposefully is understood by historical pesticide practices that celebrated the dissemination of crude and notorious poisons. Of course this destroy-by-design feature of pesticides practice does not foreclose the behavior as a matter of social choice; in legal parlance, the decision to apply pesticides could be considered excused or justified by overriding social considerations. But characterizing applications of pesticides as instances of excused pollution underscores the stark zero-sum features of the behavior where gains are secured only at the expense of environmental incursions explicitly approved. The popular nonzero-sum perception of pollution cleanup (the company can continue to

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<sup>160</sup> *MacKinnon*, 73 P.3d at 1215, 1217. The cases providing the conflicting judgments concerning the nature of specific substances as pollutants are described in Claudia G. Catalano, Annotation, *What Constitutes “Pollutant,” “Contaminant,” “Irritant,” or “Waste” Within Meaning of Absolute or Total Pollution Exclusion in Liability Insurance Policy*, 98 A.L.R. 5th 193 (2002-2004).

operate while the rest of us enjoy clean water) does not hold for acts of excused pollution.<sup>161</sup>

In other words, the mere application of pesticides fits within the common understanding of pollution. That form of pollution may be permitted, but it is still pollution.

### 3. *Vagueness & overbreadth*

Besides being all-encompassing and subject to conflicting applications, the third problem with environmental law's definitions of pollution is that they are often quite vague. The comprehensive solution's treatment of *everything* that is added to the relevant environment as pollution calls to mind the Supreme Court's admonition not to confuse that breadth with a lack of clarity. The listing solution relies upon a detailed list of what constitutes a pollutant precisely to avoid any uncertainty about the scope of the definition. The effects solution disavows any prejudgment about what constitutes a pollutant in favor of an individualized evaluation of the consequences that a substance or product has on the environment that it enters. Each approach strains to avoid disputes about the meaning of the operative definition.

The many vagueness challenges leveled against definitions of air pollution, water pollution, and other kinds of environmental pollution have achieved little success. Two lines of reasoning have been employed to reject charges that such environmental law provisions are impermissibly vague. The first response insists that the terms contained in the statutory definitions of environmental pollution really are sufficiently clear to inform the public about what is encompassed within the law's scope. Pollution definitions simply mimic longstanding statutory definitions of nuisances. A statutory reference to "pollution" itself states a recognizable standard, albeit a broad one. General definitions of pollution must be understood to be limited to harmful contamination. For these reasons, courts explain, it is unnecessary to expect the legislature to delineate all of the characteristics of all types of pollution. The second response is that broad, general definitions of environmental pollution are inevitable. The amorphous nature of air and water pollution defies precise standards. Environmental science is inexact and evolving, thereby precluding efforts to fix a particular vision of pollution into law. The sheer breadth of the subject precludes a more precise definition, lest polluters circumvent the law. These explanations – especially the refusal to equate breadth with vagueness and tolerance of the need to adapt to changing scientific and societal understandings – are rarely sufficient in vagueness disputes concerning laws regulating violent entertainment or pornography.

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<sup>161</sup> RODGERS, *supra* note 145, at 394.

Surprisingly, vagueness challenges to definitions of noise pollution have been somewhat more successful, even when no protected speech is involved. Consider *Thelen v. State*,<sup>162</sup> a dispute between lakeside residents and a neighbor who used his dock to take off and land his helicopter. The county noise ordinance prohibited “any loud, unnecessary or unusual sound or noise which either annoys, disturbs, injures, or endangers the comfort, repose, health, peace, or safety of others.” According to a unanimous Georgia Supreme Court, that ordinance was vague as applied to the sound of the helicopter. As the court correctly noted, Justice Stewart explained in *Coates v. City of Cincinnati* that “[c]onduct that annoys some people does not annoy others.”<sup>163</sup> But *Coates* involved protected speech and thus allowed the defendant to complain of the vagueness of the ordinance in any application, whereas the absence of first amendment protection for noise from a helicopter limited the pilot to arguments about the vagueness of the county noise ordinance as applied to him. Undeterred, the Georgia court proclaimed, “Whether the noise of a helicopter takeoff or landing is ‘unnecessary,’ ‘unusual,’ or ‘annoying’ to a neighbor more than 50 feet away ‘certainly depends upon the ear of the listener.’” The court did not proffer any listeners who found the sound of a nearby helicopter necessary, usual, or enjoyable.<sup>164</sup>

Perhaps the most telling indication of judicial tolerance of flexible definitions of pollution is provided by decisions allowing agencies or courts to determine what constitutes pollution on a case-by-case basis. Vagueness challenges to several environmental statutes have failed because courts relied upon the appropriate agency to judge whether the objectionable conduct constituted pollution or otherwise satisfied the statutory definition. The definition of hostile work environments provides an example of courts, rather than agencies, relying upon a case-by-case approach to identifying pollution. The term “hostile work environment” is a judicial creation that does not appear in the text of Title VII, and the determination of which work environments are too polluted by racism, sexism, or other prohibited factors depends upon judicial evaluation of all of the relevant circumstances. The problem also arises in the related field of school anti-harassment policies, where one district court analogized the problem of identifying prohibited harassment to Justice Stewart’s “I know it when I see it” remark about obscenity. But the court did not respond to the impossibility of defining harassment by insisting upon a clearer definition, as a vagueness challenge seeks. Instead, the court concluded, “Thus, some flexibility is to be expected.”<sup>165</sup> In other words, the need to define the prohibited conduct justified some imprecision in doing so.

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<sup>162</sup> *Thelen v. State*, 526 S.E.2d 60 (Ga. 2000).

<sup>163</sup> *Coates v. City of Cincinnati*, 402 U.S. 611, 614 (1970).

<sup>164</sup> *Thelen*, 526 S.E.2d at 60-61.

<sup>165</sup> *Saxe v. State College Area Sch. Dist.*, 77 F. Supp. 621, 625-26 & n.6 (M.D. Pa. 1999) (quoting *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964) (Stewart, J., concurring)), *rev'd*, 240 F.3d 200 (3d Cir. 2001).

This is the same response that Chief Justice Warren offered to the problem of defining obscenity in the same case in which Justice Stewart made his famous quip. Warren acknowledged that “neither courts nor legislatures have been able to evolve a truly satisfactory definition of obscenity.”<sup>166</sup> That admission, however, did not lead Warren to abandon the effort. Instead, he observed that it was both common and of no great concern for the law to fail to define operative terms with precision. The example he cited was negligence, which has been “difficult to define except in the most general manner” even though the term has been “in common use for centuries.”<sup>167</sup> “Yet the courts,” Warren continued, “have been able to function in such areas with a reasonable degree of efficiency.” The negligence analogy is further supported by noise pollution ordinances referring to a “reasonable” amount of noise, which courts have consistently sustained against vagueness challenges. Warren then insisted that “[n]o government – be it federal, state, or local – should be forced to choose between repressing all material, including that within the realm of decency, and allowing unrestrained license to publish any material, no matter how vile.”<sup>168</sup> For Warren, the very necessity of regulating such pollution claims should afford greater leeway in identifying it. The failure of the courts to heed Warren’s advice shows that the legal rules governing vagueness are really about special categories (*e.g.*, free speech), rather than the clarity of certain words.

Besides vagueness, a related objection to many definitions of pollution is that they encompass some substances, products or activities that are not properly regarded as pollution. A definition of pornography may include movies that many individuals – or even some individuals – would not regard as pornographic at all. The same problem exists for definitions of which entertainment is violent, which workplaces are hostile, and which noises are too loud. The definitions may be clear, but they are not confined to the subjects of concern. The definitions, in other words, are overinclusive, and thus unconstitutionally overbroad.

The three solutions to the identification problem present varying probabilities that a definition of pollution will be overbroad. The effects solution is the least likely to create an overbreadth problem because the definition of pollution applies to anything that causes a harm – no more, no less. The debate about whether a particular substance is a pollutant thus becomes a debate about the application of the definition, rather than a debate about the propriety of the definition. The listing solution is somewhat more likely to produce an overbroad definition of pollution, for it is conceivable that an overzealous list maker will include things that are not fairly regarded as pollution. This

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<sup>166</sup> *Jacobellis*, 378 U.S. at 199 (Warren, C.J., dissenting).

<sup>167</sup> *Id.*

<sup>168</sup> *Id.* at 200.

is not especially likely, though, given the predictable response to the attention that suggesting a specific substance or sound or type of movie will elicit from those concerned about the problem. The real overbreadth problems occur with the comprehensive solution. The denomination of *everything* that is introduced into the relevant environment as pollution is overbroad by definition, unless one can imagine an environment so pure that it is polluted by anything that is added to it. Yet the drafters of the Clean Water Act seem to have had such an imagination, as evidenced by the expansive understanding of the CWA's definition of "pollutant" and "pollution" described above.

Environmental law, in short, has failed to define "pollution" in a manner that distinguishes what is pollution from what is not. Anthropologists have been no more successful in crafting a definition of the "pollution" involved in the pollution beliefs which they study. Few of the many anthropologists addressing pollution beliefs have bothered to identify what they mean by "pollution," while those who have tried have not yielded much help. Consider Harriet Ngubane, who sees pollution as "a mystical force which diminishes resistance to disease and creates conditions of poor luck, misfortune . . . 'disagreeableness' and 'repulsiveness.'"<sup>169</sup> Or Edward Green, who recites a "general agreement among scholars that pollution beliefs represent a form of naturalistic or impersonal causation that is distinct from attribution of illness to spirits, witches, sorcerers, or ancestors."<sup>170</sup> Or Kathy Ryan, who describes pollution as "the inauspicious state associated with birth, death, and menstruation."<sup>171</sup> Even these descriptions must be tempered with the repeated insistence that pollution depends upon context. "Conventions of purity and pollution are variable and contested within a given culture and change over time," according to one recent study of the role of pollution beliefs in anthropology.<sup>172</sup> In the words of Mary Douglas, "What is clean in

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<sup>169</sup> HARRIET NGUBANE, *BODY AND MIND IN ZULU MEDICINE* 77 (1977).

<sup>170</sup> Edward C. Green, *Purity, Pollution and the Invisible Snake in Southern Africa*, 17 *MEDICAL ANTHROPOLOGY* 91-93 (1997).

<sup>171</sup> Kathy Ryan, *Pollution in Practice: Ritual, Structure, and Change in Tamil Sri Lanka* (1980, Ph.D. dissertation, Anthropology Dep't, Cornell Univ.), quoted in Susan Bean, *Toward a Semiotics of "Purity" and "Pollution" in India*, 8 *SYMBOLISM AND COGNITION* 587 (1981). See also Michael P. Carroll, *Totem and Taboo, Purity and Danger . . . and Fads and Fashion in the Study of Pollution Rules*, 17 *BEHAVIOR SCIENCE RESEARCH* 271 (1983) (pollution rules are prohibitions on "contact with a forbidden object [that] seemed to involve a fear of dangerous contamination"); Jamsheed Kairshasp Chosky, *Purity and Pollution in Zoroastrianism*, *THE MANKIND QUARTERLY* 167 (2001) (pollution is linked "to impurity, irreligion and danger"); Emiko Namihira, *Pollution in Folk Belief System*, 28 *CURRENT ANTHROPOLOGY* S65 (1987) ("extreme purity" is "the exact opposite of pollution"); Yasumasa Sekine, *'Pollution,' 'Purity' and 'Sacred' – The Ideological Configuration of Hindu Society*, 10 *BULLETIN OF THE NATIONAL MUSEUM OF ETHNOLOGY* 496 (1980) ("Pollution is characterized by anomaly or ambiguity between death and life (birth)").

<sup>172</sup> Janina M. Safran, *Rules of Purity and Confessional Boundaries: Maliki Debates About the Pollution of the Christian*, 42 *HISTORY OF RELIGIONS* 208 (2003).

relation to one thing may be unclean in relation to another, and vice versa."<sup>173</sup> The definitional problem is ancient, as evidenced by Robert Parker's difficulty in defining the "pollution" that is constantly expressed in ancient Greek texts. Parker identified a "basic sense . . . of defilement, the impairment of a thing's form or integrity."<sup>174</sup> The Greeks, in other words, anticipated environmental law's effects solution to the problem of defining pollution more than two millennia ago. But a law defining pollution as "defilement" or "the impairment of a thing's form of identity" would leave ample room for debates about what constitutes pollution, and what does not.

