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Integrative Environmental Law: A Prescription for Law in the Time of Climate Change

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Integrative Environmental Law: A Prescription for Law in the Time of Climate Change

Alyson C. Flournoy†

Abstract

As the magnitude of the threat posed by climate change has become increasingly apparent, scholars and practitioners have begun a dialogue about how to reform environmental law to meet the challenge. Concepts like adaptive management, sustainability, and resilience have emerged in succession, as policy makers and scholars search for new moorings for our ethical and legal framework. While useful, these concepts have failed to provide a vision, goal, or solid ethical grounding for environmental law in the era of climate change.

This project takes a new approach by exploring what we can learn from the field of Integrative Medicine. The history of the development of Integrative Medicine offers interesting parallels, contrasts, and lessons for environmental law as it grapples with the existential challenges of climate change. The article highlights the striking similarities between the limitations of conventional medicine that led doctors to pursue an integrative approach and the limitations that have stymied progress under our environmental laws. After reviewing developments in environmental law and policy that align with a path towards an integrative approach, it outlines the key unaddressed challenges, and prescribes a path towards integrative environmental law. It describes how these reforms grounded in lessons from Integrative Medicine will help us to better meet the challenges of climate change. In closing, it offers several case studies of ongoing law and policy advocacy that illustrate how an integrative approach can overcome the limitations that have impeded our progress in addressing climate change and other environmental challenges.

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INTRODUCTION

As the scale and complexity of the impacts of climate change have become increasingly apparent, scholars and practitioners have begun a dialogue about how environmental law must change in an era of climate change or, as some have called it, the Anthropocene Era.[1] They have looked variously at how the legal system can better address the scale of the impacts of humans on the environment[2] and the dynamic reality of a disrupted climate system[3] and have sought to identify an ethical framework adapted to this challenging context.[4] Concepts like adaptive management, sustainability, and resilience have emerged in succession, as policy makers and scholars search for new moorings for our ethical and legal framework. While useful, these concepts have failed to provide a vision, goal, or solid ethical grounding for environmental law. Perhaps the most radical and arguably comprehensive approach has been proposed by Pope Francis who urges a new vision grounded in what he calls an "integral ecology".[5]

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[1] Significant contributions to the dialogue include Todd S. Aagaard, *Environmental Law Outside the Canon*, 89 IND. L. J. 1239 (2014); MELINDA HARM BENSON AND ROBIN KUNDIS CRAIG, THE END OF SUSTAINABILITY: RESILIENCE AND THE FUTURE OF ENVIRONMENTAL GOVERNANCE IN THE ANTHROPOCENE (2017) ; Eric Biber, *Law in the Anthropocene Epoch*, 106 GEORGETOWN L.J. 1 (2016); Holly Doremus, *Adapting to Climate Change with Law that Bends Without Breaking*, 2 SAN DIEGO J. CLIMATE & ENERGY L. 45 (2010); Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153 (2009)(*hereinafter* Lazarus, *Super Wicked Problems*); RICHARD J. LAZARUS, THE MAKING OF ENVIRONMENTAL LAW (2004); Michael M'Gonigle and Louise Takeda, *The Liberal Limits of Environmental Law: A Green Legal Critique*, 30 PACE ENVTL. L. REV. 1005 (2013) Jedediah Purdy, *Climate Change and the Limits of the Possible*, 18 DUKE ENVTL L. & POL'Y F. 289 (2008)(hereinafter Purdy, *Limits of the Possible*; Jedediah Purdy, *Our Place in the World: A New Relationship for Environmental Ethics and Law*, 62 DUKE L.J. 857 (2013) (hereinafter Purdy, *Our Place in the World*); J.B.Ruhl, and James Salzman, *Climate Change Meets the Law of the Horse* 62 DUKE L.J. 975 (2013); J.B. Ruhl. *Climate Change Adaption and the Structural Transformation of Environmental Law*, 40 ENVTL L. 363 (2010) (hereinafter Ruhl, *Structural Transformation*); and J.B. Ruhl, *Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future*, 39 Envtl L. Rev. 10735 (2009) (hereinafter Ruhl, *No-Analog Future*); SCANLAN ET AL., LAW AND POLICY FOR A NEW ECONOMY (Melissa A. Scanlan ed. 2017). Pope Francis contributes significantly to this dialog in his ENCYCLICAL ON CLIMATE CHANGE & INEQUALITY: ON CARE FOR OUR COMMON HOME (2015), which offers an analysis of the problem of climate change grounded in the Roman Catholic religious tradition that explicitly locates the causes of climate change and environmental degradation in moral, economic, cultural, institutional, and spiritual forces and insists on a solution that addresses all these dimensions. See, e.g. ¶¶ 4-6, 9, 48, 111, 112, 139, 142, 143.

[2] BENSON AND CRAIG, *supra* note 1; Biber, *supra* note 1; LAZARUS, *supra* note 1.

[3] BENSON AND CRAIG, *supra* note 1; Eric Biber, *Climate Change and Backlash*, 17 N.Y.U. Envtl. L. J. 1295 (2009); Doremus, *supra* note 1; Sean M. Kammer, *No-Analogue Future: Challenges for the Laws of Nature in a World Without Precedent*, 42 VT L. REV. 227 (2017); Ruhl, *No-Analog Future*, *supra* note 1; Scanlan, *Climate Change, System Change, and the Path Forward*, in SCANLAN ET AL., *supra* note 1.

[4] BRYAN G. NORTON, SEARCHING FOR SUSTAINABILITY: INTERDISCIPLINARY ESSAYS IN THE PHILOSOPHY OF CONSERVATION BIOLOGY (2002)(hereinafter SEARCHING FOR SUSTAINABILITY); BRYAN G. NORTON, SUSTAINABILITY: A PHILOSOPHY OF ADAPTIVE ECOSYSTEM MANAGEMENT (2005)(hereinafter ADAPTIVE ECOSYSTEM MANAGEMENT); Purdy, *Our Place in the World*, *supra* note 1; Jedediah Purdy, *Environmentalism for the Next Economy*, in SCANLAN ET AL., *supra* note 1.

[5] POPE FRANCIS, supra note 1, provides a striking critique of the limited scope of current responses to environmental degradation and climate change and seeks to provide a broader vision of an Integral Ecology that incorporates

This paper builds on the insights of these important contributions, and acknowledges the work of scholars and practitioners to develop the concept of integrative law,[6] but takes a new approach. It explores whether environmental law can learn from experiences of the medical profession that led to the development of a new field and approach to health care called Integrative Medicine.[7] In recent decades, medical research revealed that some of the greatest threats to humans' health were beyond the reach of the traditional tools of allopathic medicine.[8] When faced with daunting evidence of the limited success of conventional medical treatment in addressing these health problems, the rising costs of medical treatment, and increasing public interest in other forms of healing, the medical establishment gradually began to embrace a new model that came to be known as Integrative Medicine.

Integrative Medicine recognizes the limits of a reductionist approach that considers a patient as a series of body parts and systems rather than a whole person with an interconnected mind, body, and spirit, all contributing to the individual's overall health. The history of the development of this new field of medicine offers both interesting parallels to and some stark contrasts with the evolution of environmental law over the decades since the 1970s. Particularly as environmental law grapples with the existential challenges of climate change and the implications of human dominance of the planet, this comparison may offer useful guidance.

Environmental law is often touted for the systemic focus it gains from its grounding in ecology, which might lead some to suppose it is already "integrative". However, exploring the analogy to medicine suggests that the ties to ecology alone do not qualify environmental law as integrative.[9] Indeed, a close examination suggests that environmental law suffers from many of the limitations identified with conventional medicine – the same limitations that prompted the development of Integrative Medicine. Just as Integrative Medicine challenged allopathic western medicine to rethink its fundamental approach, goals, and tools, this article suggests how environmental law requires a similar rethinking. It explores how environmental law has already

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"human and social dimensions". See *id.* at ¶¶ 4-6, 9, 137. In remarks to a gathering of lawyers that focused heavily on corporate crimes, Pope Francis recently proposed the idea that the Roman Catholic Church might recognize a new category of sin: "ecological sin". Jon Queally, *While Warning of Nazi-Like Fascism and Corporate Crimes, Pope Francis Proposes Adding 'Ecological Sin' to Church's Teachings*, Common Dreams (Nov. 16, 2019) https://www.commondreams.org/news/2019/11/16/while-warning-nazi-fascism-and-corporate-crimes-pope-francis-proposes-adding. Lucia A. Silecchia derives broader lessons for lawyers from the Pope's Encyclical in *Laudato Si' and Care for Our Common Home*, 6 SEATTLE J. ENVTL. L. 1 (2016).

[6] See J. Kim Wright, "*What is Integrative Law* (July 3, 2015) http://cuttingedgelaw.com/content/what-integrative-law. The integrative law movement and how the approach developed here differs from it are discussed *infra* Part IIIA.

[7] A leading text defines Integrative Medicine as "healing-oriented medicine that takes account of the whole person (body, mind, and spirit), including all aspects of lifestyle. It emphasizes the therapeutic relationship and makes use of all appropriate therapies, both conventional and alternative." David Rakel & Andrew Weil, *Philosophy of Integrative Medicine*, in INTEGRATIVE MEDICINE 4 (3d ed. 2012); see also See Nat'l Inst. of Health, Nat'l Center for Complementary and Integrative Health, *Complementary, Alternative, or Integrative Health: What's in a Name* available at: https://nccih.nih.gov/health/integrative-health.

[8] The term allopathic medicine is generally defined to mean an approach that uses drugs and surgery to treat disease. Nat'l Inst. of Health, National Cancer Institute, *NCI Dictionary of Cancer Terms*, https://www.cancer.gov/publications/dictionaries/cancer-terms/def/allopathic-medicine. The prevalence of Type II diabetes and its connection to diet and nutrition, the role of stress in heart disease, and the limited options for and severe side effects of cancer treatments are among the frequently noted limitations.

[9] *See infra* Part III.B.1.

taken some modest steps that parallel medicine's evolution toward integration. Environmental law practitioners, scholars and advocates have sought to escape the reductionist confines of early environmental laws, to articulate more integrative goals, and to embrace new approaches and collaborations with practitioners with non-legal skills.

However, a truly integrative approach demands a more radical rethinking of environmental law's approaches and goals and a rejection of environmental law exceptionalism.[10] A more intentional embrace of the emergent integrative paradigm, drawing on the model of Integrative Medicine, offers a promising, if challenging, path that could address many of the limitations that constrain conventional environmental law today, particularly its limited success in responding to the challenges of climate change. This article offers Integrative Environmental Law as a path rather than a destination – a set of questions to ask in evaluating the efficacy and adequacy of new policy proposals that can help guide legislators, policymakers, and advocates alike. The article does not present Integrative Environmental Law as a silver bullet that solves the many difficult policy challenges we face and will face for decades to come. Rather, it may serve as a beacon that can help us determine whether a particular reform moves us closer to a path that can address the challenge of climate change and use limited resources effectively.