### C. The social construction of "pollution"

This article began with the hope that many seemingly different phenomenon could be analyzed through the pollution claims that are common to each of them. The historical discussion in section I confirms that the idea of pollution has long been understood to apply broadly, and that such breadth persists in popular discourse, the law, and academic disciplines such as anthropology. But the discussion in the first part of this section demonstrates the futility of efforts to produce a universal definition of the term "pollution." Let me, therefore, approach the problem from another direction.

Rather than trying to define pollution, let us consider how the idea of pollution is actually employed in the many contexts that I have described. This investigation will reveal that pollution claims share a few common characteristics. Generally, pollution involves a pollutant (the agent that produces the harmful effect), a polluter (the person responsible for introducing the pollutant into the environment), and an environment in which someone or something is harmed. Or, as Mary Douglas explains, pollution beliefs are designed to enforce boundaries which certain things or people should not cross.

Douglas never actually defines the term "pollution," but the way in which she employs the term reveals what she understands it to mean. Pollution, according to Douglas, is about boundaries. Pollution beliefs reinforce the social boundaries established by a society by designating which things are allowed in which places. So, famously, Douglas describes dirt as "matter out of place."<sup>175</sup> She explains that "our pollution behavior is the reaction which condemns any object or idea likely to confuse

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<sup>173</sup> DOUGLAS, *supra* note 1, at 9.

<sup>174</sup> PARKER, *supra* note 123, at 121. *See also* Namihira, *supra* note 169, at S65 ("What constitutes pollution and the taxonomy of degrees of it vary with the era, area, social stratum, and occupational category"); Pauline Paine, *The Masks of Janus: A Re-analysis of the Concept of Pollution in New Guinea*, 2 THE CANADIAN STUDENT JOURNAL OF ANTHROPOLOGY 25 (1981) ("each culture defines what is polluting"); Sekine, *supra* note 171, at 493 (Mary Douglas shows "the complexity and the abundance of pollution concepts").

<sup>175</sup> DOUGLAS, *supra* note 1, at 36.

or contradict cherished classifications."<sup>176</sup> Thus, "pollution is a type of danger which is not likely to occur except where the lines of structure, cosmic or social, are clearly defined."<sup>177</sup> And "wherever the lines are precarious we find pollution ideas come to their support."<sup>178</sup> The four kinds of social pollution listed by Douglas all involve a society's effort to preserve the order to which it aspires: social pollution is (1) "a danger pressing on external boundaries," (2) "danger from transgressing the internal lines of the system," (3) "danger in the margins of the lines," and (4) "danger from internal contradiction."<sup>179</sup> The importance of these lines demonstrates why "all margins are dangerous."<sup>180</sup>

Now we can see how pollution beliefs arise, and why. Each society establishes pollution beliefs to reinforce boundaries. Some of those beliefs are common to many societies; others are limited to just a few. Consider how Douglas "explains the unevenness with which different aspects of the body are treated in the rituals of the world. In some, menstrual pollution is feared as a lethal danger; in others not at all. . . . In some, death pollution is a daily preoccupation; in others not at all. . . . In India cooked food and saliva are pollution-prone, but Bushmen collect melon seeds from their mouths for later roasting and eating."<sup>181</sup> In each instance, a society determines its preferred boundaries and then establishes pollution beliefs to police those boundaries.

Environmental law's treatment of pollution reflects a similar boundary problem. It is surprisingly difficult to specify the type, amount, and effect of substances that are released into the air or the water that may be characterized as "pollution." The line between smoke rising from a campfire and air pollution, or stones skipped along a pond and water pollution, is not as easily drawn as those innocuous activities would suggest. Nor is the line between sounds and noise pollution, between lights and light pollution, or between fragrances and odor pollution. Governmental officials, environmentalists, businesses, and residents often disagree about whether the discharge of a particular substance into the air or water constitutes pollution. And even when environmental law seeks to finesse this identification problem by treating everything as pollution (the comprehensive solution), prescribing hundreds or even thousands of individual pollutants (the listing solution), or deflecting the question to the issue of the resulting harm (the effects solution), disputes persist concerning the application of those definitions to particular instances of alleged pollution.

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<sup>176</sup> *Id.* at 37.

<sup>177</sup> *Id.* at 114.

<sup>178</sup> *Id.* at 140.

<sup>179</sup> *Id.* at 123-24. See also Susan Reynolds Whyte & Michael A. Whyte, *Cursing and Pollution: Supernatural Styles in Two Luyia-speaking Groups*, 23 *FOLK* 65 (1981) (pollution forces "strike when rules are broken, when categories are mixed and when proper order is not maintained in human affairs").

<sup>180</sup> *Id.* at 122.

<sup>181</sup> DOUGLAS, *supra* note 1, at 122.

The process of establishing these boundaries demonstrates that the very idea of pollution is socially constructed. That is the conclusion reached by Neil Evernden in his discussion of *The Social Creation of Nature*.<sup>182</sup> Evernden devotes most of his book to an explanation of how the idea of nature has been fashioned and refashioned by generations of human societies, but first he offers an insightful analysis of the concept of pollution. Evernden observes that “there has been an ongoing debate between the accusers and the alleged perpetrators about what actually constitutes pollution,” noting that “the ubiquitous term *pollution* did not acquire its current connotation until quite recently.”<sup>183</sup> He then elaborates on the uncertainty surrounding “pollution”:

If pollution is regarded as a matter of empirical fact, it may seem odd that such disagreements can persist. But since pollution involves questions not only of concentrations but also of consequences, even “hard” evidence is inevitably open to interpretation – hence the frequent spectacle of contradicting experts. Equally, significant, however, is our tendency to treat pollution as a purely material phenomenon, a bias that tends to establish arbitrary boundaries to environmental debate.

We must bear in mind that the current understanding of pollution is just that: the current understanding. Yet there is no reason to limit the definition to physical abuse alone. The dictionary definition is much broader and entails “uncleanness or impurity caused by contamination (physical or moral). Our attention to physical pollution may distract us from the fact that much of the debate is over the perception of moral pollution. For example, when voicing their opinions about how many parts per billion of a toxin are “acceptable,” both environmentalists and industrialists may be responding to a perceived instance of moral contamination. . . . The debate, it appears, is actually about *what constitutes a good life*. The instance of physical pollution serves only as the means of persuasion, a staging ground for the underlying debate.<sup>184</sup>

Thus, insists Evernden, claims of environmental pollution and claims of moral pollution collapse into the same thing.

But what is that thing? Evernden concludes that “in any society, we find ideas about pollution being used as a means of social control.”<sup>185</sup> Evernden builds upon the

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<sup>182</sup> NEIL EVERNDEN, *THE SOCIAL CREATION OF NATURE* (1992).

<sup>183</sup> *Id.* at 4.

<sup>184</sup> *Id.* at 4-5.

<sup>185</sup> *Id.* at 6.

work of Mary Douglas, whom he frequently credits. In turn, Evernden and Douglas inspired a law professor – David Cassuto – to analyze the subjectivity of pollution claims in environmental law. Cassuto discusses “the rhetoric of environmental protection,” and the meaning of the “pollutants” regulated by the Clean Water Act in particular.<sup>186</sup> Addressing the concept of pollution, Cassuto writes:

Pollutants do not exist outside of systems; pollution presupposes a system to pollute. Identifying pollutants involves determining that a foreign presence and potential source of harm exists within the system. Deciding that a substance is a pollutant requires two potentially problematic steps: designating the system’s boundaries and defining harm.<sup>187</sup>

Cassuto then lists a series of “questions of perception, not fact,” which illustrate the difficulty in identifying the boundaries of the waterways within the jurisdiction of the CWA.<sup>188</sup> He concludes that even under the seemingly precise legal strictures of the CWA, “[p]ollutant’ is context-dependent and is no longer referential absent a showing of harm.”<sup>189</sup>

#### A. The utility of “pollution”

Mary Douglas and her progeny thus demonstrate that pollution involves a violation of boundaries. They also teach that every society gets to determine its own boundaries. Douglas observes that modern western societies are unlikely to have an integrated view of how their various kinds of boundaries relate to one another. It should come as no surprise, then, that the manner in which we treat, say, claims of violent entertainment as cultural pollution differs from the way in which we address claims of toxic pollutants leaking into the water. It would seem that the idea of pollution possesses little explanatory force when it is so readily manipulated. Yet Douglas seizes upon the term “pollution” to address many different societal concerns, hundreds of environmental statutes rely upon “pollution” to state legally enforceable obligations, and claims of pollution persist in other context ranging from pornography to the aesthetics of cellular telephone towers to campaign finance reform. Why the continued attraction to “pollution”?

One response to the contingent description of the idea of pollution advanced by Douglas, Evernden, and Cassuto would be to abandon references to pollution as

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<sup>186</sup> David N. Cassuto, *The Law of Words: Standing, Environment, and Other Contested Terms*, 28 HARV. ENVTL. L. REV. 79, 80 (2004).

<sup>187</sup> *Id.* at 107.

<sup>188</sup> *Id.* at 108.

<sup>189</sup> *Id.* at 118.

unhelpful. If “pollution” means different things to different people at different times, then any attempt to compare the disparate things which we describe as pollution would seem doomed to failure. That would be true if the comparative exercise depended upon a commonly accepted meaning of the term “pollution.” But if instead we begin to examine how pollution beliefs operate in different circumstances, then the very enterprise of identifying and responding to all sorts of pollution becomes more useful. We can learn about each society by studying its pollution claims and beliefs of each society; we can learn about pollution by studying how each society perceives and responds to it.

Still, the question remains, why *pollution*? Perhaps the exercise of comparing toxic emissions and ugly signs and violent entertainment and racist workplaces could be conducted without any reliance upon the unifying word “pollution,” or any other single word. But conducting this inquiry through the lens of “pollution” remains useful, for three reasons. First, the idea of pollution is uniquely suited for describing the kinds of harms that occur when a harm occurs through exposure to something that is added to an environment. None of pollution’s synonyms – words like “corruption,” “impurity,” “contamination,” “uncleanness,” “defilement,” and “profanation” – capture the same kind of concern about harms occurring in a shared environment. Impurity, for example, is best defined by its opposite, purity. Something is pure when it does not contain any foreign matter or influences. Impurity, then, describes anything – *e.g.*, a person, liquid, or environment – that does not exist in its natural condition because of the presence of a harmful substance. An environment that is polluted is also impure, but the appellation pollution adds to the description by suggesting something about how the impurity has occurred. Thus one anthropologist has explained that pollution differs from impurity because it “evokes a stronger sense of avoidance, fear, and mystery and, in connection with these, of discrimination and rejection.”<sup>190</sup> Also, unlike impurity, “‘pollution’ is not only culturally defined but also is broadly shared in a society in the first place and sometimes even shared beyond the boundary of a society.”<sup>191</sup>

Or consider corruption. The terms pollution and corruption are synonymous insofar as they presuppose a baseline condition that is unpolluted and uncorrupted. They are also similar in their implication that something has gone wrong that has altered that condition for the worse. The terms differ, though, concerning the cause of that harmful change. The dictionary definitions of “corrupt” are more general than the definitions of pollution. Sometimes “corrupt” implies the harmful work of an outside agent, but in other uses the term refers to a harm that occurs naturally, while most

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<sup>190</sup> Namihira, *supra* note 169, at S71.

<sup>191</sup> Sekine, *supra* note 171, at 498.

broadly it includes any “change from good to bad.”<sup>192</sup> Another distinction between the terms involves the connotation of pollution as a byproduct that produces unintended (though foreseeable) results. Corruption is also more likely than pollution to connote wrongdoing by individuals, as shown by the frequent description of public officials as corrupt, not polluted. Yet the difference between pollution and corruption should not be exaggerated. Public morals and the financing of political campaigns can be described as both corrupted and polluted, with the nuances of each term adding to the understanding of the harm afflicting the thing in question.<sup>193</sup>

Pollution is similar to yet distinct from contamination, defilement, poisoned, and other terms. “Contamination” is broader than “pollution.” As a federal appeals court remarked in the context of construing a contractual indemnity provision, “all pollution is contamination, but not all contamination is pollution.”<sup>194</sup> Thus rivers, lakes and other bodies of water can be characterized as contaminated (because of the presence of the offending materials) or as polluted (because of the introduction of those materials into that aquatic environment). By contrast, food supplies, surgical wounds, and laboratory experiments are usually seen as contaminated instead of as polluted. Defilement suggests uncleanness, dirtiness, or filthiness. It is especially well suited to describe ceremonial impurity, as in houses of worship that are defiled by the presence of unbelievers. Defilement also retains a sexual connotation, especially for women, so that unwanted sexual advances are said to defile their victim. Poisoned suggests an especially toxic chemical potion that kills or seriously injures those who consume or contact it. Poisoned is more likely to describe the result of a specific intent to harm a particular individual or object, whereas pollution connotes a less purposeful but more general adverse effect. Collectively, terms like impurity, corruption, poison, defilement, or contamination are sometimes used to describe the same kinds of atmospheric and aquatic conditions that are more frequently characterized as air pollution or water pollution. Yet pollution suggests something slightly different from any of these synonymous terms. The distinctiveness of the idea of pollution rests in its dual suggestion of an unwanted outside agent and a general environment into which the agent is introduced.