Part I begins by describing the limitations and challenges that motivated change in the medical field. Part II then describes the specific changes encompassed in the move to Integrative Medicine that address many of the limitations associated with conventional allopathic practice. Part III develops the analogy between conventional medicine and conventional environmental law. After defining relevant terminology and noting limits of the analogy, Part III considers attributes that have limited conventional environmental law's efficacy in recent decades, noting the striking similarities to the challenges faced by conventional allopathic medicine. Part IV describes the path towards integrative environmental law. Part IVA catalogs steps that lawmakers and advocates have already taken along a path that bears some resemblance to the path that led medical practitioners to Integrative Medicine. It then considers the more fundamental changes in approach that would be needed to develop truly Integrative Environmental Law.[11] It offers a prescription for the ambitious rethinking that would be required by intentional embrace of such a path, and the ways in which this approach would address many of the limitations that constrain environmental law today. Finally, Part V considers directly the question of whether such an approach can produce law and policy better designed for an era of climate change. After outlining the case in favor of this approach, the article concludes by offering three examples of strategies and approaches being advanced by environmental

[10] The debate over tax exceptionalism has centered largely on whether IRS decisions are exempted from the strictures of the Administrative Procedure Act. *See, e.g.,* James M. Puckett, *Structural Tax Exceptionalism*, 49 GA. L.REV. 1067 (2015) and Kristin E. Hickman, *Unpacking the Force of Law*, 66 VAND. L. REV. 465 (2013). See Anne C. Dailey and Laura A. Rosenbury, *The New Law of the Child* , 127, YALE. L. J. 1448 (2018) for an example of a more comprehensive effort to broaden the lens and reject exceptionalism in the field of children's law. (Rejecting conventional authorities-focused framework in favor of a broadened view of children's interests that promotes children's relationships, responsibilities, and rights).

[11] My use of the term "integrative" in relation to environmental law is distinct from the use of that term by practitioners in the "integrative law movement". Wright, *supra* note __. This latter approach represents one of several related approaches that are sometimes called comprehensive, holistic or collaborative law. These are discussed *infra* Part IIIA.

advocates that align with an integrative approach. These case studies illustrate how an integrative environmental law approach may better meet the challenges we face, particularly those associated with an era of climate change.

I. CONVENTIONAL MEDICINE

A. The Allopathic Tradition and its Limitations

The roots of Integrative Medicine (IM) are most easily understood in relation to certain defining characteristics of the Western allopathic medical tradition.[12] This tradition has been described as focused on the external and physical,[13] and, in contrast to some traditions, it developed on a foundation that embraced a Cartesian mind-body duality.[14] This division ceded matters related to mind and spirit to the realm of religion and dictated that the body alone was the realm of medicine.[15]

In addition, early in its development, allopathic medicine embraced a reductionist approach to understanding health and the practice of medicine. By focusing on small parts, scientists and medical doctors were able to better understand health and disease.[16] This scientific approach enabled huge successes. The germ theory of disease produced enormous benefits for society, but it forged a path for medicine that focused on identifying a single, external, often microscopic cause for illness.[17] Associated with this was an emerging conception of health as the absence of disease.[18] Some describe this as producing a medical science and practice focused

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[12] This approach to health care is sometimes also referred to as the biomedical approach, because it is deeply rooted in a scientific model of medicine. See, e.g. Ian Coulter, *Integration and Paradigm Clash: The Practical Difficulties of Integrative Medicine* in MAINSTREAMING COMPLEMENTARY AND ALTERNATIVE MEDICINE: STUDIES IN SOCIAL CONTEXT 103, 109, 110-111 (Philip Tovey, Gary Easthope & Jon Adams eds. 2017 e-book 2003); Rakel and Weil, *supra* note __, at 2 (describing scientific model of medicine). The term allopathic medicine is generally defined as an approach that uses drugs and surgery to treat disease. It is sometimes used to distinguish this approach embraced generally by medical doctors (M.D.s) from an approach that uses homeopathy https://studentaffairs.jhu.edu/preprofadvising/pre-medhealth/overview/allopathic-medicine/ or to distinguish from the more preventive and holistic approach used by osteopaths (D.O.s). http://www.hpplc.indiana.edu/medicine/med-res-twokinds.shtml. The National Cancer Institute defines allopathic medicine as follows:

> A system in which medical doctors and other healthcare professionals (such as nurses, pharmacists, and therapists) treat symptoms and diseases using drugs, radiation, or surgery. Also called biomedicine, conventional medicine, mainstream medicine, orthodox medicine, and Western medicine.

https://www.cancer.gov/publications/dictionaries/cancer-terms/def/allopathic-medicine . This article uses the adjectives allopathic, conventional, and biomedical without distinction to describe this approach.

[13] Rakel and Weil, *supra* note __, at 2.

[14] Rakel and Weil, *supra* note __, at.2

[15] Rakel and Weil, *supra* note __, at 2. This dualism contrasts with approaches from traditions such as Traditional Chinese Medicine with roots in Taoism and Ayurvedic medicine with its links to a Hindu worldview. Coulter, *supra* note __, at 113.

[16] Rakel and Weil, supra note __, at 2; INST. OF MEDICINE, INTEGRATIVE MEDICINE AND THE HEALTH OF THE PUBLIC: A SUMMARY OF THE FEBRUARY 2009 SUMMIT 32 (2009) (hereafter INSTITUTE OF MEDICINE SUMMIT) (Summary of Ralph Snyderman, Keynote on Integrating Health and Health Care) available at: https://www.nap.edu/read/12668/chapter/3#32.

[17] Coulter, supra note __, at 111; INSTITUTE OF MEDICINE SUMMIT, supra note __, at 32.

[18] Coulter, supra note __, at 111.

more on the biological structure of disease than on the health of the patient.[19] The scientific approach to medicine also led hospitals to become the centers for medical practice.[20]

The reductionist approach produced an atomistic approach to medical care.[21] Medicine developed enormous knowledge and powerful tools and technology by simplifying natural phenomena and focusing on individual parts of the body.[22] Practitioners became subspecialized, focusing on ever-smaller aspects of the body or treatment of particular symptoms.[23] Drugs and procedures including surgery were among the primary tools on which medicine depended as treatments for disease and injury.[24] Trauma and acute illnesses became elevated over chronic illnesses as the primary focus for medical practice.[25]

While this biomedical approach proved very effective for treating many acute illnesses and injuries, it did not prove equally useful for chronic disease affecting more than one body part or system.[26] As the significance of chronic illnesses like diabetes, heart disease, asthma, high blood pressure, and depression mounted, this limitation of the allopathic approach became more widely recognized.[27] Moreover, better understanding of the causes of these chronic illnesses pointed to causes like stress[28] that are ill-suited to conventional medical treatment.

At the same time, some in the medical profession began to recognize other limitations inherent in the biomedical model. The definition of health as the absence of disease, led doctors to focus on treating disease rather than promoting overall patient health. Often, this path also fell short by treating the symptoms rather than the causes of disease.[29] The organization of practice and extreme specialization reinforced an atomistic view of the patient.[30] In addition, the ever-increasing costs of treatment were widely criticized, as were doctors' failure to recognize the impact of socio-economic factors in patients' health.[31] Efforts to limit ever-increasing costs through managed care and other means were only partially successful and exacerbated patient

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[19] Coulter, *supra* note __, at 111.
[20] Coulter, *supra* note __, at 111.
[21] Coulter, *supra* note __, at 111.
[22] Rakel and Weil, *supra* note __, at 2
[23] Rakel and Weil, *supra* note __, at 2
[24] Riya R. Kanherkar, et al., *Epigenetic Mechanisms of Integrative Medicine*, EVIDENCE-BASED COMPLEMENTARY & ALTERNATIVE MED., Article ID 4365429, at 1 (2017) available at: https://doi.org/10.1155/2017/4365429.
[25] Kevin D. Willison, *Advancing Integrative Medicine Through Interprofessional Education,* 17 HEALTH SOC. REV. 342 (2008); Coulter, *supra* note __, at 111.
[26] INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at xi; Kanherkar et al. *supra* note __ at 3 (describing contrasting holistic approach of IM).
[27] A 2001 study found that these five chronic conditions accounted for over half of all U.S. health expenditures at that time. See INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 2 (citing Druss et al.)
[28] For example, a massive cross-cultural study of the causes of acute myocardial infarction in 2004 identified stress as the second leading cause of heart disease after smoking. Rakel and Weil, *supra* note __, at 5 (citing Rosengran, Haken, Ounpuu, et al.).
[29] Kanherkar et al. *supra* note __ at 3(describing the contrasting philosophy embraced by IM); Coulter, *supra* note __, at 111-12, 114 (describing the contrasting philosophy embraced by Complementary and Integrative Medicine (CAM)).
[30] Coulter, *supra* note __, at 113 (describing the contrasting philosophy embraced by Complementary and Alternative Medicine; Rakel and Weil, *supra* note __, at 2; INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 2.
[31] INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 1-2.

disaffection with a medical system that failed to effectively treat chronic disease.[32] Increasingly strong therapies caused increasingly strong adverse side effects.[33] The conventional approach often failed to empower patients as active agents in their own health, instead relying on a model of the doctor as healer.[34] Yet, as technology replaced communication, the physician-patient relationship was marginalized, and public confidence in the medical profession waned.[35]

These increasingly apparent shortcomings of the conventional biomedical approach to health care created pressure for reform both from patients[36] and from within the profession.[37] One summary described the biomedical approach to health as "reactive, sporadic, uncoordinated, and very expensive."[38] The limitations frequently identified as driving change include: (1) a reductionist approach, (2) insufficiently ambitious goals, (3) a reactive approach focused on acute problems, (4) a focus on symptoms not causes, (5) technology dependence and resulting patient alienation, and (6) cost. Patients began seeking what came to be called Complementary and Alternative Medicine (CAM) treatments, creating a thriving field of practice running in parallel with the allopathic medical care system.[39] CAM offered tools that avoided many of the limitations identified as inherent in conventional biomedicine. Rather than continuing to ignore or suppress CAM practices, a growing segment of the medical profession began to seek ways to integrate them into their practice. This led these practitioners onto the path toward the now well-established field called Integrative Medicine.