The breadth of the affected area serves to distinguish pollution claims from synonymous kinds of harmful actions. Consider two different ways in which an elderly woman could be injured by drinking a glass of water laced with arsenic. If the arsenic is placed in the woman’s water by her murderous nephew seeking to prevent her from disinheritting him, the water is not described as polluted. If, however, the

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<sup>192</sup> WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 512 (1986).

<sup>193</sup> I compared the meanings of pollution and corruption in Nagle, *supra* note 19, at 318-19.

<sup>194</sup> Cleere Drilling Co. v. Dominion Exploration & Production, Inc., 352 F.3d 642, 651 (5th Cir. 2003).

arsenic was contained in water pumped from the woman's well after it leaked into the ground from a nearby mining operation, then the water is said to be polluted. The amount of arsenic present in the woman's glass of water may be identical, and the injury to her can be exactly the same, but pollution exists only when the arsenic occurred in the larger body of water. Likewise, the sound of airplanes taking off and landing nearby elicits claims of noise pollution, while someone yelling into a megaphone placed next to your ear does not. And a violent television program can be accused of polluting the culture by desensitizing those who watch it, while a teacher who exhorts his student to attack others is acting harmfully, but not as a polluter.

A second indication of the value of "pollution" appears by examining its environmental opposite. Wilderness is the ideal state of the natural environment according to many environmentalists and environmental law. The Wilderness Act provides for the protection of those wilderness areas "where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain."<sup>195</sup> By contrast, a polluted environment is one that man's hand has harmed or even destroyed. So conceived, pollution is the antithesis of wilderness. But wilderness, say its critics, is socially constructed and is no easier to define than pollution. Roderick Nash's classic *Wilderness in the American Mind* shows how the idea of wilderness has evolved throughout the course of American history from a place to conquer to a place to preserve.<sup>196</sup> Max Oelschlaeger's *The Idea of Wilderness* traces wilderness all the way back to prehistoric times and finds a similar evolution which continues today.<sup>197</sup> Both writers question whether "wilderness" has any fixed meaning at all. Nash writes that "wilderness . . . is so heavily freighted with meaning of a personal, symbolic, and changing kind as to resist easy definition."<sup>198</sup> Oelschlaeger refers to the "different, sometimes inconsistent, and even contradictory ideas of wilderness."<sup>199</sup> And Congress still struggles to determine which unprotected federal lands satisfy the definition of "wilderness" contained in the Wilderness Act. Wilderness, says William Cronin, "is quite profoundly a human creation."<sup>200</sup> Yet the idea of wilderness still plays an important role in the law and in popular understandings of the kinds of lands that we seek to preserve, and academic suggestions that "wilderness" be replaced with some other construct for environmental preservation have been ignored by those responsible for establishing preservation policies.

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<sup>195</sup> 16 U.S.C. § 1131(c).

<sup>196</sup> RODERICK FRAZIER NASH, *WILDERNESS IN THE AMERICAN MIND* (4th ed. 2001).

<sup>197</sup> MAX OELSCHLAEGER, *THE IDEA OF WILDERNESS* (1991).

<sup>198</sup> NASH, *supra* note 196, at 1.

<sup>199</sup> OELSCHLAEGER, *supra* note 197, at 3.

<sup>200</sup> William Cronin, *The Trouble with Wilderness, or, Getting Back to the Wrong Nature*, in *THE GREAT NEW WILDERNESS DEBATE* 471 (J. Baird Callicott & Michael P. Nelson eds., 1998).

Finally, whatever the relative merits of the various synonymous terms, our commonplace understanding of environmental pollution provides a helpful foundation for considering other kinds of pollution. The shared aspiration for clean environments transcends the natural environment. The idea of pollution helps explain the similarities between what we think of as environmental pollution and other things that have been described as pollution. We can better evaluate the many distinct means of seeking a clean environment by comparing the different kinds of things that pollute them. The shared language of pollution provides a point of entry for discussions that include both the quality of the air and the water to the condition of our workplaces, cultures, institutions, and other human environments. Remember, too, that anthropologists remain committed to analyzing various societal phenomena as *pollution* beliefs. Perhaps another term could perform the same function in anthropological studies, but none has emerged. As anthropologist Pauline Paine admitted, "I am not satisfied with the use of the word 'pollution,' however, unable to come up with another term that successfully captures both the positive and negative dimensions of so called 'polluting' substances, I am forced to use it."<sup>201</sup>

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So "pollution" cannot be precisely defined, but it must mean something, or else thousands of pages of environmental law make no sense. And whatever pollution means, it must mean more than today's environmental connotations. The work of Mary Douglas and other anthropologists shows that "pollution" is socially constructed: pollution means what we say it means. In environmental law, we often say that any harmful addition to the natural environment constitutes pollution. We are less willing to condemn all speech, money, foreign influences, and especially other people as pollution of human environments, but we debate precisely which of those things could be said to pollute our nation, culture, workplaces, and other environments of our making. The task of analyzing pollution claims is really the task of constructing our ideal environments and then describing which influences degrade them. And it is to that comparison of the many kinds of pollution claims that I now turn.

### III. POLLUTANTS AND ENVIRONMENTS

The popular concern about environmental pollution illustrates the central aspects of any pollution claim: there must be an environment and there must be a pollutant. This section explores the concepts of an "environment" and a "pollutant." I first

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<sup>201</sup> Paine, *supra* note 174, at 28 n.1.

address the environments and boundaries that are susceptible to pollution. Environmental law focuses upon the natural environment, but it has occasion to consider human environments, too. Civil rights law considers workplace environments. Much additional writing discusses the culture as an environment that is susceptible to pollution. These and other spaces are viewed as environments, anthropologists teach us, depending upon the boundaries that a society establishes and protects. The second part of this section considers the things that are denominated “pollutants” when they cross those boundaries into an environment. The discussion in Part II has already demonstrated how environmental law employs three different techniques to mask the impossibility of crafting an uncontested definition of what constitutes a pollutant. Here I will describe the many things which have been designated as pollutants by anthropology, environmental law, and popular discourse. The list of pollutants ranges far beyond the toxic chemicals that are familiar to environmental law, including the bodily fluids and proximity to death identified as pollutants by anthropologists, the violent and pornographic images targeted by opponents of cultural pollution, and the unwanted immigrants who have been derided as people pollution. Many such pollution claims generate passionate opposition from those who deny that bodily fluids, death, violent or sexual images, or immigrants are in any way harmful. The persistence of pollution imagery in such circumstances actually reinforces efforts to address environmental pollution in the face of similar charges that a given substance is not really a pollutant.

#### A. Environments and boundaries

The description of pollution as a violation of boundaries that was made famous by Mary Douglas animates environmental law as well. A pollutant is introduced into an environment from the outside. An environment becomes polluted only when something is added to it. Put differently, no environment is polluted in its natural state. This is not to say that an unpolluted environment is a perfectly safe one. An environment may be harmful to some people or things even as it is desirable to others. The cleanest air in the world is no more hospitable to fish than a badly polluted lake simply because fish cannot live outside of water. Moreover, the thing that is introduced may already occur naturally in the environment, albeit in a lesser quantity. Too much of any substance renders the water or air quite different, and much less hospitable to human, plant, and animal life.

The mere introduction of something into the environment does not constitute pollution. This is because there are few environments whose qualities are so precisely established that any foreign substance constitutes pollution. Several early twentieth century decisions support the proposition that pollution does not exist where no harm is done. In the 1934 case of *Wilmore v. Chain O’Mines*, the Colorado Supreme Court

sustained an injunction against pollution from a mining operation that discharged tailings and other material into creeks used by neighboring farmers for irrigation. On rehearing, the court explained what the injunction meant when it referred to “pollution”:

[I]t has been argued, in substance, that the introduction of any quantity of extraneous matter into this stream would be a violation of the injunction. That does not follow. For the purposes of this case, the word “pollution” means an impairment, with attendant injury, to the use of the water that plaintiffs are entitled to make. *Unless the introduction of extraneous matter so unfavorably affects such use, the condition created is short of pollution.* In reality, the thing forbidden is injury. The quantity introduced is immaterial.<sup>202</sup>

Four years later, the court repeated this understanding of pollution while adjudicating another dispute between mining operations and farmers. When the farmers complained of the water pollution caused by the mining, the miners responded that the farmers had unclean hands because they were polluting the water with “a large amount of natural detritus, rock particles, decayed vegetable matter, and other deleterious substances.” The court followed the definition of pollution that it had stated in *Wilmore*, and concluded that the materials attributed to the farming “not only did not unfavorably affect the use of the water they were entitled to make but was beneficial to it, and hence caused no pollution in a legal sense.”<sup>203</sup> Another, earlier instance of courts refusing to treat all materials as pollution occurred in *Doremus v. Mayor of City of Paterson*,<sup>204</sup> where individuals living along the Passaic River objected to the sewage that Paterson was dumping into the river. The New Jersey Court of Chancery opined that “[t]he term ‘pollution’ is likely to mislead if its meaning be not clearly defined.” The court then explained that “[n]o water, except distilled water, is perfectly free from foreign substances. A river contains in its natural state both mineral and vegetable substances held in suspension and solution.” With that understanding, the court noted that some of the sewage should not be regarded as polluting the river because the resulting chemical reactions “may conduce rather to its purity than to its pollution.”<sup>205</sup>

The lesson of such cases is that there is no pollution where there is no harm. As

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<sup>202</sup> *Wilmore v. Chain O’Mines, Inc.*, 44 P.2d 1024, 1029 (Colo. 1934) (en banc) (emphasis added).

<sup>203</sup> *Slide Mines, Inc. v. Left Hand Ditch Co.*, 77 P.2d 125, 127 (Colo. 1938).

<sup>204</sup> *Doremus v. Mayor of City of Paterson*, 69 A. 225 (N.J. 1908).

<sup>205</sup> *Id.* at 232. The court also distinguished between “harmful pollution” and “pollution which consists merely in the presence, even in considerable quantities, of minerals held in suspension, or of minerals produced by chemical reactions whose specific gravity causes them to sink quickly to the bottom.” *Id.* “Harmful pollution” would be a redundancy under my definition of pollution as existing only if there is a harm.

David Cassuto has written, “a harmless pollutant amounts to a contradiction in terms.”<sup>206</sup> Conversely, “pollutants are harmful by definition. If a pollutant need not cause harm, then it seems that anything at all could be a pollutant . . . .”<sup>207</sup> The nexus between pollution and harm, though, raises questions about harm and causation that are beyond the scope of my study here. Moreover, to say that pollution is harmful is not to suggest that pollution is *only* harmful. The same substance, material, or activity may be regarded by some as pollution and by others as a valuable good. Again, as Cassuto puts it, “[o]ne system’s pollutant is another’s necessity.”<sup>208</sup> But to describe an environment as polluted never has a positive connotation.

The challenge in many instances is to identify the background, “unpolluted” state of the relevant environment. As Mary Douglas and Aaron Wildavsky explained, the idea of pollution “rests upon a clear notion of the prepolluted condition. A river that flows over muddy ground may be always thick; but if that is taken as its natural state, it is not necessarily said to be polluted.”<sup>209</sup> So how much noise can exist before there is noise pollution? A Federal Aviation Administration regulation of tourist flights insisted upon “natural quiet” near the Grand Canyon, which it defined as “naturally occurring, non-mechanized sounds.”<sup>210</sup> How much light can exist before there is light pollution? Model lighting ordinance regulations depend upon the baseline amount of light expected in certain areas.<sup>211</sup> The same challenge of identifying an unpolluted state exists with respect to claims of the pollution of human environments. In 1876, for example, a man convicted of defiling a minor argued to the Kansas Supreme Court that a woman could not be defiled if she was already unchaste. The court disagreed because it was unwilling to assume that “a girl of less than eighteen years of age can reach such a depth of sin and pollution that there can be no lower deep into which she may be plunged by an unfaithful protection to whom she may have been confided.”<sup>212</sup> More recently, claims of cultural pollution rely upon an analogous presumption that there is such a thing as an unpolluted cultural environment. Such a determination of a distinct baseline will be controversial: for the Taliban, it is a pure Islamic state; for social conservatives, it is a society that does not corrupt the morals of the individuals by objectionable teachings or conduct concerning violence, sexuality, materialism, or hostility toward religion; for political liberals, it is a society that tolerates diverse forms of speech and expression, or a society free from any hostility based on race, gender,

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<sup>206</sup> Cassuto, *supra* note 186, at 117.

<sup>207</sup> *Id.* at 118.

<sup>208</sup> *Id.* at 125.

<sup>209</sup> DOUGLAS & WILDAVSKY, *supra* note 118, at 36.

<sup>210</sup> See *Grand Canyon Air Tour Coalition v. Federal Aviation Admin.*, 154 F.3d 455 (D.C. Cir. 1998), *cert. denied*, 526 U.S. 1158 (1999).

<sup>211</sup> See Model Lighting Ordinance Template, *available at* <http://proxima.astro.virginia.edu/~pai/AvIDA/Ords/ordtemplate.html>.

<sup>212</sup> *State v. Jones*, 16 Kan. 608, 612 (1876).

religion, sexual orientation, or other characteristics. In each instance, the desired pure environment must be determined before it becomes possible to identify the outside sources that are believed to introduce pollution into the environment.

Consider another example, this time drawn from the pollution language employed in judicial opinions. Whether a workplace is sufficiently polluted by discrimination to give rise to a Title VII claim depends upon how much such pollution exists in an unpolluted workplace. “Racism is like pollution, therefore, one must know a state of non-pollution to be able to grasp the poisonous aspect of pollution.”<sup>213</sup> In other words, discrimination claims must be measured against a baseline. Few workplaces are completely free from racial and sexual content. “Thus,” explains one treatise, “a ‘normal’ level of workplace obscenity, isolated sexual suggestiveness or propositions, and even some single instances of unwelcome touching, may not amount to unreasonable interference” required to succeed in a Title VII suit.<sup>214</sup> On the other hand, the fact that some kinds of work environments are more likely to be polluted by racism or sexism than other environments has not shielded the employers responsible for such workplaces from liability. In one famous case, a shipyard failed to persuade the court that women who worked there must be prepared to expect more sexual innuendos and pictures than one would find in a typical workplace. “A pre-existing atmosphere” – again, note the environmental imagery – “that deters women from entering or continuing in a profession or job is no less destructive to and offensive to workplace equality than a sign declaring ‘Men Only.’”<sup>215</sup>

This problem of identifying the baseline unpolluted environment is equally present with respect to claims of environmental pollution. What we know as “freshwater” actually contains a diverse and dynamic chemical composition besides the familiar H<sub>2</sub>O, including sodium, calcium, chlorine, magnesium, potassium, and even small amounts of metals such as copper, lead and zinc. The modest amounts of such chemicals that are contained in freshwater rivers and lakes often serve as essential nutrients for the life that depends upon the water. The notion of “clean” air is similarly contingent. Generally, the earth’s atmosphere consists of fixed amounts of nitrogen, oxygen, argon, neon, helium, methane, krypton, hydrogen, nitrous oxide, and xenon, and variable amounts of water, carbon dioxide, ozone, sulfur dioxide, and nitrogen dioxide in variable amounts. Natural processes constantly change that balance. Vegetation withdraws carbon dioxide and emits oxygen in prodigious amounts. Winds sweep fine sand and particulates into the air, forest fires send smoke toward the sky, and volcanoes belch assorted chemicals into the atmosphere. Yet claims of pollution

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<sup>213</sup> *Education: A Lifeline for the Inuit in Transition*, 10 ST. THOMAS L. REV. 109, 112 (1997).

<sup>214</sup> HAROLD S. LEWIS, JR. & ELIZABETH J. NORMAN, *EMPLOYMENT DISCRIMINATION LAW AND PRACTICE* 63-65 (2001)

<sup>215</sup> *See Robinson v. Jacksonville Shipyards, Inc.*, 760 F. Supp. 1486, 1526 (M.D. Fla. 1991).

presuppose an ability to identify the point at which the environment is unpolluted, even amidst the dynamic natural processes that affect the composition of the atmosphere or a body of water.

We answer the “what is clean” question by stating our own preference for the condition of the environment. “In order for there to be perceptible pollution,” writes Neil Evernden, “there must be an understanding of systemic order, an environmental norm. Only then is it possible to detect something that is ‘out of place.’”<sup>216</sup> Evernden adds that pollution threatens “not just the environment,” but also “the very *idea* of environment, the social ideal of proper order.”<sup>217</sup> In other words, the idea of a clean or pure environment is itself socially constructed. We see this in the controversies attending the cleanup of many hazardous waste sites, with landowners, nearby residents, and prospective businesses insisting upon strikingly different visions of when the land has been “cleaned” up. More generally, as David Cassuto has written:

In defining the optimal state of a waterway – a prerequisite for determining whether the water way has been polluted – boundaries must be set and agreed upon. Potential pollutants impede the attainment of that optimal state. Yet, there is no objective method for determining when and if contamination takes place because the determination is contingent on systemic priorities. The optimal state of a given waterway is a matter of fierce debate between the many constituencies that look to use it.<sup>218</sup>

But the problem runs deeper than determining which environments are pure and which are not. The very idea of an environment is socially constructed. We did not often speak of “the environment” before the environmental movement of the 1960's. Instead, we spoke of “nature,” another capacious term whose meaning was explored by Evernden in his aptly titled book “The Social Creation of Nature.” Most of Evernden’s book is devoted to the proposition that “nature” means what we say it means. The same is true of the “environment.” In Cassuto’s words, “the environment does not define itself; we define the environment. Depending on one’s point of view, the concept of environment can range from the inanimate through an infinitely complex polyphony of perspectives.”<sup>219</sup>

We have defined the relevant environment broadly. FIFRA, the federal pesticide statute, is typical: “The term ‘environment’ includes water, air, land, and all plants and

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<sup>216</sup> EVERNDEN, *supra* note 182, at 5-6.

<sup>217</sup> *Id.* at 6.

<sup>218</sup> Cassuto, *supra* note 186, at 108. *See also id.* at 105-07 (describing how the drawing of the boundaries of environments “is ongoing, subjective, and in constant flux”).

<sup>219</sup> *Id.* at 92.

man and other animals living therein, and the interrelationships which exists among them.”<sup>220</sup> Other environmental statutes recognize that the affected environment may extend beyond the air, water or land. Tennessee defines pollution in part as the harmful alteration of “animal, fish and aquatic life.”<sup>221</sup> A Colorado law governs the “pollution of air, water, real or *personal property, animals or human beings.*”<sup>222</sup> The scope of the “environment” is important to the National Environmental Policy Act (NEPA), which requires the federal government to prepare an environmental impact statement “on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.”<sup>223</sup> Early decisions concluded that “[n]oise, traffic, overburdened mass transportation systems, crime, congestion and even availability of drugs all affect the urban ‘environment’” and were thus within the scope of NEPA’s consideration of the human environment.<sup>224</sup> They also acknowledged “the ‘people pollution’ cases” involving proposals to build prisons, low-income housing, and job training facilities in suburban neighborhoods whose residents worried about the consequences of such newcomers.<sup>225</sup> In 1983, however, a unanimous Supreme Court held that NEPA applied only to “the physical environment – the world around us, so to speak.” The alternative, “broadest possible definition” of the relevant environment “might embrace any consequence of a governmental action that someone thought ‘adverse,’ a result no member of the Court was willing to accept.<sup>226</sup> The cases decided since 1983 are much less willing to acknowledge that effects unrelated to the natural environment, such as a reduced quality of urban life, trigger the duty to prepare an environmental impact statement. Even as narrowed, though, the regulations interpreting NEPA explain that the relevant effects include “aesthetic, historic, cultural, economic, social or health” as well as ecological effects, though economic or social effects that are unrelated to the natural environment are not subject to NEPA.<sup>227</sup>

Environmental law also superimposes boundaries upon the environment that are foreign to any concept of hydrology or atmospheric science. The law distinguishes between ambient air and indoor air, and between surface water and groundwater, with strikingly different regulatory regimes governing the distinct types of air and water. Some statutes limit the meaning of pollution to certain parts of the environment, such as the air, the water, or the land. Other statutes are even more precise, limiting their definition of pollution to certain kinds of air – *e.g.*, indoor air – or certain kinds of water – *e.g.*, groundwater or coastal waters. The social creation of the “environment” is also

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<sup>220</sup> 7 U.S.C. § 136(j).

<sup>221</sup> TENN. CODE ANN. § 60-1-503.

<sup>222</sup> COL. REV. STAT. ANN. § 13-20-702 (emphasis added).

<sup>223</sup> 42 U.S.C. § 4332(C).

<sup>224</sup> *Hanly v. Mitchell*, 460 F.2d 640, 647 (D.C. Cir. 1972), *cert. denied*, 409 U.S. 990 (1972).

<sup>225</sup> RODGERS, *supra* note 145, at 942 (citing cases).

<sup>226</sup> *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 772 (1983).

<sup>227</sup> *See* 40 C.F.R. §§ 1508.8, 1508.14.

apparent in numerous environmental statutes that impose artificial restrictions upon the scope of the environment which they address. Ohio excludes “private waters that do not combine or effect a junction with natural surface or underground waters” from its definition of water pollution.<sup>228</sup> The federal CWA refers to “waters of the United States,” just as many state statutes contain a similar limitation to “waters of the state.”<sup>229</sup>

The law sometimes struggles to define the boundaries of the relevant environment affected by pollution. For example, in 2004 the Supreme Court considered whether a drainage canal and an adjacent wetland within the Everglades constitute two bodies of water or one. Strict federal regulation could accompany a determination that the canal and the wetland were two different bodies of water; a more forgiving federal and state partnership applies if there is only one body of water. The controversy inspired Justice O’Connor to adopt a pot of soup metaphor. “If one takes a ladle of soup from a pot, lifts it above the pot, and pours it back into the pot, one has not ‘added’ anything else to the pot.”<sup>230</sup> The federal government insisted that the canal and the wetland constituted a single pot, according to a “unitary waters” argument that would result in a distinct set of legal rules governing pollutants that have previously entered one waterbody and are now being moved to another one. By contrast, the Muskogee Tribe claimed that the canal and the wetland were two separate bodies of water. Or, as Justice O’Connor put it, the tribe saw the canal and the wetland as “two pots of soup, not one.” The Court remanded the case to the lower courts to decide how the law defines the applicable environment. The forthcoming decision will turn on the social construction of the aquatic environment for purposes of the Clean Water Act, rather than the hydrological truths about the Everglades.

The “environment” is also a crucial component of Title VII hostile work environment litigation. The other type of Title VII claim – a *quid pro quo* theory of discrimination – applies to workers who are terminated because of their race or sex or who are specifically targeted for other adverse employment actions because of such protected characteristics. A hostile work environment presents a distinct legal claim that arises when an employee suffers the ill effects of working in a workplace that is permeated by racism, sexism, or other prohibited bias. A few courts have thus emphasized the environmental nature of the claim. As one court explained, “To consider each offensive event in isolation would defeat the entire purpose of allowing claims based upon a ‘hostile work environment’ theory, as the very meaning of ‘environment’ is ‘the surrounding conditions, influences or forces which influence or modify.’”<sup>231</sup> Or, as John Calmore has observed, “Like environmental pollution, cultural

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<sup>228</sup> OHIO REV. CODE ANN. § 1511.01.

<sup>229</sup> 33 U.S.C. § 1362(7).

<sup>230</sup> *South Florida Water Mgmt. Dist v. Miccosukee Tribe of Indians*, 541 U.S. 95, 108 (2004).