B. The Promise of Complementary and Alternative Medicine

The roots of Integrative Medicine (IM) lie in both the limitations inherent in biomedical practice described above and the promise of CAM. The National Library of Medicine defines Complementary and Alternative Medicine as "a group of diverse medical and health care practices and products that are not presently considered to be part of conventional medicine."[40] These approaches "include but are not limited to yoga, chiropractic and osteopathic manipulation, meditation, massage therapy, acupuncture, relaxation techniques, tai chi, qi gong, healing touch, hypnotherapy and movement therapies. Other complementary health approaches include traditional healers, Ayurvedic medicine, traditional Chinese medicine, homeopathy and

[32] Rakel and Weil, *supra* note __, at 3.
[33] Fred Kronenberg, Janet Mindes & Judith S. Jacobson, *The Future of Complementary and Alternative Medicine for* Cancer, 23 CANCER INVESTIGATION 420 (2005)(citing study showing that 94% of cancer patients experienced disease-related symptoms not addressed by or side effects caused by conventional treatment); COULTER, *supra* note __, at 111. Rakel and Weil note that "adverse drug reactions have become the sixth leading cause of death in hospitalized patients." Rakel and Weil, *supra* note __, at 3.
[34] Coulter, *supra* note __, at 111, 112; Institute of Medicine Summit at x.
[35] Rakel and Weil, *supra* note __, at 3.
[36] Rakel and Weil, *supra* note __, at 3.
[37] The Summit on Integrative Medicine and the Health of the Public convened by the Institute of Medicine of the National Academies both discussed the pressure from within the profession and is evidence of it. INSTITUTE OF MEDICINE SUMMIT, *supra* note __.
[38] INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at xi.
[39] See Nat'l Inst. of Health, *supra* note __ (*What's in a Name)*; Rakel and Weil, *supra* note _, at 3.
[40] Nat'l Inst. of Health, *Collection Development Manual* in U.S. NATIONAL LIBRARY OF MEDICINE, https://www.nlm.nih.gov/tsd/acquisitions/cdm/subjects24.html.

naturopathy."[41] The older "Alternative" label reflects the history of patients and doctors viewing these approaches as a substitute for or rejection of conventional medical treatment.[42] The newer "Complementary" label highlights the growing recognition that these are not simply an alternative to biomedical treatment but can be and are used to complement biomedical treatment.[43] Many CAM approaches and therapies offered ways to address the identified shortcomings of biomedicine and suggested a vision for integrative medical care that responded to biomedicine's limitations.[44]

II. FROM CONVENTIONAL TO INTEGRATIVE MEDICINE

Conventional and Alternative Medicine offered tools that avoided many of the limitations identified as inherent in conventional biomedicine. Rather than continuing to ignore or suppress CAM practices, a growing segment of the medical profession began to seek ways to integrate them into their practices. This led these practitioners onto the path toward the now well-established field called Integrative Medicine. Integrative Medicine took a step beyond recognition of CAM by seeking systematically to integrate CAM therapies and the insights derived from their diverse approaches with conventional biomedical practice to forge a new, more holistic form of health care that draws on the best of what all traditions have to offer.[45] IM sought to overcome the continued siloing and diminished respect still accorded CAM by many medical doctors. IM rejected the notion that CAM therapies are an alternative to allopathic medical treatment and sought to incorporate them into the practice of allopathic medicine as valuable tools for some conditions and patients. Thus, the goal was not to create a new specialty within allopathic medicine, but to encourage all practitioners to incorporate IM's premises.[46]

Integrative Medicine sought to address the limitations inherent in biomedicine by two key moves: it expanded both the focus and the nature of medical practice. These two major shifts inherent in IM are that it *broadened the lens* used by medical practice and it *broadened the tent* to incorporate new participants and techniques in the pursuit of patient health. The first shift -- *broadening the lens* – entailed a shift away from a reductionist and reactive approach focused only on curing disease and towards to a holistic approach that affirmatively sought the patient's comprehensive well-being. The second step -- *broadening the tent* – required rethinking the idea of medical practice as an enclave exclusively for medical doctors that relied on increasingly costly and technology-dependent allopathic techniques that often treated symptoms of disease

[41] Nat'l Inst. of Health, *supra* note __, at https://www.nlm.nih.gov/tsd/acquisitions/cdm/subjects24.html Additional non-medical therapies and treatment modalities associated with CAM include use of natural products, deep breathing, diet-based therapies, progressive relaxation, guided imagery, and prayer. *See also* Riya R. Kanherkar, et al., *Epigenetic Mechanisms of Integrative Medicine*, EVIDENCE-BASED COMPLEMENTARY & ALTERNATIVE MED., Article ID 4365429, at Part 3 (2017) available at: https://doi.org/10.1155/2017/4365429 (describing in detail various alternative and complementary practices and their beneifts); Rakel and Weil, *supra* note __, at 3; Coulter, *supra* note __, at 105 (describing types of CAM practitioners being brought into conventional medical practices).

[42] Nat'l Inst. of Health, *supra* note __ (*What's in a Name*).

[43] *Id.*

[44] Willison, *supra* note __ at 342-43.

[45] *Id.*; Rakel, *supra* note __,at 4; National Institutes of Health, *supra* note __, https://www.nlm.nih.gov/tsd/acquisitions/cdm/subjects24.html.

[46] Rakel and Weil, *supra* note __, at 5, 6.

rather than causes. How integrative medicine accomplishes these two shifts is described in more detail below.

A. Broadening the Lens: Moving Beyond Reductionism, Weak Goals, and a Reactive Approach

Integrative Medicine broadens the lens or focus of medical practice because it emphasizes a view of the patient as a whole person with an interconnected mind, body, and spirit, all contributing to the individual's overall health. This replaces a reductionist approach that considers the patient as a series of body parts and systems.[47] IM also replaces the narrow conception of health as freedom from disease with a broader affirmative conception of health,[48] defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."[49] The goal of care is not reactive – to cure disease -- but active -- to promote health and healing.[50] IM emphasizes prevention and seeks to anticipate needs rather than react to acute poor health.[51]

B. Broadening the Tent: Treating Causes Not Symptoms, Reducing Technology Dependence and Cost

The most obvious manifestation of IM is the toolbox of CAM approaches and techniques on which it draws and the related professionals with whom the physician collaborates in providing care to patients.[52] IM broadens the tent by incorporating CAM approaches and treatments and bringing in practitioners of CAM and the patient as active collaborators in the quest for patient well-being. Techniques from CAM are engaged to assist with this pursuit of a broader conception of health. CAM techniques have proved far more effective in addressing some of the leading chronic diseases by addressing causes and not just symptoms. Better nutrition and exercise have been shown to reduce the incidence of adult-onset Type II Diabetes; stress reduction techniques like meditation and yoga have proved effective in helping reduce heart disease and other illness. These therapies also have shown the potential to reduce reliance on drugs to manage pain, thus avoiding adverse side effects and addiction risks. CAM

[47] Rakel and Weil define Integrative Medicine as "[h]ealing-oriented medicine that takes account of the whole person (body, mind, and spirit), including all aspects of lifestyle. It emphasizes the therapeutic relationship and makes use of all appropriate therapies, both conventional and alternative." Rakel and Weil, *supra* note __, at 4,; s*ee also id.* at 7, 10, Table 102 and Figure 1-1; INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 31.

[48] Rakel and Weil, *supra* note __, at 5, 6-7.

[49] This has been embraced in the Constitution of the World Health Organization. *Constitution of WHO: Principles*, http://www.who.int/about/mission/en/.

[50] Rakel and Weil, *supra* note __, at 6-7; Coulter, *supra* note __, at 114. Evidence has been offered to suggest that IM's success in promoting healing reflects a correlation between physical and mental effects of IM on the one hand and modulation of gene expression and epigenetic state on the other. In other words, IM's success and value may also be grounded in previously unexplained relationships among therapies and biochemical effects. Kanherkar, et al., *supra* note __.

[51] Coulter, *supra* note __, at 111, 112; INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 3, 31 (describing goal of having patients participate in development of a personal strategic health plan).

[52] *See* supra p. __ for a list of these. Benjamin et al., *Response to a Proposal for an Integrative Medicine Curriculum*, 13 J. ALTERNATIVE & COMPLEMENTARY MED. 1021, 1023-24 (2007) emphasizes the importance of recognizing that Integrative Medicine involves medical physicians collaborating with practitioners of CAM and not simply viewing CAM techniques as an "add-on" or attempting to incorporate those techniques themselves. Benjamin et al. discuss many of the conditions necessary to produce a successful collaboration in this setting.

approaches and techniques also tend to be less costly and technology-dependent than biomedical approaches, thus helping IM to respond to patient dissatisfaction and alienation.

The broader tent includes not just new techniques, but new personnel. A central aspect of IM is collaboration between MD's and CAM practitioners and others such as social workers with varied expertise, resources, and perspectives that can help the patient move toward comprehensive well-being. Importantly, practitioners of CAM are viewed as co-equal collaborators with medical doctors – not merely as potential referrals to treat conditions diagnosed by the doctor. The goal is to engage their perspective and expertise at every stage of the relationship, to better understand the patient's health needs, and to devise an overall plan to achieve the patient's comprehensive well-being. On a practical level, this represents a profound change in medical practice and one that creates challenges for those pursuing an integrative practice.

In addition to the collaboration with CAM practitioners, IM transforms the role of the patient to a more active one. IM demands that the patient be at the center of care, and empowerment of the patient is an explicit goal.[53] Some describe IM as "relationship-centered care",[54] emphasizing the centrality of the patient-physician relationship. A practitioner of IM seeks not to cure the patient but to engage the patient's capacity for healing.[55] The physician is no longer viewed as the all-powerful curer of disease but is reimagined as educator, helping provide the patient with the tools to heal and maintain health.[56] By recognizing the complex of factors within and beyond the patient that contribute to health, the physician must acknowledge the limited power she possesses and the importance of empowering patients with knowledge and engaging them in their own health care.[57] The understanding of what causes poor health is also transformed by IM. Rather than looking solely to physical processes, practitioners must consider how the relationships and community surrounding the patient affect the patient's health[58] in order to identify *causes* rather than merely *symptoms* of ill health.[59]

As Coulter and others have noted, fundamental challenges remain if Integrative Medicine is to achieve its ambitious goal of transforming medical practice.[60] Incorporation of CAM techniques has challenged the science-based foundations and research standards of biomedicine.[61] It has demanded new research methods that can understand the multiple

[53] INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 3, 30, 31.
[54] Rakel and Weil, *supra* note __, at 5, 6.
[55] Coulter, *supra* note __, at 112; INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 29; *see also* Hope Foley & Amie Steel, *The Nexus Between Patient-Centered Care and Complementary Medicine: Allies in the Era of Chronic Disease?*, 23 J. ALTERNATIVE & COMPLEMENTARY MED. 158 (2017).
[56] Coulter, *supra* note __, at 111, 112; Institute of Medicine Summit at x.
[57] Coulter, *supra* note __, at 112; Rakel and Weil, *supra* note __, at 7; INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 3, 29.
[58] Rakel and Weil, *supra* note __, at 6 (pull quote), 7.
[59] Coulter, *supra* note __, at 111, 113.
[60] *Id*.
[61] Rakel and Weil, *supra* note __, at 3; *see also* Sunita Vohra et al., *Integrating Complementary and Alternative Medicine into Leading Academic Medical Centers: Experience and Perceptions of Nine Leading Centers in North America*, 5 BMC Health Services Research 78 (2005) (surveying leading academic medical centers on questions including how they applied concept of evidence-based medicine in light of gaps in evidence on CAM therapies).

influences on patients' health,[62] test dynamic healing systems, and account for intangible values like quality of life, and not just remission rates.[63] Incorporating these new therapies has also created organizational, economic, regulatory,[64] and philosophical challenges,[65] and demanded a new commitment to collaborative care for patients across a range of different professions. Yet, the record points toward increasing acceptance of IM. The Institute of Medicine Summit and other resources provide biomedical practitioners tools like checklists and rules that constitute a new blueprint for patient care.[66] Recognition by the National Institutes of Health and the creation of programs focusing on Integrative Medicine at numerous medical schools are evidence of its growing acceptance.[67]

III. CONVENTIONAL ENVIRONMENTAL LAW

A. Terminology and Limits to the Medicine-Environmental Law Analogy

Before exploring the analogy to Integrative Medicine, it is important to distinguish my use of the term Integrative Environmental Law from the work of others who coined the phrase "Integrative Law" to conceptualize a more holistic approach to the practice of law generally.[68] Kim Wright describes Integrative Law as a movement that includes various new approaches to practice including comprehensive law and holistic law.[69] These various approaches overlap, but have in common an effort to avoid litigation and to improve the well-being of both clients and practitioners.[70] They all generally emphasize cooperation, comprehension, humanism, healing,

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[62] Rakel and Weil, *supra* note __, at 3; INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 3, 7.
[63] Rakel and Weil, *supra* note__, at 3.
[64] *See generally* Michael H. Cohen, *Complementary and Integrative Medical Therapies, the FDA, and the NIH: Definitions and Regulation*, 16 DERMATOLOGIC THERAPY 77 (2003).
[65] Coulter, *supra* note __, at 105, 110-115; *see generally* Alphia Possamai-Inesedy & Suzanne Cochrane, *The Consequences of Integrating Complementary and Alternative Medicine: An Analysis of Impacts on Practice*, 22 HEALTH SOC. REV. 65 (2013); *see also* Rosy Daniel et al., Editorial, *Distinguishing Between Complementary and Alternative Medicine and Integrative Medicine Delivery: The United Kingdom Joins World Leaders in Professional Integrative Medicine Education*, 17 J. ALTERNATIVE & COMPLEMENTARY MED. 483, 484 (2011)(describing challenges with updating medical education to train medical graduates to practice IM).
[66] *See, e.g.*, Rakel and Weil, *supra* note __, 8-9, and Tables 1-1 and 1-2; INSTITUTE OF MEDICINE SUMMIT, *supra* note __, at 57-59.
[67] The creation of a National Center for Complementary and Alternative Medicine by Congress in 1998 (to replace an Office of Alternative Medicine created in 1992), and its renaming by Congress in 2014 as the National Center for Complementary and Integrative Health suggest the acceptance and ongoing evolution of the field. See Nat'l Inst. of Health, Nat'l Center for Complementary and Integrative Health, https://www.nih.gov/about-nih/what-we-do/nih-almanac/national-center-complementary-integrative-health-nccih. At least a dozen medical schools had already created programs in IM by 1998. Coulter, *supra* note __, at 104. And in the United Kingdom, the Prince of Wales developed a steering committee and working groups as part of an initiative to explore integrative health care. *Id.* Vohra et al., *supra* note __, mention formation of the Consortium of Academic Health Centers for Integrative Medicine by 29 leading academic medical institutions. Another indication is the developing literature reviewing IM programs and describing an array of different models of Integrative Medicine that exist. *See, e.g.*, Eun Jin Lim, et al., *A Scoping Review on Models of Integrative Medicine: What is Known from the Existing Literature?*, 23 J. ALTERNATIVE & COMPLEMENTARY MED. 8 (2017).
[68] J. Kim Wright, "*What is Integrative Law* (July 3, 2015) http://cuttingedgelaw.com/content/what-integrative-law
[69] J. KIM WRIGHT, LAWYERS AS PEACEMAKERS: PRACTICING HOLISTIC, PROBLEM-SOLVING LAW (2010) available at https://books.google.com/books?hl=en&lr=&id=EX6pjUAfcU4C&oi=fnd&pg=PR33&dq=J.+Kim+Wright+Lawyers+as+peacemakers&ots=Lju4n8Olte&sig=ZOs9N8JSCiBWybzA2oax9gG-JZg#v=onepage&q=J.%20Kim%20Wright%20Lawyers%20as%20peacemakers&f=false.
[70] Hollee Schwartz Temple. *Attorney as Healer: Integrative Law Puts Passion into the Profession* (August 2013).

and spiritual aspects.[71] They focus primarily on a general approach to law practice, and in particular on representation of individual as opposed to corporate or institutional clients. But these approaches can be used in any type of practice, and they seek to transform the approach to law practice -- not the definition and understanding of the goals or legal tools associated with a particular substantive field.[72] In contrast to both Integrative Law and Integrative Medicine, Integrative Environmental Law focuses not on individual clients or patients but on transforming the substantive law as well as the practice of environmental law to better address the environmental challenges we face as a society.

Although distinct, there are some similarities in the meanings ascribed to the word integrative in the contexts of Integrative Law and IM. Integrative Law and related approaches seek to broaden the lens through which they view conflicts and broaden the tent by expanding who are considered stakeholders. As with IM practitioners, Integrative Law practitioners recognize the context of complex and inter-related systems in which they operate.[73] Some writing about Integrative Law also seek to integrate spirituality into law practice,[74] resonant of the emphasis in IM on spirit as well as body and mind. And like IM, holistic law seeks to recognize the whole client, encompassing past, future, body, mind, and spirit.[75] One of the earliest manifestations of what came to be known as Integrative Law was the Comprehensive Law Movement, developed by Professor Susan Daicoff, who drew explicitly on the metaphor of law as a healing profession.[76]

A second definitional note relates to how I use the term environmental law: as a shorthand to refer both to the relevant body of law and to a broad set of professional activities undertaken by lawyers implementing those laws and advocating for environmental, health, and safety.[77] These activities may include litigation, legislative and regulatory development, implementation of environmental laws, and enforcement, as well as advocacy in other settings.

Finally, before exploring the analogy between the fields of medicine and environmental law, it is important to acknowledge that there are fundamental differences between the two fields

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[71] WRIGHT, LAWYERS AS PEACEMAKERS, *supra* note __, at 4.

[72] One exception is the field of collaborative law, which developed primarily in the context of divorce law. Stu Webb, *Collaborative Law: A Practitioner's Perspective on its History and Current Practice* (2008) https://heinonline.org/HOL/LandingPage?handle=hein.journals/jaaml21&div=11&id=&page=.

[73] J. Kim Wright. *Principles and Perspectives,* https://www.cuttingedgelaw.com/page/integrative-law-movement-introduction.

[74] Bruce Peterson and Stu Webb, *Everything that Rises Must Converge: Integrating Spirituality, Law, and Politics*, PROJECT FOR INTEGRATING SPIRITUALITY, LAW AND POLITICS BLOG (June 11, 2018) http://www.spiritlawpolitics.org/blog

[75] ROBERT BORODSY, A NEW PARADIGM FOR LAWYERS (2002)

[76] Susan Daicoff, *Law as a Healing Profession: The 'Comprehensive Law Movement'* (December 2005) https://pdfs.semanticscholar.org/2f6e/fdee36a418781d6138296afb6404bf4cd243.pdf. Daicoff discusses the "vectors" of the comprehensive law movement as "(1) collaborative law, (2) creative problem solving, (3) holistic justice, (4) preventive law, (5) problem solving law, (6) procedural justice, (7) restorative justice, (8) therapeutic jurisprudence, and (9) transformative mediation." *Id.* at 1-2.

[77] Many of the challenges I describe are faced not just by lawyers but also by non-lawyer advocates and the path forward toward Integrative Environmental Law involves greater collaboration with non-lawyer advocates and experts with a broader range of concerns than has been characteristic of environmental law.

and that the analogy has limits.[78] Although the metaphors of health and healing are sometimes used to describe the goals of environmental law and ethics,[79] the contexts and subjects of medicine and environmental law are very different.

A first and most obvious distinction between environmental law and medicine is the presence or absence of a clearly articulated goal or objective which the practitioner is required to pursue by professional standards. Medical doctors are bound by the Declaration of Geneva -- the modern successor to the Hippocratic oath -- to pursue the health and well-being of their patient as their first consideration, and to respect the autonomy and dignity of their patient.[80] Thus, medical practitioners pursue a defined substantive goal – health and well-being of the patient. In contrast, environmental law practitioners are governed by the same professional standards as all lawyers, which dictate loyalty to and zealous advocacy on behalf of the client generally. There is no defined substantive goal akin to "health" which lawyers must pursue, and certainly no analogous goal for environmental lawyers, in particular. Instead, lawyers must serve their clients' interests, however those are defined, with some limitations.

Moreover, the principles of medicine that guide medical professionals are grounded in science, whereas environmental law is built on public policies determined through the political process. Although ideally supported by science, the laws and policies ultimately reflect value choices that are not generally determined through scientific study and experimentation. There is robust debate among environmental advocates as well as academics in law, policy, and philosophy, regarding what the goal of environmental law should be, and what ethics underpin environmental and conservation efforts. While there are debates among doctors about medical ethics, there is far greater agreement about the basic ethics surrounding medical practice than there is surrounding the value choices our environmental laws should encode.[81] This distinction is important and one to which this article will return in discussing the limitations of conventional environmental law.

A second important distinction is the role of the patient as distinct from the role of the client. At first blush, there is similarity between the doctor-patient and the lawyer-client relationship, in that the lawyer must pursue the interests of the client just as the doctor serves the patient's interests. And, as with the duties owed by the doctor to the patient, the lawyer owes the client duties of loyalty and confidentiality.[82] As noted above, however, in medicine, there is only one goal the physician can seek: patient health and well-being. In law, the lawyer pursues whatever goal the client seeks, within a broad range of permissible goals.

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[78] This discussion does not comprehensively explore the differences between the two professions or practices – environmental law and medicine – but highlights some fundamental distinctions that seem of particular relevance to the analogy I am pursuing.

[79] HEALING THE WOUNDS: THE PROMISE OF ECOFEMINISM (Judith Plant ed. 1989).

[80] The World Medical Assembly recently updated this declaration. Michael Cook, *New Hippocratic Oath for Doctors Approved*, BIOEDGE: BIOETHICS NEWS FROM AROUND THE WORLD (Nov. 4, 2017) https://www.bioedge.org/bioethics/new-hippocratic-oath-for-doctors-approved/12496.

[81] Alyson C. Flournoy, *In Search of an Environmental Ethic*, 28 COLUMBIA J. ENVTL. L. 64, 66 (2003)

[82] American Bar Association, Model Rules of Professional Conduct, Rule 1.6 (Confidentiality) & Rule 1.7 Comment ¶1(Loyalty); See also Michael Cook, *New Hippocratic Oath for Doctors Approved*, BIOEDGE: BIOETHICS NEWS FROM AROUND THE WORLD (Nov. 4, 2017) https://www.bioedge.org/bioethics/new-hippocratic-oath-for-doctors-approved/12496 (duty of confidentiality to patient).

Of course, some environmental law advocates consider themselves as advocating for the environment, complicating further the analogy to doctors who have a single human being as patient. Christopher Stone's famous query whether trees should have standing,[83] embraced by Justice Douglas in his dissent in *Sierra Club v. Morton*,[84] expresses the impulse of some environmental lawyers and ethicists toward direct advocacy for the environment rather than advocacy intermediated by a human client. In the intervening years, some public interest advocates have sought to name species of animals as plaintiffs,[85] challenging the concept of the lawyer-client relationship further.[86] However, this approach has not succeeded, leaving at least this interesting complication unrealized as yet.

Notwithstanding these differences, this paper posits that there are important similarities between the challenges faced by conventional medicine and those confronting conventional environmental law. Thus, it explores the value of this analogy to mine lessons that environmental law can learn from the experience of the medical field. Part IIIB begins by looking at conventional environmental law as it developed beginning in the late 1960's. It highlights how the early law and practice faced many of the same challenges that led to the development and embrace of an integrative approach in medicine. Part IV then describes environmental law's evolution, highlighting early steps congruent with an integrative approach and a path forward building on these toward an integrative approach.