<sup>231</sup> *Jackson v. Quanax Corp.*, 191 F.3d 647, 660 (6th Cir. 1999) (quoting BLACK’S LAW DICTIONARY 534 (6th ed. 1990)).

racism transcends individual harms and private disputes.”<sup>232</sup> Note, too, that a polluted workplace can exist outside of a company’s office. Sexist pickup attempts made in hotel bars during business trips demonstrate that the affected environment can extend to wherever employees are working together.

Cultural pollution claims see the popular culture as the affected environment. That the culture is a kind of environment is evidenced in H. Richard Niebuhr’s definition of “culture” as “the ‘artificial, secondary environment’ which man superimposes on the natural.”<sup>233</sup> The components of that environment, added Niebuhr, include “language, habits, ideas, beliefs, customs, social organization, inherited artifacts, technical processes, and values.”<sup>234</sup> Of course, there are many other definitions of culture besides Niebuhr’s. As Sally Engle Merry explains, “Culture is now understood as historically produced rather than static; unbounded rather than bounded and integrated; contested rather than consensus; incorporated within the structures of power such as the construction of hegemony; rooted in practices, symbols, habits, patterns of practical mastery, and practical rationality within cultural categories of meaning rather than in any simple dichotomy between ideas and behavior; and negotiated and constructed through human action rather than superorganic forces.” In short, the perception of the cultural environment as dynamic and unpredictable matches the recent ecological teaching that portrays the natural environment in much the same way. To speak of the “pollution” of a space that is constantly changing anyway presents challenging definitional questions, but that is equally true for natural and human environments.<sup>235</sup> Even so, an understanding of the relevant “environment” that encompasses nearly anything threatens to drain the idea of an environment of any useful meaning in the context of pollution claims.

The response to this concern appears in the anthropological literature, which identifies innumerable areas in which pollution appears. Metal, earth, water, fire, plants, animals, and humans are all viewed by some cultures as in need of protection from pollution. Fire, for example, is “extremely vulnerable to pollution” according to Zoroastrianism.<sup>236</sup> Moving closer to the claims of environmental pollution, the pollution beliefs of some societies worry about effects upon water, albeit by corpses or ritually unclean individuals rather than toxic chemicals. But the boundaries of greatest interest to Mary Douglas and other anthropologists involve the body. According to

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<sup>232</sup> John O. Calmore, *Random Notes of an Integration Warrior – Part II: A Critical Response to the Hegemonic “Truth” of Daniel Farber and Suzanna Sherry*, 83 MINN. L. REV. 1589, 1609 (1999).

<sup>233</sup> H. RICHARD NIEBUHR, CHRIST AND CULTURE 32 (1951) (citing Bronislaw Malinowski, *Culture*, 4 ENCYCLOPEDIA OF SOCIAL SCIENCES 621 (1931)).

<sup>234</sup> *Id.*

<sup>235</sup> Sally Engle Merry, *Law, Culture, and Cultural Appropriation*, 10 YALE J. L. & HUMANITIES 575, 580 (1998).

<sup>236</sup> Choksy, *supra* note 171, at 176.

Douglas, “[t]he body is a model which can stand for any bounded system. Its boundaries can represent any boundaries which are threatened or precarious. . . . We cannot possibly interpret rituals concerning excreta, breast milk, saliva and the rest unless we are prepared to see in the body a symbol of society . . . .”<sup>237</sup> Anthropology, in short, reminds us that the environments affected by pollution are all simply areas defined by boundaries of our own making.

## B. Pollutants

The second aspect of pollution claims concerns the things which are characterized as pollutants when they enter an environment. A review of the pollutants described by environmental law, anthropologists, and other writers identifies three common features. First, anything can serve as a pollutant. Second, whether something is viewed as a pollutant depends upon the context. Third, whether something is correctly described as a pollutant is often contested.

### 1. *Pollutants in anthropology and theology*

Consider the pollution beliefs examined by anthropologists. Recall that Mary Douglas described “dirt” – the source of many pollution beliefs – as “matter out of place.” Employing that image, anthropologists have identified numerous things as the objectionable pollutant targeted by pollution beliefs. Many of these pollutants cluster around concerns about sexuality, bodily fluids, death, violence, food, and undesirable people. Sexuality is an especially prominent source of pollution beliefs. As Douglas wrote, “pollution fears do not seem to cluster round contradictions which do not involve sex. The answer may be that no other social pressures are so potentially explosive as those which constrain sexual relations.”<sup>238</sup> Thus sexual intercourse is

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<sup>237</sup> DOUGLAS, *supra* note 1, at 16. See also *id.* at 174 (“the focus of all pollution symbolism is the body”); Michael D. Quam, *The Sick Role, Stigma, and Pollution: The Case of AIDS*, in *CULTURE AND AIDS* 39 (Douglas A. Feldman ed., 1990); Paul Stillitoe, *Man-Eating Women: Fears of Sexual Pollution in the Papua New Guinea Highlands*, 88 *THE JOURNAL OF POLYNESIAN SOCIETY* 77 (1979) (women can “pollute and kill men by eating away at their vital organs”); Benedicte Ingstad, Frank J. Bruun & Sheila Tlou, *AIDS and the Elderly Tswana: The Concept of Pollution and Consequences for AIDS Prevention*, 12 *JOURNAL OF CROSS-CULTURAL GERONTOLOGY* 357, 364 (1997) (blood is polluted by breaking sexual taboos); Tong Chee Kiong, *Death Rituals and Ideas of Pollution Among Chinese in Singapore*, 9 *CONTRIBUTIONS TO SOUTHEAST ASIAN ETHNOGRAPHY* 109 (1990) (gods, ancestral spirits, and a corpse itself can be affected by death pollution); Chosky, *supra* note 171, at 173, 176 (listing metal, earth, water, fire, plants, animal, and humans as susceptible to pollution); Kiong, *supra*, at 108 (household water supply polluted by the presence of a corpse); Safran, *supra* note 172, at 208 (water polluted by sharing it with Christians). For litigation voicing these concerns, see *Piggee v. Carl Sandburg College*, 464 F.3d 667, 668 (7th Cir. 2006) (citing a pamphlet asserting “that all gay males will pollute the blood supply with HIV-positive blood unless people give more money for AIDS research”).

<sup>238</sup> DOUGLAS, *supra* note 1, at 159.

polluting when it occurs at the wrong time (e.g., before one is married, while mourning one's husband, or with a woman who is nursing or menstruating), in the wrong place (e.g., in the forest, in the bush, in the garden, or in your spouse's bed with someone else), or with the wrong person (as illustrated by the "adultery pollution" which Douglas describes).<sup>239</sup> Concerns about sexuality animate many other pollution beliefs. For many societies, "menstrual blood 'was once the most feared pollutant.'"<sup>240</sup> Another anthropologist explains that for some people groups "reproduction is tinged with pollution and thus must be kept in check," so pollution beliefs targeted pregnancy, childbirth, the birth of twins, miscarriage, and abortion.<sup>241</sup> Other societies saw pollution

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<sup>239</sup> On sexual intercourse generally as pollution, see Rachel K. Jewkes & Katherine Wood, *Problematizing Pollution: Dirty Wombs, Ritual Pollution, and Pathological Processes*, 18 *MEDICAL ANTHROPOLOGY* 171 (1999); Julie Marcus, *Islam, Women and Pollution in Turkey*, 15 *JOURNAL OF THE ANTHROPOLOGICAL SOCIETY OF OXFORD* 207 (1984); Namihira, *supra* note 171, at S65. Specific instances of sexual activity as pollution include DOUGLAS, *supra* note 1, at 135 ("adultery pollution"); Jude C.U. Aguwa, *Taboos and Purification of Ritual Pollutions in Igbo Traditional Society*, *ANTHROPOS* 88 (1993): 541 (pregnancy and sexual relations while mourning one's husband, sex with a menstruating woman, and sex while nursing); Sillitoe, *supra* note 237, at 85; Michael W. Young, *Skirts, Yams, and Sexual Pollution: The Politics of Adultery in Kalauna*, 84 *JOURNAL DE LA SOCIETE DES OCEANISTES* 61, 63-64 (1987) (premarital sex and sex in the garden); Sharon Hutchinson, *'Dangerous to Eat': Rethinking Pollution States Among the Nuer of Sudan*, 62 *AFRICA* 496 (1992); Alma Gottlieb, *Rethinking Female Pollution: The Beng of Côte D'Ivoire*, 14 *DIALECTICAL ANTHROPOLOGY* 70 (1989) (sex in the forest); Whyte & Whyte, *supra* note 179, at 69 (adultery generally, and specifically sex with another woman on your wife's bed).

<sup>240</sup> Jeffrey Clark, *Gold, Sex, and Pollution: Male Illness and Myth at Mt. Kare, Papua New Guinea*, 20 *AMERICAN ETHNOLOGIST* 742, 744 (1993). See also DOUGLAS, *supra* note 1, at 122 ("menstrual pollution is feared as a lethal danger" is some rituals; "in others not at all"; Yeshe Choekyi Lhamo, *The Fangs of Reproduction: An Analysis of Taiwanese Menstrual Pollution in the Context of Buddhist Philosophy and Practice*, 14 *HISTORY & ANTHROPOLOGY* 157 (2003); Janet Hoskins, *Blood Mysteries: Beyond Menstruation as Pollution*, 41 *ETHNOLOGY* 299 (2002); Bean, *supra* note 171, at 576; Jewkes & Wood, *supra* note 239, at 163 ("the idea that taboo relating to female reproductive states or events acts to oppress women has had wide circulation, equating the isolation of 'polluted' women with discrimination and low social status"); Per Hage & Frank Harary, *Pollution Beliefs in Highland New Guinea*, 16 *MAN* 368, 372 (1981); F. Allan Hanson, *Female Pollution in Polynesia?*, 91 *THE JOURNAL OF POLYNESIAN SOCIETY* 335 (1982) (menstrual blood is pollution "when out of place"); Sekine, *supra* note 171, at 499 (menstrual blood "the most dangerous 'pollution'"); Sillitoe, *supra* note 237, at 77; *id.* at 87 (asking "why they have these fears of a natural female condition which does not produce a substance of any real toxicity"); Sekine Yasumasa, *The Concepts of Ritual Pollution in South Indian Tamil Society: On the Field of Conflicts Between Hierarchy and Subjectivity*, 51 *MINZOKUGAKU KENKYU* 219 (1986).

<sup>241</sup> Carol Silverman, *Pollution and Power: Gypsy Women in America*, in *THE AMERICAN KALDERAS: GYPSIES IN THE NEW WORLD* 55, 65 (Matt T. Salo ed., 1991) ("reproduction is tinged with pollution and thus must be kept in check"). On childbirth as pollution, see Joanne M. Pierce, *"Green Women" and Blood Pollution: Some Medieval Rituals for the Churching of Women After Childbirth*, 29 *STUDIA LITURGICA* 191 (1999); Ariel Glucklich, *Karma and Pollution in Hindu Dharma: Distinguishing Law from Nature*, 18 *CONTRIBUTIONS TO INDIAN SOCIOLOGY* 25, 26 (1984); Ingstad, Bruun & Tlou, *supra* note 237, at 364; Hutchinson, *supra* note 239, at 496; Namihira, *supra* note 171, at S65; Sekine, *supra* note 171, at 482; Yasumasa, *supra* note 240, at 219. On pregnancy as pollution, see Namihira, *supra* note 171, at S65; Silverman, *supra*, at 58. On miscarriage as pollution, see Glucklich, *supra*, at 26; Green, *supra* note 170, at 93. On abortion as pollution, see Green, *supra* note 170, at 93; Ingstad, Bruun & Tlou, *supra* note 237, at 364.

in countless things related to sexuality, including male circumcision, prostitutes, incest, women in the year following marriage, lower body parts, nudity and exposure of private parts, witnessing your child's sexual affairs, and even conversations related to sex and pregnancy.<sup>242</sup>

The treatment of certain aspects of sexuality as pollution is often accompanied by the view that bodily fluids are polluting. "All bodily emissions, even blood or pus from a wound, are sources of impurity," according to Douglas's description of the beliefs of Havik Brahmins.<sup>243</sup> Douglas added that the Israelites believed that "all the bodily issues were polluting, blood, pus, excreta, semen, etc."<sup>244</sup> Indeed, as Pauline Paine explained, "the functions of the human body are almost universally considered polluting, although not all functions are considered polluting in all cultures."<sup>245</sup> Here, too, the idea of boundaries is key, for these bodily fluids are often viewed as polluting because they "blur the distinction between the human body and things outside the body."<sup>246</sup>

Death is another source of many pollution beliefs. Douglas writes that "death pollution is a daily preoccupation" in some rituals; in others not at all.<sup>247</sup> Corpses are often regarded as polluting those who touch them or even those who are close to them. Murder and suicide may be viewed as polluting, as are some violent acts that do not result in death, including feuding and striking one's father. Disease and illness gives rise to fears of pollution, too.<sup>248</sup> And some of the most serious pollution beliefs

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<sup>242</sup> See DOUGLAS, *supra* note 1, at 160 (incest); Marcus, *supra* note 237, at 207 (male circumcision, nudity, and exposure of private parts); Clark, *supra* note 240, at 745 (prostitutes); Hutchinson, *supra* note 129, at 496 (incest); Gottlieb, *supra* note 239, at 70 (sex in the forest); Whyte & Whyte, *supra* note 179, at 68 (incest, sexual immodesty, and witnessing your child's sexual affairs); Gottlieb, *supra* note 239, at 67 (women who have engaged in premature sex); Silverman, *supra* note 241, at 67 (women in the year following marriage, lower body parts, conversations related to sex and pregnancy); Glucklich, *supra* note 241, at 26 ("self-pollution and contact with the lower parts of the body"); Quam, *supra* note 237, at 38 (AIDS); Aguwa, *supra* note 237, at 541 (twins); Green, *supra* note 170, at 93; Hutchinson, *supra* note 239, at 490 (twins); Sillitoe, *supra* note 237, at 79 (new-born babies).