B. Conventional Environmental Law and its Limitations

A review of the history of environmental law's progress suggests interesting parallels to the limitations that hampered biomedicine's success and the urgent need for a new approach. Perhaps the most compelling, overarching shortcoming that led practitioners of biomedicine to pursue IM was the conventional approach's lack of success in treating the remaining leading causes of mortality. A recent critique of traditional environmental law and environmentalism by Gus Speth echoes this. He writes: "[w]e have won many victories but we are losing the planet."[87] There is growing, widespread agreement that our existing laws and approaches are insufficient tools to address the challenges of climate change.[88] As with medicine, this may be the most powerful motivator toward rethinking our approach. Beyond this general similarity, there are several striking parallels between the limitations of allopathic medicine and those of conventional environmental law that are explored below.

As is described in more detail below, environmental law shares the same six inherent limitations that helped drive change in the biomedical field toward an integrative approach. Like

[83] Christopher D. Stone, *Should Trees Have Standing? – Towards Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972); CHRISTOPHER D. STONE, SHOULD TREES HAVE STANDING?: LAW, MORALITY, AND THE ENVIRONMENT (2010).
[84] 405 U.S. 727, 741 (1972).
[85] Hawaiian Crow (Alala) v. Lujan, 906 F.Supp. 549 (D..Hawaii 1991)(granting motion to dismiss the Alala's complaint and strike its name from the complaint); *see also* Lindsey Schromen-Wawrin, *Representing Ecosystems in Court: An Introduction for Practitioners*, 31 TUL. ENVTL. L.J. 279 (2018).
[86] Although it is merely a slogan, it is telling that Earthjustice, a leading public interest environmental law firm, brands itself with the phrase: "Because the earth needs a good lawyer" See https://earthjustice.org/.
[87] James Gustave Speth, *The Joyful Economy: Rising Up from the Devastation of People and Nature*, in SCANLAN ET AL., *supra* note 1, at 32.
[88] *See supra* note 1.

conventional medicine, conventional environmental law can be critiqued as: (1) reductionist, (2) guided by insufficiently ambitious goals, (3) reactive and designed to focus on acute problems, (4) focused on symptoms not root causes of health impairment and environmental degradation, (5) technology-dependent and alienating to the public, and (6) perceived as costly.

1. *Reductionist Tendencies*

The medium-specific approach embodied in the major environmental statutes was early recognized as problematic because of its reductionist nature.[89] Just as medical practice was constrained by its focus on individual symptoms or body parts or processes, environmental law practice was constrained by the statutory framework that dictated a focus on air, water, endangered species, or pesticides, but failed to provide the tools to integrate these concerns and see the impacts on the broader natural systems. This approach, like the reductionist medical approach, created huge early gains in terms of addressing what could be considered the low-hanging fruit – cleaning up the most obvious media-specific pollution and most egregious practices, including visible oil and pollution on many water bodies, dangerous smog levels, intentional killing of endangered species, and widespread use of organochlorine pesticides like DDT. Like the success in treating infectious diseases through the germ theory of illness, this yielded significant societal benefits. However, it failed to enable practitioners to focus on ecosystems as a whole. It also may have produced a certain fatigue in the public, just as patients became tired of being sent from one specialist to another, all of whom could see only a small part of the picture, sometimes missing the root cause of their complaint.

Another reductionist aspect of conventional environmental law was its narrow focus on human health impacts and environmental degradation. One might challenge this characterization of the focus as narrow; in one sense, the breadth of environmental law was in fact sweeping – it sought to protect human health and avoid harm to the entire environment. Yet the focus on these *physical* elements, like the biomedical focus on the body, overlooked the important role of social and economic systems and relationships – both the impact of environmental degradation on these systems and these systems' role in causing degradation.[90] The impacts of environmental degradation and of environmental regulation on human communities and the disparate impacts experienced by poor and marginalized communities were generally overlooked.[91] Efforts by

[89] Lakshman Guruswamy, *Integrating Thoughtways: Re-Opening of the Environmental Mind?*, 1989 WIS. L. REV. 463.

[90] This broader inquiry lies at the heart of the "new economy" approaches outlined in SCANLAN ET AL., supra note 1. See also M'Gonigle and Takeda, *supra* note 1, at 1080-86 (highlighting the ecological contradictions of environmental law that accepts economic liberal premises and systems); Pope Francis, supra note __, at ¶¶ 16, 109-111, 189-198. NEPA's broad, albeit largely unfulfilled, statement in policy in Section 101 of the Act, 42 U.S.C. §4331, and its mandate of a broad interdisciplinary approach that integrates "the natural and social sciences and the environmental design arts in planning and in decisionmaking", 42 U.S.C. §4332(2)(A), stand as notable instances of a commitment to a broader integrative focus in traditional environmental law. However, NEPA's early interpretation as a statute providing only procedural relief has limited its impact.

[91] *See, e.g.*, ROBERT D. BULLARD, DUMPING IN DIXIE: RACE, CLASS, AND ENVIRONMENTAL QUALITY (1990); Luke W. Cole, *Remedying Environmental Racism: A View from the Field*, 90 MICH. L. REV. 1991 (1992) (*hereinafter Remedying Environmental Racism*); Luke W. Cole, *Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law*, 19 ECOL. L.Q. 619 (1992) (*hereinafter Empowerment as the Key*); UNITED CHURCH OF CHRIST COMMISSION FOR RACIAL JUSTICE, TOXIC WASTES AND RACE IN THE UNITED STATES (1987).

environmental justice advocates to highlight the problem and advance reforms largely failed to achieve success. Moreover, the broader socio-economic impact of regulatory decisions on all people and communities were not part of the standard regulatory equation.[92] By using a narrow lens to define problems and forge solutions, environmental law has arguably condemned itself to irrelevance and inefficacy.[93] The absence of a broader conversation about the interplay between environmental problems and the broader social and economic context also arguably created an opening for industry to blame environmental regulation for loss of jobs and the death of industrial towns. This narrative was often based on false claims about the role of environmental regulation in factory closures -- as opposed to the role of businesses' pursuit of enhanced profitability via technology and international labor markets. Nevertheless, the false narrative eroded popular support for environmental law in many communities by creating the perception that economic opportunity and environmental quality are mutually exclusive values.[94]

Another aspect of conventional environmental laws' reductionism is reminiscent of the mind-body dualism of biomedicine. Many discussions of environmental protection place humans outside nature and reduce the focus to just the environment, ignoring the interrelationships and the reality that humans are part of the environment.[95] This leads to goals that focus on maintaining pristine or "natural" environments apart from humans. As with a focus

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See also POPE FRANCIS, *supra* note __, at ¶¶ 48-52 (on the essential and overlooked inter-connection between social and economic injustice and environmental degradation). Regulatory agencies did at times explicitly include consider the impacts on vulnerable or heavily exposed groups among the population in setting health- and risk-based standards, but usually this was only at the insistence of environmental justice advocacy groups. The Environmental Justice movement in the 1980s marked a concerted effort address these shortcomings by broadening the focus of environmental law to systematically incorporate socioeconomic and racial justice. This is discussed *infra* Part IV.A.1. as an example of pressure toward a more integrative approach.

[92] *See* Mary Christina Wood, *The Nature's Trust Paradigm for a Sustaining Economy*, in SCANLAN ET AL., *supra* note 1, at 97. Luke Cole pointed out early on that because of their grounding, grassroots activists often have a better institutional understanding of "the political economy of pollution". As such, they recognize that the market system that centers on maximizing profit rather than individual polluters is the root problem. Cole, *Empowerment as the Key*, *supra* note __, at 642-43. The yellow vest protests in France provide a vivid illustration of the perils of efforts to address climate change through regressive policies like fuel taxes, without considering the broader socio-economic context and the impact of the policies on people. Rokhaya Diallo, *Why are the 'Yellow Vests' Protesting in France?*, Al Jazeera, December 10, 2018, https://www.aljazeera.com/indepth/opinion/yellow-vests-protesting-france-181206083636240.html; Alissa J. Rubin, *Macron's Proposal to Mollify Yellow Vest Protesters Fails to Impress*, N.Y. Times, December 11, 2018, https://www.nytimes.com/2018/12/11/world/europe/yellow-vests-france-macron.html.

[93] *See* Speth, *supra* note __, at 35 (discussing need for systemic change and failure to seek it as traditional environmentalists' biggest mistake); *see also* Laurie Ristino, *Legal Democracy: Using Legal Design, Technology and Communications to Reform Food and Agriculture Systems*, in SCANLAN ET AL., *supra* note 1, at 262 (discussing food system problem as a wicked problem requiring systems thinking to overcome). Pope Francis notes the inherently reductionist tendency of the technocratic paradigm and its inability to respond to the challenges of environmental degradation including climate change, *supra* note __ at ¶¶ 109-111. His Encyclical calls for putting technology "at the service of another type of progress, one which is healthier, more human, more social, more integral." *Id.* at ¶ 112.

[94] *See* Speth, *supra* note __, at 34 for a deeper analysis of this dynamic.

[95] Benson and Craig discuss this in their book as "an ontological misstep with serious consequences." BENSON AND CRAIG, *supra* note __, at 33. See also Lindsey Schromen-Wawrin, *Representing Ecosystems in Court: An Introduction for Practitioners*, 31 TUL. L. REV. 279, 282-85 (2018) for an illuminating discussion of this "estranged worldview". See also POPE FRANCIS, *supra* note __ at ¶¶ 139.

solely on the patient's body, such an approach is radically limited as well as unattainable, particularly in an era of climate change.

2. *Insufficiently Ambitious Non-Integrative Goals*

Environmental statutory *goals* also fell short, like the biomedical goal of health defined as the absence of disease. Like the inadequate goal of avoiding disease in medicine, our pollution control statutes sought to avoid pollution that caused demonstrable harm to health or the environment. Natural resource protection statutes often relied on "preservation" as their implicit or explicit goal and guiding ethic. But as we began to understand that natural systems were dynamic, it became clear that the goal of preservation made little sense and was likely a losing battle in most contexts. Other laws embraced a more human-centered utilitarian ethic with a goal of "conservation" of natural resources, associated with the tradition of multiple use and sustained yield of resources.[96] This ethic and goal also faced challenges in that it embraced use of natural resources without the benefit of systems capable of monitoring or ensuring that any given activity or the cumulative impact of all activities was truly sustainable.[97] These various goals all fell short by focusing primarily on limiting the adverse physical effects of pollution, degradation, or use of resources.

Other critiques highlight different shortcomings of our goals. Jedediah Purdy describes mainstream environmentalism as characterized by "a blend of radical and complacent elements" – radical in assessing the level of threat but complacent in its confidence about solutions and the adequacy of its tools and goals.[98] Purdy also notes the elite and anti-democratic qualities of the goals of the environmental movement, which focus disproportionately on charismatic species and mountain vistas and reflect the disproportionately white elite membership of the environmental movement and its motivation by a romantic attachment to nature.[99]

Moreover, creative approaches that focus on the underlying economic systems that create incentives for environmental degradation -- like James Salzman's early proposal for aligning incentives for what he calls leverage services [100] and David Driesen's proposal for an Environmental Competition Statute [101] -- don't fit well with the conventional goals of environmental law. And although these and other proposals are not incompatible with conventional environmental law, they are far less likely to get broad attention by environmental advocates than would a more conventional environmental approach. As is discussed above, these

[96] This was grounded in the tradition associated with Gifford Pinchot, first Chief of the U.S. Forest Service. See SAMUEL P. HAYS (IN COLLABORATION WITH BARBARA D. HAYS), BEAUTY, HEALTH, AND PERMANENCE: ENVIRONMENTAL POLITICS IN THE UNITED STATES, 1955-1985, 17 (1987).

[97] BENSON AND CRAIG, *supra* note __, at 32.

[98] Purdy, *supra* note 4, at 61. Pope Francis echoes this concern and describes how an approach grounded in the technological paradigm produces fragmented and partial solutions and tends to supplant human freedom and creativity. *Supra* note __, at ¶¶ 108-111.

[99] Purdy, *supra* note 4, at 50.

[100] James Salzman, *Beyond the Smokestack: Environmental Protection in the Service Economy*, 47 U.C.L.A.L.REV. 411, 460-62 (1999).

[101] David M Driesen, *An Environmental Competition Statute*, in BEYOND ENVIRONMENTAL LAW: POLICY PROPOSALS FOR A BETTER ENVIRONMENTAL FUTURE (Alyson C. Flournoy and David M. Driesen eds. 2010).

conventional goals also preclude a focus on the broader socio-economic and cultural context in which the environmental- and health-degrading activities occur.[102]

3. *Reactive Law that Prioritizes Acute Problems*

Like biomedicine, our environmental laws are most effective at dealing with acute or traumatic environmental insults. The impetus for enactment of each of the major environmental statutes included a highly visible disaster that attracted widespread public attention. The burning Cuyahoga River, the deadly air inversion in Donora, Pennsylvania, the Santa Barbara oil spill, Love Canal, and the grounding of the Exxon Valdez are some examples of events that propelled Congress to act by mobilizing massive public support. Not only was the motivation for the statutes reactive, the system the statutes created was largely reactive. There was no system for monitoring environmental *health* on an ongoing basis under any of our statutes. Even monitoring under the Clean Water Act and Clean Air Act is reactive – it requires sources of pollution to track their *discharges or emissions* to enable corrective action and, if necessary, enforcement to correct emissions in excess of standards. Environmental health was being defined implicitly as the absence of some level of harm – be it pollution that reached defined levels or near extirpation of rare species. As with conventional medicine, environmental law dealt best with acute episodes or pollution – just as biomedicine elevated and prioritized trauma and acute illness.

4. *Treating Symptoms not Causes*

A fourth limitation of both conventional medicine and conventional environmental law is that they treat symptoms rather than root causes of the problems of concern. The tools in our environmental statutes often focused on end of the pipe or other technology-based controls to capture emissions, sometimes creating toxic waste in the process, that then requires disposal on land.[103] Moreover, the underlying economic incentives for externalizing the costs of pollution remained largely unchanged.[104] Resource use and degradation continued to be the accepted engines for economic success; environmental law sought only to ensure that emissions were controlled to some extent. But the statutory standards often dictated that such controls were only required to the extent feasible, generally meaning that they would not interfere with continuation of the underlying economic activity.[105] In the realm of natural resource protection, the Endangered Species Act focused on prohibiting affirmative actions that would harm endangered species, but these types of conduct were only one part of the engine of extinction. The remaining major causes of extinction – land use changes and habitat loss – were addressed, at best, indirectly through the designation of critical habitat under the statute. Statutory protections for

[102] *See* supra Part IIIB1.

[103] *See* Cole, *Empowerment as the Key*, *supra* note __, at 644-45.

[104] Sarah E. Light, *The Law of the Corporation as Environmental Law*, 71 STAN. L. REV. 137 (2019) suggests the often-overlooked power of corporate law to better address underlying corporate behavior that causes environmental degradation. Pope Francis explicitly criticizes the misguided focus on the technological paradigm that causes us to fail to see the broader social, cultural, and ethical roots of our present failures. POPE FRANCIS, *supra* note __, at ¶¶109, 139, 160.

[105] *See, e.g.*, 33 U.S.C. §1311(b)(2)(A) (requiring application of best available technology economically achievable for water pollution point sources). Other provisions explicitly demanded standards that protected public health or the environment with a margin of safety. *E.g.*, 42 U.S.C. §7409(b)(1) (mandating that national ambient air quality standards "allowing an adequate margin of safety, are requisite to protect the public health").

public lands and the natural resources on them were even less ambitious in many cases – allowing multiple, often competing uses of these lands and resources with few enforceable mandates even to address clear symptoms of harm.[106]

Climate change presents environmental law with a challenge analogous to chronic diseases' challenge for biomedicine. Unequivocal evidence of the impacts of greenhouse gas emissions, including climate change and associated phenomena like ocean acidification and sea-level rise, have confronted both society and environmental law with existential challenges.[107] Just as biomedicine's symptom-focused approach failed in dealing with chronic or lifestyle diseases, conventional environmental law has only succeeded in focusing on the symptoms of climate change and has failed to effectively address the root causes of climate change. Chronic diseases are sometimes termed lifestyle diseases – and changes in lifestyle offered the best chance for preventing and managing them.[108] In the same way, the lifestyle embraced by citizens of the U.S. and other developed nations (and aspired to by many developing nations) lies at the root of our climate problems. Our lifestyle is heavily reliant on fossil fuels and agricultural practices that generate greenhouse gas emissions. Climate change is our lifestyle disease, and existing environmental laws offer few tools to address this massive challenge.[109] Like chronic diseases, the problems caused by climate change are pervasive and they result from cultural and social patterns that lie beyond the scope of conventional environmental law. The energy economy on which our society depends have been regulated to reduce health and environmental impacts, but the fundamental decision to rely on fossil fuels has never been within the lens of environmental law. We are thus hampered by what might be called environmental law exceptionalism or myopia.

Similarly, as Scanlan points out, even today, efforts to achieve and measures of greenhouse gas emission reductions in industrialized countries that fail to account for the shift in manufacturing to developing economies like China, for example, create spurious indicators of success.[110] We focus on the symptom (greenhouse gas emissions) rather than the cause (an economy dependent on growth and reliant on fossil fuel sources) to satisfy and allow continuation of the massive levels of consumption in developed nations. The goals and ideals of preservation or conservation become absurd pursuits, and even sustainability suddenly seems a poor fit in the face of a dramatically changing climate.

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[106] *See, e.g.*, Multiple-Use Sustained-Yield Act of 1960, 16 U.S.C. §§ 528-531. Exceptions, like the protections for Wilderness Areas under the Wilderness Act. 16 U.S.C. §§ 1131-1136, provide a higher level of protection.

[107] U.S. GLOBAL CHANGE RESEARCH PROGRAM, IMPACTS, RISKS, AND ADAPTATION IN THE UNITED STATES: FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II (D.R. Reidmiller et al. eds. 2018); U.S. GLOBAL CHANGE RESEARCH PROGRAM, CLIMATE SCIENCE SPECIAL REPORT: FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME I (D.J. Wuebbles et al. eds. 2017) INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SPECIAL REPORT: GLOBAL WARMING OF 1.5° C (2018).

[108] See MedicineNet.com, Medical Definition of Lifestyle Disease https://www.medicinenet.com/script/main/art.asp?articlekey=38316; see also New York State Department of Health, *Chronic Diseases and Conditions* (describing chronic diseases as "linked to lifestyle choices") https://www.health.ny.gov/diseases/chronic/; Cleveland Clinic, *Online Health Chat with Mladen Golubic, MD, PhD Lifestyle Choices: Root Causes of Chronic Diseases*, (January 14, 2013) https://my.clevelandclinic.org/health/transcripts/1444_lifestyle-choices-root-causes-of-chronic-diseases.

[109] See Aagaard, *supra* note 1, at 1289-90 (noting inadequacy of current policy mechanisms to address climate change).

[110] Scanlan, *supra* note 1, at 9-10.

5. *Technology Dependence*

Another similarity to conventional medicine's limitations is the increasingly dominant role technology played in the two fields. In environmental law this was particularly true in the realm of control of pollution and other toxins.[111] Standards were expressed in parts per billion, scientific studies formed the basis for health assessments, and extensive technical studies provided the grounding for technology-based standards. As conservation biology advanced, the information demands for natural resource-focused statutes like the Endangered Species Act increased as well. Although the reliance on expertise may have boosted public confidence to some degree, it seems possible – although difficult to ascertain with any certainty -- that it also created an obstacle to maintaining the passion that impelled the enactment of this major suite of environmental laws. It is hard to rally the public around a victory measured in parts per billion.[112] Recognition of this fact no doubt impelled environmental advocacy groups to emphasize deaths prevented, cases of childhood asthma prevented, and protection of furry and feathered mega-fauna in their communications. Yet the nature of the terrain remains highly technical.

The dependence on technology also reinforced a technological optimism that led to the expectation that we could design or engineer our way out of our environmental challenges.[113] The dominant focus on technological solutions to pollution was similar to biomedicine's primary focus on drugs and surgery, even when these were increasingly costly, relatively ineffective for many chronic diseases, and were themselves causing adverse outcomes.

6. *Costly Interventions*

Implementation of environmental law proved slow and required increasingly large agencies to manage the process, as well as vigorous advocacy to keep the agencies moving forward. Both administration and advocacy demand considerable resources. And even though cost-benefit analyses required by some statutes and under Executive Orders consistently show the overwhelming net benefits to society of expenditures on environmental protection,[114] the costs associated with compliance with the new laws were concrete and easily measured while the benefits were often intangible or unquantifiable.[115] Thus, as industry dug in to oppose implementation and enforcement of the statutes, advocates increasingly had to fend off arguments about the excessive cost or burden imposed by environmental regulations.

Over time, this industry critique broadened to include a characterization of environmental laws as "killing jobs" or "hurting the economy" generally. Notwithstanding that these claims have been repeatedly proven false, the narrative has proved powerful and sticky. A key to its

[111] Although natural resource protection laws are structured differently, the grounding for these laws, too, was extensive scientific and technical information, albeit frequently drawn from different branches of science.

[112] *See* Wood, *supra* note __, at 113; Speth, *supra* note __ at 37 (need for a discourse not dominated by lawyers, scientists, and economists); *see also* Ristino, *supra* note __, at 265-68 (discussing limited social relevance for end users and high cost of access to law couched in technical legal jargon) See also Pope Francis, *supra* note __, ¶ 199 (on the need for a respectful dialogue between technology and religion).

[113] BENSON AND CRAIG, *supra* note __, at 14-18, 29; Purdy, *supra* note 4, at 61; Pope Francis, *supra* note __, at ¶¶ 108-110.

[114] *See e.g.* LAZARUS, *supra* note __, at 24

[115] FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING (2004).

longevity and success may be that this narrative of "job-killing regulations" is a coded appeal (albeit a disingenuous one) to the desire of many in America for more broadly-shared economic opportunity. In other words, this narrative casts economic equality and opportunity as priorities in competition with environmental health. Perhaps it is the kernel of truth at the core of this equation that keeps this narrative alive: the economic benefits of environmental statutes are real, but they do not always inure to the particular workers who may ultimately suffer burdens as a result of corporate strategies for compliance. While environmentalists rightly (and often self-righteously) point to the fact that the loss of jobs results from voluntary corporate decisions and prioritization of profits over workers, the costs of compliance cannot be swept under the rug.[116] And although public health and the environment are widely shared goods, protection of health and environmental amenities have not been evenly distributed, as environmental justice advocates have resoundingly demonstrated time and again.[117] Moreover, as Mary Christina Wood has noted, the economic benefits of environmental protection have always been incidental for environmental law and policy. The focus of environmental law has been to protect public health and the environment.[118] The environmental movement and environmental law have not prioritized economic equality.[119]

Although not a perfect analogy, these various challenges are somewhat analogous to the medical profession's confrontation of both the high cost and adverse side effects of increasingly strong drugs and other conventional therapies. Integrative Medicine offered a chance for medicine to finally reckon with these costs and bring a broader array of benefits into the medical equation. An integrative approach to environmental law could similarly help to offset the inaccurate perception of the cost of environmental protection and to address the regrettably accurate perception of its distributive inequality.