<sup>243</sup> DOUGLAS, *supra* note 1, at 35.

<sup>244</sup> *Id.* at 125.

<sup>245</sup> Paine, *supra* note 174, at 25. See also Glucklich, *supra* note 241, at 26 (bodily discharges); Namihira, *supra* note 171, at S65 (bleeding); Kiong, *supra* note 237, at 111 ("A woman's blood is considered a particularly polluting substance."); Marcus, *supra* note 237, at 207, 210 (excretion, bowel gas, urine, vomit, semen, and tears); Silverman, *supra* note 241, at 57 (bathrooms); Hanson, *supra* note 240, at 335 (semen "when out of place).

<sup>246</sup> Carroll, *supra* note 171, at 275 ("feces, urine, pus, vomit, mucus, semen, and menstrual blood" are "often defined as unclean in various cultures" because they "blur the distinction between the human body and things outside the body").

<sup>247</sup> DOUGLAS, *supra* note 1, at 122.

<sup>248</sup> On pollution beliefs concerning death, see *id.* at 174-80; James L. Watson, *Of Flesh and Bones: The Management of Death Pollution in Cantonese Society*, in DEATH AND THE REGENERATION OF LIFE 156

feature a combination of concerns about sexuality, bodily fluids, violence, and death. Consider miscarriage, abortion, and burying a woman with a child in her womb, each of which involve both death and sexuality. Likewise, menstrual blood and semen combine concerns about sexuality and bodily fluids.<sup>249</sup>

The presence of certain threatening or undesirable people gives rise to an additional set of pollution beliefs. Douglas refers to “caste pollution,” a term which is especially common – but not unique to – Hindu societies.<sup>250</sup> Roma (nee Gypsies) see everyone else as polluting. Janina Safran describes how Muslims identify non-Muslims, especially Christians, as polluting.<sup>251</sup> More generally, women are the source of numerous pollution beliefs; so much so that Paul Sillitoe could write of “the generally polluting influence of women.”<sup>252</sup> And like certain people, animals are sometimes viewed as polluting. For example, Jude Aguwa observes that the traditional Igbo society of southwestern Nigeria sees pollution in such odd animal activities as a hen that sits on only one’s egg, a cock that crows at an unusual hour, a fowl flying over a corpse in the coffin, and a goat climbing onto the roof of a house.<sup>253</sup>

Food is often seen as polluting, too. Not all food, of course, but food that is taken

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(Maurice Bloch & Jonathan Parry eds., 1982): Chosky, *supra* note 171, at 178; Glücklich, *supra* note 239, at 26; Kiong, *supra* note 237, at 91; Namihira, *supra* note 171, at S66; Sekine, *supra* note 171, at 482; Silverman, *supra* note 241, at 57; Whyte & Whyte, *supra* note 179, at 68; Yasumasa, *supra* note 240, at 219. For specific pollution beliefs surrounding death, see DOUGLAS, *supra* note 1, at 11 (corpses); Hutchinson, *supra* note 239, at 496 (corpses); Kiong, *supra* note 237, at 108 (corpses); Marcus, *supra* note 237, at 207 (corpses); Green, *supra* note 170, at 93 (husband or child’s death, miscarriage, and abortion); Whyte & Whyte, *supra* note 179, at 69 (unpurified widows). On pollution beliefs involving violence and disease, see Whyte & Whyte, *supra* note 179, at 68 (violence as polluting); Aguwa, *supra* note 237, at 541 (suicide, murder, striking one’s father, and leprosy); Watson, *supra* note 248, at 158 (suicide); Hutchinson, *supra* note 239, at 495 (murder and feuding); 490; Green, *supra* note 170, at 93 (illness); Namihira, *supra* note 171, at S70-71 (illness); Silverman, *supra* note 241, at 56 (disease).

<sup>249</sup> See Green, *supra* note 170, at 93 (abortion and miscarriage); Aguwa, *supra* note 237, at 541 (burying a woman with a child in her womb).

<sup>250</sup> DOUGLAS, *supra* note 1, at 126.

<sup>251</sup> See Safran, *supra* note 172, at 199, 201, 203-04 (all non-Muslims are polluting, especially Christians).

<sup>252</sup> See Sillitoe, *supra* note 237, at 83. See also Gottlieb, *supra* note 239, at 66, 72 (noting “the now voluminous literature on female pollution,” but observing that men were sometimes seen as polluting); Hanson, *supra* note 240, at 335-36 (observing that “the idea that women were viewed in Polynesia as . . . polluting is rampant in the literature”). For other pollution beliefs targeting certain people as polluting, see Bean, *supra* note 171, at 575 (lower classes); Sekine, *supra* note 171, at 482 (lower classes), Silverman, *supra* note 241, at 57 (non-Gypsies); Aguwa, *supra* note 237, at 541 (twins); Green, *supra* note 170, at 93 (twins); Hutchinson, *supra* note 239, at 490 (twins); Sillitoe, *supra* note 237, at 79 (new-born babies); Paine, *supra* note 174, at 19 (men or women).

<sup>253</sup> See Aguwa, *supra* note 237, at 541-42. For other pollution beliefs involving animals, see Glücklich, *supra* note 241, at 26; Hutchinson, *supra* note 239, at 495 (killing elephants); Safran, *supra* note 172, at 204 (pigs).

from a certain source or that is prepared in a particular manner. For example, Douglas describes a “Nuer pollution rule that a wife is forbidden from drinking ‘the milk of the cows which have been paid for her marriage.’”<sup>254</sup> Other examples include food that is placed on a table, food prepared by a menstruating women, and metal cooking vessels.<sup>255</sup>

Finally, there are a host of other things which defy categorization but which different societies regard as polluting. These include gold and other metals, silk clothing, leather, cotton cloth, crime generally and theft in particular, usury, gambling, drunkenness, barbering, cutting yam tendrils, hair, a child who cuts the upper teeth first, one’s left hand, fainting, deep sleep, strong emotions, prophesying, and simply contact with a new environment.<sup>256</sup> Again, whether these things are viewed as pollutants often depends upon the context in which they occur, and different societies hold sharply contrasting beliefs about whether they are properly deemed pollutants at all. Even so, the number of pollutants identified by anthropology begins to make the many pollutants identified by environmental law less surprising.

The shifting nature of pollution beliefs is illustrated by David deSilva’s contrast between Old Testament and New Testament understandings of pollutants. deSilva’s book on “unlocking New Testament culture” is designed to explain the cultural assumptions that existed when the books of the New Testament were written in order to facilitate a better understanding of those writings today.<sup>257</sup> Toward that end, deSilva identifies several “purity maps” drawn by Leviticus, other Old Testament books, and early Jewish culture to delineate the boundaries across which pollutants should not

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<sup>254</sup> DOUGLAS, *supra* note 1, at 133.

<sup>255</sup> See *id.* at 34-35, 128 (metal cooking vessels, cooking food, and cooked food, but not uncooked food); Glucklich, *supra* note 241, at 26 (touching used cooking vessels); Silverman, *supra* note 241, at 56; Aguwa, *supra* note 237, at 541 (eating prohibited food and eating food prepared by a menstruating woman); Hutchinson, *supra* note 239, at 495-496 (cannibalism and certain cow’s milk); Aisha Khan, ‘Juthaa’ in *Trinidad: Food, Pollution, and Hierarchy in a Caribbean Diaspora Community*, 21 AMERICAN ETHNOLOGIST 245-46 (1994) (eating prohibited food); Marcus, *supra* note 237, at 207 (eating prohibited food); Sekine, *supra* note 171, at 497 (sitting on chairs and putting food on a table). For litigation concerning such beliefs, see *Akinsanya v. Ashcroft*, 105 Fed. Appx. 848, 850 (7th Cir. 2004) (woman seeking asylum because her Nigerian jailers had denied her “all nourishment except ‘polluted’ food”).

<sup>256</sup> For miscellaneous pollution beliefs, see DOUGLAS, *supra* note 1, at 35 (leather and cotton cloth); Clark, *supra* note 240, at 742 (gold and other things); Glucklich, *supra* note 241, at 26 (various metals); Namihira, *supra* note 169, at S69-S70 (crime): Aguwa, *supra* note 237, at 541 (theft, betting with one’s husband, cutting yam tendrils, and a child who cuts the upper teeth first); Marcus, *supra* note 237, at 207, 214 (usury, gambling, drunkenness, fainting, deep sleep, strong emotions, prophesying, hair, the left hand, silk clothing and gold jewelry for men); Safran, *supra* note 172, at 204 (wine); Bean, *supra* note 171, at 575 (barbering and sweeping); Silverman, *supra* note 241, at 56 (topics of conversation); Green, *supra* note 170, at 56 (contact with a new environment).

<sup>257</sup> See DAVID A. DESILVA, *HONOR, PATRONAGE, KINSHIP & PURITY: UNLOCKING NEW TESTAMENT CULTURE* 241-304 (2000).

cross.<sup>258</sup> These maps many of the same pollutants discussed by contemporary anthropologists. The “maps of people” keep the Israelites separate from the Gentiles.<sup>259</sup> For example, “[t]he book of Ezra and literature associated with it . . . censure the marriage of Israelites to non-Israelite wives as a violation of the Deuteronomic pollution taboo against intermarriage with the natives of Canaan who had polluted the holy land.”<sup>260</sup> “Maps of spaces” protected the holy city of Jerusalem, and especially the temple therein, from the polluting presence of anyone who was not authorized to enter there.<sup>261</sup> “Maps of time” are illustrated by the polluting influence of work on the Sabbath.<sup>262</sup> Dietary regulations are “[o]ne of the better known aspects of Jewish purity codes and pollution taboos.”<sup>263</sup> And, of course, the law contained “maps of the body” that viewed corpses, menstruation, childbirth, and other aspects of death and sexuality as pollutants.<sup>264</sup> Yet “sweating, crying, urinating, defecating, even bleeding from a cut were not regarded as polluting.”<sup>265</sup> By contrast, deSilva explains, the pollutants of concern in New Testament writings are much different. Jesus offered a “radical reinterpretation and redrawing of purity and pollution lines, now entirely in an ethical direction: ‘It is not what goes into the mouth that defiles a person, but it is what comes out of the mouth that defiles.’”<sup>266</sup> And thus speech “pollutes relationships.”<sup>267</sup> Bad teaching is polluting. So are prostitution, fornication, and other sexual sins. “Every bit as polluting as sexual sin is guile, insincerity, and self-serving motives and agenda . . . .”<sup>268</sup> Paul’s letters portray the Christian’s body as “sacred space,” so “one who harms the Christian (or fellow Christian for that matter) contracts sacrilege pollution and comes under God’s ban.”<sup>269</sup> The epistle of James, says deSilva, “uses purity and pollution language . . . to orient believers toward rejecting the intrusion of the values of the dominant, non-Christian culture (like showing partiality to the rich and treating the poor dishonorably . . . ) as pollution of their community.”<sup>270</sup> The concluding book of Revelation uses pollution imagery to denounce the power of Rome. Some of the Old Testament pollution regulations are retained, but many are rejected as unnecessary

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<sup>258</sup> *Id.* at 256-69. For other accounts of pollution beliefs in Jewish thought, see ELLIOT N. DORFF, MATTERS OF LIFE AND DEATH 69-70 (1998) (suggesting that some Jews do not want to “pollute purity of the Jewish line”); Miryam Z. Wahrman, *Fruit of the Womb: Artificial Reproductive Technologies & Jewish Law*, 9 J. GENDER, RACE & JUSTICE 109, 135 (2005).