IV. FROM CONVENTIONAL TO INTEGRATIVE ENVIRONMENTAL LAW

A. Beginning Steps

Environmental lawyers and policymakers have not been idle in the face of the challenges and limitations described above. Indeed, if we look at the evolution of environmental law over the last four decades, advocates and those implementing the law have taken some steps to address and overcome these limitations.[120] And many of those steps parallel the path associated with the development of Integrative Medicine. This section examines areas where some evolution toward an integrative path can be discerned. However, no coherent, integrated approach or vision has guided this process. Incremental and often uncoordinated changes have

[116] Also, as is discussed above the latitude given to corporations to make these choices is a central characteristic of our current political economy that environmentalists have generally accepted as a given. *See supra* nn. 89-91 and acc. text and *infra* note 139 (similar shortcoming of sustainability as a goal).

[117] *See generally* Lazarus, *Pursuing "Environmental Justice", supra* note __.

[118] Wood, *supra* note __, at 97.

[119] Scanlan, *supra* note 1, at 3. Using a broader frame, Scanlan also points out that the use of Gross Domestic Product as a shorthand for economic well-being skews the assessment of what constitutes a cost or a benefit dangerously, excluding the value of equality and of internalization of environmental impacts from the calculus of economic progress. *Id.* at 3, 12.

[120] I intentionally omit legislators because of the gridlock at the federal level that has largely prevented any evolution in our statutory framework. Some states, however, have made progress in enacting new legislation that addresses some of these shortcomings.

occurred. This is progress and notable, nevertheless. As noted earlier, an integrative approach's value may be as a direction, not a destination. However, these steps represent only a small start and have not begun to address the challenge of climate change. Without an explicit commitment to an integrative path, we are unlikely to undertake the more difficult and comprehensive reforms needed to reap the benefits of a truly integrative environmental law.

This section describes elements of the evolution of environmental law to date that respond to limitations of conventional environmental law. It highlights some similarities to and important differences from the evolution of biomedicine toward Integrative Medicine. Part IVB then suggests further steps that would be needed to move further along the path toward integrative environmental law, highlighting the benefits that might accompany a continued and intentional embrace of an integrative vision of environmental law.

1. *Broadening the Lens: Efforts to Move Beyond Reductionism, Weak Goals, and A Reactive Approach*

In the late 1980's, in response to the limitations of our major pollution control laws, the Environmental Protection Agency (EPA) began to launch multi-media enforcement and management initiatives in the realm of pollution control.[121] These initiatives were driven by an increasing consensus that EPA's medium-specific regulatory efforts were insufficient to meet the multi-faceted challenges of environmental degradation. These initiatives were intended to create a more holistic approach to environmental protection, and to make more effective use of limited resources.[122]

At the same time, scientists, regulators, and some commentators were grappling with the realization that the medium-specific approaches embodied in laws governing natural resources and public lands were ignoring the complex dynamics and interconnectedness of ecosystems. Conservation biologists began to advocate for "ecosystem management" – an approach grounded in conservation biology which demanded that land managers and regulators look beyond jurisdictional boundaries and specific media or species in order to consider ecosystems as a whole.[123] Ecosystem integrity became the new watchword, and managers confronted the challenge of protecting dynamic natural systems and natural processes.[124] Law and policy

[121] Peter J. Fontaine, *EPA's Multimedia Enforcement Strategy: The Struggle to Close the Compliance Circle*, 18 COLUM. J. ENVTL. L. 31 (1993). As Fontaine points out, the creation of EPA by President Nixon in 1970 was expected to rectify fragmentation and create a needed integrated approach to environmental protection. *Id.* at n. 27.

[122] Fontaine, *supra*, note __, at 35-36. Both Fontaine and Lazarus, *supra* note __ at 169-70, note the limited success of these initiatives.

[123] R. Edward Grumbine, *What is Ecosystem Management?*, 8 CONSERV. BIOL. 27, 28-29 (Mar. 1994). Along with ecologically-defined boundaries and an approach that is multi-scalar or hierarchical, ecosystem management generally also encoded a goal of ecological integrity, broad cooperation among agencies, and monitoring of management outcomes. *Id.* at 29-31 and Table 1. Robert B. Keiter, *Beyond the Boundary Line: Constructing a Law of Ecosystem Management*, 65 U. COLO. L. REV. 293, 295 (1994). *See also*, Pamela Matson, *Environmental Challenges for the Twenty-First Century: Interacting Challenges and Integrative Solutions*, 27 ECOL. L.Q. 1179 (2001).

[124] A. Dan Tarlock, *The Nonequilibrium Paradigm in Ecology and the Partial Unraveling of Environmental Law*, 27 LOY. L.A. L. REV. 1121 (1994). Ecosystem management often became linked to the emerging trend toward adaptive management and to the notion of valuing non-resource values of ecosystems. Grumbine, *supra* note __, at 31, 34. It also advanced the notion that people must be considered as part of but not the defining feature of ecosystems. See Lee P. Breckenridge, *Reweaving the Landscape: The Institutional Challenges of Ecosystem Management for Lands*

scholars took up the idea and debated its implications and inevitability throughout the 1990s,[125] as land managers sought to implement it on the ground.[126]

These were early steps toward a less reductionist approach -- one that no longer looked at pollution of one medium in isolation from its effects on other media and that no longer broke natural systems into component parts. However, neither fully addressed the problems of the inherently reductionist approach. Multi-media enforcement strategies met with limited success and retained the fundamentally flawed vision of controlling pollution rather than considering human and environmental health comprehensively. And ecosystem management, while an advance, did little to address the growing recognition that natural systems also interacted with human systems and that they operated at multiple geographic and temporal scales.[127] Akin to doctors looking at the patient's body as a whole, the broader focus across media and on ecosystems were important steps, but they did not produce a fully effective approach to promoting human and ecosystem health. These advances can perhaps be likened to biomedical practitioners seeing the body as a whole, but they do not approach Integrative Medicine's ambitious broadening of the lens to include body, mind, and spirit.[128]

In the early 1990s, environmental law took another step that both addressed the reductionism characteristic of conventional environmental law and had the potential to furnish conventional environmental law with more ambitious and integrative goals. Following the Rio Earth Summit, sustainable development and sustainability emerged as new goals and quickly gained widespread acceptance.[129] Among the positive and integrative aspects of these new goals was the recognition that economics, environment, and society all interacted and that concern for the impacts of actions on all three of these was essential. This seems to reflect a move similar to the broadening of medicine's focus to encompass mind, body, and spirit, rather than body alone. One might say by analogy that incorporating sustainability meant incorporating mind (social and economic factors), body, (physical impacts to health and environment), and spirit (an inchoate ethic).[130] Despite its promise, as Michael Burger and his collaborators have noted, sustainability devolved into a utopian have-it-all goal that has been used to justify the status quo of our market and consumer driven socio-economic systems.[131] An analogy in the realm of medicine would be had medicine acknowledged that mind and spirit mattered to patient health but assumed their

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in Private Ownership, 19 VT. L. REV. 363, 375-77(1995); Oliver A. Houck, Are Humans Part of Ecosystems?, 28, Envtl. L. 1, 6, 11 (1998)(suggesting that "[w]e are part of ecosystems, but we are not their measure");.

[125] *See, e.g.*, Keiter, *supra* note __ (outlining the challenges and strategies for developing a law of ecosystem management); Bruce Pardy, *Changing Nature: The Myth of the Inevitability of Ecosystem Management*, 20 PACE ENVTL. L. REV. 675 (2003); J.B. Ruhl, *The Myth of What is Inevitable under Ecosystem Management: A Response to Pardy*, 21 PACE ENVTL. L. REV. 315 (2004).

[126] Keiter, *supra* note __, reviews many of these efforts.

[127] The introduction of adaptive management, discussed *infra* note 143 and acc. text, began to address some of these issues. BENSON AND CRAIG, *supra* note 1, at 56-63, discuss how resilience theory better addresses these attributes of natural systems.

[128] Part IVB1 explores what such an approach might look like in environmental law.

[129] Benson and Craig, *supra* note 1, at 33-34, track this history.

[130] Philosopher Bryan Norton has been a leader in exploring development of the ethical and social dimensions of such an ethic. BRYAN G. NORTON, SUSTAINABILITY: A PHILOSOPHY OF ADAPTIVE ECOSYSTEM MANAGEMENT (2005).

[131] Burger et al., *Rethinking Sustainability to Meet the Climate Change Challenge*, 43 ENVTL. L. REP. 10342, 10356 (2013)

condition was a given. In other words, although the lens of sustainability nominally included these other components, it failed to truly engage them.

Environmental Justice (EJ) emerged in the 1980s as a movement that sought to broaden the focus of environmental law by recognizing and reducing the disproportionate burden of pollution and lack of environmental amenities in many low-income and minority communities.[132] EJ challenged environmental law directly for its failure to consider race, socioeconomic status, and the role of community. As Purdy has noted, EJ highlighted that environmental law's blind spots included its narrow definition of what constituted an environmental problem and whose problems counted.[133] In addition to a critique regarding the distribution of environmental harms and amenities,[134] EJ included a critique of the environmental movement's culturally-bound conception of nature and "what kind of relation to it human beings should cultivate".[135] If successful, this critique would have dictated that environmental law integrate economic and social justice into its lens and therefore embrace broader and more ambitious goals than mere pollution reduction or sustainable management of natural resources.

However, EJ failed to achieve its goal of transforming mainstream environmental law.[136] Conventional environmentalists have embraced EJ issues at best episodically and generally only when it aligns with their other priorities. And the EJ movement never succeeded in triggering the enactment of new, strong statutory foundations; its legal foundations remained closely tied to Civil Rights Laws, judicial interpretations of which created serious hurdles to success. The effort to broaden the lens of environmental law to incorporate social justice is ongoing,[137] but the structure and conception of conventional environmental law makes this an uphill effort.

As is noted above, in the early 1990s, sustainable development and sustainability emerged as potential new goals for environmental law and policy and quickly gained widespread acceptance.[138] Yet just as it failed to rectify environmental law's reductionist approach, as a goal,

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[132] See Richard J. Lazarus, *Pursuing "Environmental Justice": The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787 (1993) (exploring the distributional side of environmental protection and how to incorporate environmental justice into present and future environmental law).

[133] Purdy, *supra* note __, (*Environmentalism for the Next Economy*) at 57. For example, workplace exposure to toxins and air quality in fenceline communities were not addressed by environmental laws initially. *See also* Lazarus, *supra* note __ (*Pursuing "Environmental Justice"*)); Sarah Krakoff, *Public Lands, Conservation, and the Possibility of Justice*, 53 HARV. C.R.-C.L. L. REV. 213, 215, 227-37 (2018) (discussing the historic exclusion of Native Tribes' interests and sacrifice of their interests to those of the dominant white population as the "dark side of our conservation history").