<sup>259</sup> *Id.* at 256-58.

<sup>260</sup> *Id.* at 257 n.30.

<sup>261</sup> *Id.* at 258-59.

<sup>262</sup> *Id.* at 259-60.

<sup>263</sup> *Id.* at 260.

<sup>264</sup> *Id.* at 262-264.

<sup>265</sup> *Id.* at 263.

<sup>266</sup> *Id.* at 281.

<sup>267</sup> *Id.*

<sup>268</sup> *Id.* at 296.

<sup>269</sup> *Id.* at 293.

<sup>270</sup> *Id.* at 300.

during the period after Jesus fulfilled the demands of the ritual laws.

I should emphasize here that I am not endorsing all of these pollution beliefs; far from it. Many of the alleged pollutants make little sense to twenty-first century American thought (cooking utensils and bodily fluids come to mind); others are affirmatively objectionable (especially the treatment of disfavored people as themselves polluting). My point, rather, is that different societies have constructed remarkably elaborate understandings of the pollution which they must guard against. From that perspective, the ubiquity of environmental pollution claims becomes more familiar, and the contested nature of many environmental pollution claims becomes more understandable.

## 2. *Pollutants of the natural environment*

Like anthropology and theology, environmental law sees many different kinds of pollutants. As described in Part II, just five federal environmental statutes list a total of 1,134 different pollutants. Examples of the particular pollutants of concern to environmental law confirm the extraordinarily broad range of things that have been described as pollutants. “Metals, priority toxic organic chemicals, pesticides, and oil and grease are among the leading persistent toxic pollutants cited as causing water quality impairments,” while “[s]iltation, nutrient enrichment, and oxygen-depleting substances are among the leading causes of habitat degradation and destruction.”<sup>271</sup> Lead leaches into drinking water from corroded plumbing. Viruses, bacteria, and other pathogens enter the water from sewage systems. Spills, pipeline breaks, and runoff introduce oil into the water. Thermal pollution occurs when power plants and other facilities that use water to generate steam or to cool their machinery discharge heated water back into the river, stream or lake. The Clean Air Act targets carbon monoxide, lead, ozone, particulates, sulfur dioxide, and volatile organic compounds as so-called criteria pollutants; the law also addresses 189 specific substances that are deemed “hazardous air pollutants,” including asbestos, chlorine, and methanol.<sup>272</sup> The hazardous wastes regulated by federal law contain substances that are corrosive, flammable, reactive, toxic, or otherwise dangerous, including countless byproducts of industrial activities as well as discarded consumer goods such as batteries, paints, solvents, and cleaning fluids. These examples show that a pollutant may be liquid, solid, or gaseous. It may be a chemical, or radiation, or heat. It may be a living organism. It need not be a tangible substance that you can see or feel. Quite simply, there is no limit to the kinds of materials that can operate as a pollutant. The common theme, as in anthropology, is to identify the things which cross a boundary into places

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<sup>271</sup> THE COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY: THE 1997 REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY 106-07 (1997).

<sup>272</sup> 42 U.S.C. § 7412(b)(1).

where they are perceived as harmful. And like anthropologists, second generation environmental law scholars have come to recognize that “[w]hat is pollution and how we respond to it are now seen in context.”<sup>273</sup>

Moving to claims of sensory pollution, we again see that the offending pollutants are otherwise innocuous – or even desirable – things which now appear in excessive quantities in the wrong place. Noise is often defined as “unwanted sound,” which neatly captures the distinction between those sounds which we appreciate or ignore and those sounds which we find annoying or harmful. Lights that are too bright for a certain time and place give rise to complaints about light pollution. Billboards, tall towers, and ugly buildings yield sights that are sometimes described as visual pollution. Pollution imagery is less often applied to unwanted smells, but there are occasional descriptions of especially bothersome smells as odor pollution. Large factory farms and farms located near residential communities are the most frequent target of odor pollution complaints, which further demonstrates the contextual nature of pollution claims.

### 3. *Pollutants of human environments*

The broad range of pollutants identified by anthropology, theology, environmental law, and sensory regulations shows how easy it is to move to descriptions of human environments as polluted. Generally, these descriptions refer to certain ideas, images, or people as the objectionable pollutants. Of course, not every idea, image, or person is polluting, nor are particular ideas, images, or persons viewed as pollutants in every place. The pollution claims more often suggest that the problem has arisen because the idea, image, or person has crossed a boundary into a place where it is unwanted.

This pattern appears in the many nations that blame western influences for polluting their society. China, for example, has been concerned about “spiritual pollution” from foreign influences since the nineteenth century. The battle against foreign influences intensified during the infamous Cultural Revolution of the 1960's and 1970's, and complaints about spiritual pollution persist into the twenty-first century. Such efforts are better described as cultural pollution than “spiritual” pollution because they have been more concerned about the purity of Chinese society than the souls of Chinese citizens. Deng Xiao Ping’s late 1983 campaign responded to the tension between the modernization of China and unwanted western influences of the post-Mao years. Deng defined “spiritual pollution” as “disseminating all varieties of corrupt and

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<sup>273</sup> Charles W. Powers & Marian R. Chertow, *Industrial Ecology: Overcoming Policy Fragmentation*, in THINKING ECOLOGICALLY: THE NEXT GENERATION OF ENVIRONMENTAL POLICY 21 (Marian R. Chertow & Daniel C. Esty eds., 1997).

decadent ideologies of the bourgeoisie and other exploiting classes, and disseminating sentiments of distrust toward socialism and communist causes and the Communist Party leadership.”<sup>274</sup> At the same time, the Communist Party’s propaganda chief identified four types of spiritual pollution: “spreading things that are ‘obscene, barbarous, treacherous, or reactionary; vulgar taste in artistic performances; efforts to seek personal gain and indulgence in individualism, anarchism, and liberalism; writing articles or delivering speeches that run counter to the country’s social system.”<sup>275</sup> The actual targets of the campaign proved to be western fashions, literature, art, and music; sexual depravity and pornography, drinking, and hedonistic lifestyles; and intellectuals who questioned socialism. These harmful forces were to be opposed by criticism and education instead of criminal sanctions, and they were to be counteracted by competing messages that helped promote the government’s ideal of the Chinese state and society. But the Chinese leadership itself soon feared that the campaign could be coopted by forces that opposed increased economic and technological ties to the west, so it moved to distinguish spiritual pollution from efforts to secure an improved and more enjoyable life. The leadership also warned against equating spiritual pollution with one’s own dislikes. The campaign then ended as soon as it began, fading away without an official conclusion early in 1984. Since then, while there has not been a similar organized campaign, concerns about spiritual pollution have led Chinese officials to block internet sites, regulate the content of movies produced in China, prevent the Rolling Stones from touring, criticize sex talk shows, control the names given to public buildings, and ban the sale of an Yves Saint Laurent perfume named “opium” because of its reminder of the nineteenth century Opium Wars. The efficacy of these actions remains questionable. The popular Lonely Planet travel guide to China reports without concern that “Shanghai is emerging as the most spiritually polluted city in China.”<sup>276</sup>

Afghanistan’s Taliban offers an even more sobering example of the relentless enforcement of boundaries against perceived pollutants. The Taliban sought a pure Islamic society. Toward that end, the Taliban created a governmental Department for the Promotion of Virtue and the Prevention of Vice that issued decrees requiring prayers and beards and forbidding idolatry, gambling, homosexuality, sorcery, pictures of animals, and kite flying. The Taliban incurred the wrath of the international community by severely restricting the activities of women. All women were required to wear a traditional *burqa* that covered their entire body save for two tiny slits near the

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<sup>274</sup> See ORVILLE SCHELL, *TO GET RICH IS GLORIOUS: CHINA IN THE EIGHTIES* 170-74 (1984).

<sup>275</sup> *Id.*

<sup>276</sup> CAROLINE LIU ET AL., *CHINA* 393 (7th ed. 2001). Additional references to spiritual pollution in China include Paul G. Pickowicz, *The Theme of Spiritual Pollution in Chinese Films of the 1930’s*, 17 *MODERN CHINA* 38 (1991); and Thomas B. Gold, “Just in Time!” *China Battles Spiritual Pollution on the Eve of 1984*, 24 *ASIAN SURVEY* 947 (1984).

eyes. Women were banned from most work, schooling, and movement outside the home. The windows of women's homes were sometimes painted black so that, in President Clinton's words, "they won't be able to see outside and be polluted."<sup>277</sup> The Taliban was even more fearful of how outside influences could prevent it from realizing its dream of an Islamic state. Osama bin Laden believed that the West pollutes Muslims.<sup>278</sup> The Taliban banned televisions, VCRs, satellite dishes, music, dancing, and virtually every form of entertainment because they were corrupting the morals of the people, especially the youth. For example, the head of the Department for the Promotion of Virtue and the Prevention of Vice explained that "[o]nly one in 100 cassettes we confiscate are good. The rest are Indian movies and outright pornography, and these are polluters of the mind."<sup>279</sup> The Taliban also feared that improper education could pollute Islamic culture, so it closed home schools and prohibited women from attending any schools until the classes were reformed. Religions contrary to Islam were perhaps most suspect to the Taliban, which prosecuted foreign aid workers accused of spreading Christianity and destroyed famous ancient statues of Buddha "so thoroughly, that not even pieces of them would remain to pollute the soil."<sup>280</sup>

Many other nations view western influences as pollution as well. Muslim countries have been particularly keen to oppose what they regard as American cultural pollution. Nabeel DeJoni, a professor of communications at the American University in Beirut, insists that "[c]ultural pollution in my country is as harmful as environmental pollution."<sup>281</sup> American influences are derided as a source of cultural pollution by even erstwhile friendly nations. France has long sought to protect its indigenous culture from the effects of American movies, music, and food.<sup>282</sup> Canada is another frequent complainer against the cultural pollution spewing across its southern border.<sup>283</sup>

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<sup>277</sup> William J. Clinton, Remarks as Delivered by President William Jefferson Clinton at Georgetown University (Nov. 7, 2001).

<sup>278</sup> See Kanan Makiya, *Help the Iraqi's Take Their Country Back*, N.Y. TIMES, Nov. 21, 2001, at A19 (noting that Wahhabi clerics view "view all non-Muslims . . . as a form of 'pollution' of the entire 'land of Muhammad,' the phrase that Osama bin Laden uses when he talks about the presence of the American military forces in Saudi Arabia).

<sup>279</sup> See Barry Bearak, *Afghans Ruled by Taliban: Poor, Isolated, but Secure*, N.Y. TIMES, Oct. 10, 1998, at A1 (quoting the head of the General Department for the Preservation of Virtue and Prevention of Vice).

<sup>280</sup> Manohar Malgonkar, *Anger of the Gods*, THE STATESMAN (INDIA), Dec. 31, 2001.

<sup>281</sup> See The AMC Project: Hollywood and the Muslim World (2003), quoted in Janice Rhoshalle Littlejohn, *Film Studies U.S. Media Influence*, SEATTLE TIMES, July 14, 2003, at E1 (quoting DeJoni).

<sup>282</sup> See, e.g., Taylor Dinerman, *France and the Idea of Strategic Defense: Technology, Politics and Doctrine*, 25 J. SOC. POL. & ECON. STUD. 285-302 (2000) (explaining France's view that most of America's entertainment exports are "forms of cultural pollution").

<sup>283</sup> See SEYMOUR MARTIN LIPSET, THE VALUES AND INSTITUTIONS OF THE UNITED STATES AND CANADA 221-22 (1990) (describing the Canadian concern about American domination of domination of the popular culture).

Mexican novelist Homero Aridjis decries Halloween celebrations as “cultural pollution” from the United States.<sup>284</sup> In each instance, the survival of native cultures is thought to be threatened by the foreign culture – especially the messages and values disseminated by the entertainment media – coming from the United States. The use of the term pollution highlights both the allegiance to the pure native culture and the hostility to the harmful American influences.

Not surprisingly, such complaints gain less traction within the United States itself. Instead, American complaints about cultural pollution typically target violent entertainment, pornography, and racism. For violent entertainment, the pollutant is the violent images and words that are contained in the various forms of entertainment. But not all violent images are created equal. Pollution beliefs involving violent entertainment, like pollution claims in environmental law and anthropology, are contested regarding what constitutes a pollutant and contingent upon the context in which the act occurs. The pollutant charge is most likely to be leveled against portrayals that glorify violence or fail to show any adverse consequences for engaging in violence, for violence that is especially graphic, or for violence that is easily imitated. Thus *National Born Killers* has been targeted as cultural pollution because the murderers are perceived as heroes, while *The Basketball Diaries* provides an all-too-readily imitated depiction of a disillusioned student killing his classmates. Video games that portray lifelike incidents of violence, even allowing the player to choose the color of the animated victim’s blood, are equally controversial, as are games that function to teach a player how to better engage in actual violence. By contrast, entertainment violence that is punished, or justified by a greater good (e.g., *Saving Private Ryan*), or necessary to demonstrate its horrific nature (e.g., *Schindler’s List*) is less likely to be characterized as a pollutant. So is violence that appears on news programming or, at another extreme, violence that occurs in animated cartoons.

Pornography also yields frequent complaints about cultural pollution. These complaints must confront the challenge of identifying the offending pollutant, for the difficulty of determining what is pornography and what is not has attained almost mythic proportions. Putting the details of that debate aside for the moment, the pollutant said to be contained in pornography is graphic sexual images, and sometimes graphic sexual words. The broad universe of such materials could include such disparate things as X-rated movies, *Playboy* magazine, popular Hollywood movies, medical textbooks, baby photographs and Renaissance art. It also includes, as the Meese commission put it, specialty magazines featuring “virtually any conceivable, and quite a few inconceivable, sexual preferences,” with “a significant portion of what is available” circa 1986 “featuring sado-masochism, bestiality, urination and defecation in

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<sup>284</sup> DAVID J. SKAL, *DEATH MAKES A HOLIDAY: A CULTURAL HISTORY OF HALLOWEEN 186* (2002) (quoting Aridjis).

a sexual context, and substantially more unusual practices even than those.”<sup>285</sup> Which materials constitute pornography is a source of never ending debate that illustrates the contested nature of many pollution claims.

A similar dynamic appears in the pollution claims involving other human environments. The pollution imagery employed in the campaign finance debate presumes that money – especially soft money – is the pollutant that is introduced into the political environment. Obviously, though, money is not harmful in all times and in all places. Indeed, many critics of traditional campaign finance regulations question whether money can ever qualify as a pollutant. There is a much wider consensus that racism or sexism is properly viewed as a pollutant that produces hostile work environments, for there are few people who would say that such attitudes and actions are appropriate in *any* place. Yet precisely what constitutes racism or sexism, and which references to race or to sexuality are appropriate in which places, remain very much an issue of public debate.

A final group of pollution claims – those targeting unwanted people as pollutants – is worthy of extended consideration. Anthropologists have identified numerous pollution beliefs involving women and others as the offending pollutant when a society says that they are in the wrong place. “People pollution” accusations in popular discourse come in three forms: population control advocates see human overpopulation as a problem of too many people, objections to urban sprawl object to the growing number of people in a particular place, and beliefs that certain kinds of people are undesirable seek to exclude those people from the community. The last accusations of people pollution are the most troubling. Tourists, celebrities, and convicts have each been labeled pollution. An infamous 1950 Senate committee report warned that “[o]ne homosexual can pollute a government office.”<sup>286</sup> Conservative Christians and Catholics have also been disparaged as pollutants. The view of Catholics as pollution helped lead to the nineteenth century and early twentieth century move toward public schools.<sup>287</sup>

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<sup>285</sup> ATTORNEY GENERAL’S COMMISSION ON PORNOGRAPHY, FINAL REPORT 28-29 (1986).

<sup>286</sup> Senate Comm. on Expenditures in the Executive Dep’ts, Employment of Homosexuals and Other Sex Perverts in Government, S. Doc. No. 241, 81st Cong., 2d Sess. 3-5 (1950). See also *Dahl v. Secretary of the U.S. Navy*, 830 F. Supp. 1319, 1331 (E.D. Cal. 1993) (noting “the fearful imagery of homosexuals polluting the social environment with unrestrained and wanton expressions of deviant sexuality”).

<sup>287</sup> See, e.g., 141 CONG. REC. H8205 (daily ed. Aug. 2, 1995) (statement of Rep. Clay) (complaining that an appropriations bill was “polluted with the wish list of the Christian Coalition”); 133 CONG. REC. S1295 (daily ed. Jan. 28, 1997) (statement of Sen. Simon) (reprinting an article written by a Lutheran church official who criticized fundamentalists and asserted the “need to avoid giving credence to pious phrases which pollute the political waters and stagnate debate”); Joseph P. Viteritti, *Davey’s Plea: Blaine, Blair, Writers, and the Protection of Religious Freedom*, 27 HARV. J.L. & PUB. POL’Y 299, 300 (2003) (asserting

The poor are a frequent target of people pollution complaints. In 1978, for example, a group of residents objected to the federal government's planned establishment of a Job Corps center on a former seminary campus in their St. Paul, Minnesota neighborhood. They sued, alleging that the project could not proceed until the federal government prepared an environmental impact statement documenting the effect that the project would have on the environment. That effect, said the neighbors, was "people pollution": "the impact of persons who by reason of their background and experience are or may be different than the persons already present in the community."<sup>288</sup> The court rejected the notion that "the mere influx of low-income persons into a wealthier community should not be regarded as an adverse environmental impact," but it concluded that NEPA does require consideration of traffic congestion, criminal activity, and the character of a neighborhood because they are part of the "human environment." Thus the poor were not pollutants themselves, but their activities could result in other kinds of pollution.<sup>289</sup>

Perhaps the most sustained use of this kind of vicious imagery occurred in response to the immigration of Chinese to the United States in the second half of the nineteenth century. The number of Chinese in the United States jumped from virtually zero before 1850 to hundreds of thousands in the years after the California gold rush. Most of those immigrants settled in California, and especially in San Francisco, though Chinatowns appeared in mining towns throughout the west. The newcomers were welcomed at first, but attitudes quickly changed. Bayard Thomas wrote a widely read account of his travels through China in 1853 in which he expressed his "deliberate opinion that the Chinese are, morally, the most debased people on the face of the earth. . . Their touch is pollution, and, harsh as the opinion may seem, justice to our own race demands that they should not be allowed to settle on our soil."<sup>290</sup> California's Aaron Augustus Sargent expounded on that theme in a remarkable speech to the Senate on May 1, 1876. The Chinese, he proclaimed, "bring pollution and spread corruption."<sup>291</sup> The pollution charge is evidenced in Sargent's description of the arrival of the Chinese in a neighborhood:

A landlord will rent a single house on a street to a Chinamen, who at once

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that efforts to restrict Catholic schools were "conceived in a climate polluted by religious bigotry").

<sup>288</sup> *Como-Falcon Coalition, Inc. v. United States Dep't of Labor*, 465 F. Supp. 850, 857-58 & n.2 (D. Minn. 1978).

<sup>289</sup> *Id.*

<sup>290</sup> BAYARD TAYLOR, *A VISIT TO INDIA, CHINA, AND JAPAN IN THE YEAR 1853* 354 (16th ed. 1862).

<sup>291</sup> 40 CONG. REC. 2855 (1876) (remarks of Sen. Sargent). See also Kitty Valavita, *Collisions at the Intersection of Gender, Race, and Class: Enforcing the Chinese Exclusion Laws*, 40 LAW & SOC'Y REV. 249, 258-59 (2006) (quoting additional pollution claims voiced during the congressional debate over the Chinese exclusion acts).

crowded it to repletion with their compatriots. . . . The atmosphere becomes fetid, and a sickly smell pervades the neighborhood, which caused the tenants of the houses to the right and to the left to vacate. These houses cannot be rented again to white persons, the rents fall, and finally the Chinese get possession. . . . Withal there is unutterable filth and plague-breeding nuisances. . . . [I]t seems only a question of time whether the Chinese will occupy the entire city of San Francisco.<sup>292</sup>

Sargent also detailed all of the other injuries inflicted by the presence of the Chinese. They undersell and thus displace white labor, they ruin existing businesses, they “fight savagely” and are dangerous to peace, they kill female infants, they prefer “ingeniously cruel and unusual” punishments, they perjure themselves, and they do not aspire to “a government of the people, by the people, for the people.”<sup>293</sup> Recent scholarship, especially the work of Keith Aoki, further documents the view of nineteenth century Chinese immigrants as pollution that threatened valuable natural resources, public morals, and public health.<sup>294</sup>

The nineteenth century depictions of Chinese immigrants as pollutants are instructive for several reasons. They affirm the three characteristics of the pollutants that are present in all pollution beliefs: anything – even another person – can be viewed as a pollutant, whether something is a pollutant depends upon the context in which it appears, and pollutant claims are often contested. The treatment of nineteenth century Chinese immigrants also demonstrates the ease with which pollution claims can be used to stigmatize things which later generations see as benign or even desirable. Immigration presents a literal illustration of Mary Douglas’s understanding of pollution as a violation of boundaries. Yet it is rare to find any explicit descriptions of immigrants as people pollution at the beginning of the twenty-first century. The worries about overpopulation, sprawl, and immigration persist, but explicit pollution claims have disappeared.

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Claims of environmental pollution, cultural pollution, and the pollution beliefs analyzed by anthropologists each involve a “pollutant” entering an “environment”

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<sup>292</sup> *Id.* at 2851.

<sup>293</sup> *Id.* at 2850-56. Ironically, two years later Senator Sargent proposed what would later become the nineteenth amendment that guaranteed women the right to vote, and his wife Ellen Clark Sargent was a close friend of Susan B. Anthony. See Cornerstone Realty Group, Nevada County History: Sargent House, available at <[http://www.cornerstone-realty.com/nc\\_history\\_sghouse.htm](http://www.cornerstone-realty.com/nc_history_sghouse.htm)> (proclaiming Sargent’s accomplishments, including the fact that he “wrote the nation’s first immigration laws”).

<sup>294</sup> See Aoki, *supra* note 20, at 27-31 (analyzing the description of nineteenth century Chinese immigrants as “pollution”).

where it produces a harm. There is a very broad and variable understanding of the affected environments and the pollutants. What constitutes a clean environment is contested, as are the things that are said to pollute that environment. Environmental pollution is no different from other kinds of pollution claims in this respect.

#### IV. CONCLUSION

Mary Douglas observed that “some pollutions are used as analogies for expressing a general view of the social order.”<sup>295</sup> The wide range of things that have been described as pollution confirms her insight. Yet the law has constructed distinct responses to these pollution claims involving emissions into the air, discharges into the water, violent entertainment, odors, pesticides, sprawl, noise, and hazardous wastes without recognizing that each of these problems involves disputes about what can be added to a shared environment. The realization that there are many kinds of “pollution” should assist both in revisiting the efficacy of various environmental regulations and in considering the diverse ways in which the law regulates workplaces, public speech, and activities in other human environments. That is the comparative, and normative, project toward which this article points.

The problems that can be characterized as pollution are as old as unsightly smoke and as new as virtual pornography on the internet. No one word is capable of resolving all of those problems. Nor is any one discipline. The literature reviewed here suggests that anthropology, ecology, sociology, engineering, history, economics, theology, epidemiology, and law each contain insights that are invaluable in responding to pollution. The idea of pollution provides an opportunity to explore these connections between many societal ills that we have struggled to address separately.

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<sup>295</sup> DOUGLAS, *supra* note 1, at 3.