[134] *See* Lazarus, *supra* note __, (*Pursuing "Environmental Justice"*).

[135] Purdy, *supra* note __, (*Environmentalism for the Next Economy*) at 58; *see also id*. at 68; Lazarus, *supra* note __ (*Pursuing "Environmental Justice"*) at 788-89.

[136] *See generally* Alice Kaswan, *Environmental Justice and Environmental Law*, 24 FORDHAM ENVTL. L. 149 (2013); Government Accountability Office, ENVIRONMENTAL JUSTICE: FEDERAL EFFORTS NEED BETTER PLANNING, COORDINATION, AND METHODS TO ASSESS PROGRESS, GAO-19-543 (September 2019)

[137] Nina Lakhani, *'Racism dictates who gets dumped on': how environmental injustice divides the world*, The Guardian
(Oct. 21, 2019) (announcing launch of year-long series Our Unequal Earth focused on investigating environmental injustices).

[138] Benson and Craig, *supra* note 1, at 33-34, track this history. Sustainable development has been articulated to incorporate a wide array of social and human values and rights in the transnational context. For example, the United Nations pursued eight Millennium Development Goals which embodied its commitment to sustainable development

sustainability fell short as well.[139] The concept of sustainability acknowledged the relevance of economics and social values and their connection to environmental protection, but it accepted economic practices and social values uncritically as givens.[140] It therefore failed to address root causes of environmental degradation, and continued the pattern of treating merely the symptoms instead.

Further, the idea of sustainability seemed to confirm the false idea of what Craig and Benson call stationarity – the idea that although natural and human systems fluctuate, it is within some "unchanging envelope of variability."[141] A dominant characteristic of our era, – the lack of predictability and the reality of ongoing, unprecedented change – has proven incompatible with the goal of sustainability.[142] Benson and Craig note that sustainability also continues to reinforce the narrative that humans are separate from the environment, which ignores the reality of our era in which it is impossible to identify that which is "natural" and that humans are an inextricable and key element of the social-ecological systems that effect change in the world around us.[143]

In the same period, adaptive management emerged as a new technique in natural resources law, offering flexibility and the promise of the ability to respond to changing circumstances in the management of dynamic natural systems.[144] However, while a useful management tool, many promoted adaptive management as a paradigm or end in itself, a role it was unable to fill. Although a fundamental and important shift in approach, at base, it is a

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from 2000-2015. See United Nations, Millennium Development Goals and Beyond 2015, https://www.un.org/millenniumgoals/. These goals, derived from its Millennium Declaration, United Nations, G.A. Res. 55/2, U.N. DOC. A/RES/55/2 (Sept. 18, 2000), included environment alongside goals related to human health, education, eradicating poverty and hunger, gender equality, and economic development. However, the 2015 Report on these Goals seems to look at each in a silo and fails to address the deep connections among them. See United Nations, The Millennium Development Goals Report 2015. https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf. In 2015, the UN updated and broadened these to include 17 sustainable development goals. United Nations, https://www.un.org/sustainabledevelopment/sustainable-development-goals/. In addition to these global efforts, several regional human rights agreements adopt a more integrative approach. The 1981 African Charter on Human and Peoples' Rights, the 1988 Additional Protocol to the American Convention on Human Rights, and the 2004 Arab Charter on Human Rights all include the right to live in a healthy environment as part of their statement of recognized human rights. *See* U.N. Human Rights Council, Preliminary Report of the Independent Expert on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment, (John H. Knox) (December 24, 2012) UN Doc. A/HRC/22/43, ¶13.

[139] Purdy, *Our Place in the World*, *supra* note __; Burger et al., *supra* note __.

[140] BENSON AND CRAIG, *supra* note __, at 40 (noting that existing US narratives of the related concept of sustainable development don't acknowledge the possibility of limits to growth and development). This also reflects a continuation of the unproductive narratives of Manifest Destiny and human control over the environment. *Id.* at 29.

[141] BENSON AND CRAIG, *supra* note __, at 34.

[142] BENSON AND CRAIG, *supra* note __, at 2, 14, 45.

[143] BENSON AND CRAIG, *supra* note __, at 5.

[144] C.S. HOLLING ET AL., ADAPTIVE ENVIRONMENTAL ASSESSMENT AND MANAGEMENT (C.S. Holling ed. 1978); *see also* Mary Jane Angelo, *Stumbling Toward Success: A Story of Adaptive Law and Ecological Resilience*, 87 NEB. L. REV. 950 (2009); Holly Doremus, *Adaptive Management, the Endangered Species Act, and the Institutional Challenges of "New Age" Environmental Protection*, 41 WASHBURN L.J. 50, 52(2001)(discussing the promises and dangers of employing this inevitably poorly-defined term without institutional controls to ensure balance of administrative flexibility and public accountability); NORTON, ADAPTIVE ECOSYSTEM MANAGEMENT, *supra* note __; J.B. Ruhl, *Thinking of Environmental Law as a Complex Adaptive System: How to Clean Up the Environment by Making a Mess of Environmental Law*, 34 HOUS. L. REV. 933, 996 (1997).

method for learning and responding to change, and its limitations belied any promise as a goal or paradigm for environmental law.

More recently, resilience theory has been recognized as a useful way to understand dynamic systems and to conceptualize goals for managing them.[145] Resilience has been widely adopted more broadly as a value or criterion to guide adaptation planning.[146] Many have latched onto it more broadly in the ongoing quest to find a single easily articulable goal or ethic to replace sustainability. It has the virtue of acknowledging the inevitability of perturbations of our natural and social systems in an era of climate change. In the context of climate adaptation planning, resilience has come to incorporate not just physical capacity to recover from climate impacts, but also social capacity.[147] This, too, marks a move toward integration. Yet, like past goals of avoiding degradation, resilience is insufficiently ambitious. At its core, resilience focuses on ensuring only that communities can withstand a certain degree of climate-change-induced or other harm and loss. To draw on the analogy to medicine, resilience encourages us to focus on the ability to recover from disease and its symptoms and not on how to achieve a positive vision of health.[148] Thus, identifying a more ambitious, affirmative, truly integrative goal remains a challenge on the path toward an integrative approach.

2. Broadening the Tent: Efforts to Treat Causes Not Symptoms and Reduce Technology Dependence and Cost

The enactment of the major environmental laws of the 1970s provided a new and expanded toolbox that became the core of conventional environmental law. These laws were enacted in part in response to the limitations of common law as a tool to address environmental degradation. Advocacy for new legislation that focused on pollution proved a powerful force in a

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[145] *See, e.g.,* BENSON AND CRAIG, *supra* note __; Benson elsewhere emphasizes resilience not as a goal but a narrative and emphasizes the power of the stories we tell to define our experience. Melinda Harm Benson, *Reconceptualizing Environmental Challenges – Is Resilience the New Narrative?*, 21 J. ENVTL. & SUSTAINABILITY L. 99, at n.10 (2015).

[146] *See* Darryn McEvoy, Hartmut Funfgeld & Karyn Bosomworth, *Resilience and Climate Change Adaptation: The Importance of Framing*, 28 PLANNING PRACTICE AND RESEARCH 280 (2013) https://www.tandfonline.com/doi/abs/10.1080/02697459.2013.787710 (studying increasing framing of adaptation in terms of resilience in Australia). Numerous resources and websites link these two concepts. See, e.g., S. WICANDER ET AL., RESILIENCE AND ADAPTATION PLANNING FOR COMMUNITIES IN PROTECTED AREAS: A STEP-BY-STEP GUIDE (UNEP-WCMC 2016) https://www.unep-wcmc.org/system/comfy/cms/files/files/000/000/770/original/UNEP-WCMC_Manual_2016_en.pdf. Environmental and Energy Study Institute, *Resilience and Adaptation*, available at: https://www.eesi.org/topics/adaptation-resilience/description.

[147] Sid Shapiro, *An Ounce of Prevention, Preface* to BURKETT ET AL., FROM SURVIVING TO THRIVING: EQUITY IN DISASTER PLANNING AND RECOVERY at iii (Center for Progressive Reform 2018) http://www.progressivereform.org/survivingthriving_main.cfm. A recent study of three Florida communities documents the limited extent to which resilience planning adequately considers social resilience and the needs of vulnerable communities and populations in particular. Andrea Bonvecchio and Sekita Grant, *Coastal Justice: Climate Change and Social Resilience in Florida* (2019) https://www.law.ufl.edu/areas-of-study/experiential-learning/clinics/conservation-clinic/program-areas/coastal-development-ecosystem-change.

[148] Sarah Krakoff, *supra* note __, at 254-55, describes the creation of Bears Ears National Monument to illustrate a process that incorporated elements of recovering from loss and a positive affirmative vision of reclaiming Tribes' histories and protecting traditional practices, while creating an inter-tribal political movement, a more diverse and equitable environmental movement, and a vision of land management responsive to global environmental threats. This narrative offers a glimpse of something approaching an affirmative vision of cultural, social, and economic health.

receptive political climate. Civil litigation remained an important tool, but now took the form of citizen suits and cases to force agency action. In addition, the statutes opened up the administrative forum and associated judicial review opportunities. Enforcement, citizen suits, action-forcing litigation, and participation in agency rulemaking became prominent tools in environmental law practice and advocacy.

As legislative gridlock set in during the 1980's, environmental lawyers and advocates adopted many new tools and approaches to achieve environmental goals.[149] Land trusts that acquired and managed land to promote conservation became prominent features of the landscape. Environmental advocacy groups developed new niches and strategies like partnering with industry;[150] and tools from the ADR movement, like facilitation and stakeholder engagement, became more widely used.[151] As the connection between land use and environmental law became more apparent, groups formed to deploy land use planning as a tool to achieve both environmental goals and an improved quality of life for people and communities.[152] Environmental advocates began to consider strategies that drew on social psychology and consumer behavior as tools to achieve regulatory objectives.[153] Regulatory agencies experimented with tools like voluntary guidelines[154] and trading programs.[155] And approaches like ecosystem services valuation -- that sought to enable economics to more fully value the environment – developed and were incorporated in natural resource damage assessments and other contexts.[156] In other words, just as Integrative Medicine broadened the

[149] Aagaard, *supra* note 1, at 1268, 1283, notes that what he terms non-canonical embedded environmental laws – laws that exist outside traditional environmental law statutes and programs but which have an environmental dimension – can help to overcome political stalemate. These non-canonical provisions also tend to employ a broader range of regulatory mechanisms than do canonical environmental laws (like the Clean Air Act and Clean Water Act) and are better integrated with non-environmental law. *Id.* at 1268-69. Sarah E. Light emphasizes the role of corporate law in environmental law in *The Law of the Corporation as Environmental Law*, *supra* note __.

[150] The Environmental Defense Fund is a prominent example of a non-governmental organization that has pursued industry partnerships since its inception. See Environmental Defense Fund, *About Environmental Defense Fund* available at: https://www.edf.org/about.

[151] *See, e.g.*, Jody Freeman & Daniel A. Farber, *Modular Environmental Regulation*, 54 DUKE L.J. 795, 799 (2005) (identifying agreement-based decision making and broad stakeholder participation as two of six attributes of the modular approach they expound); Sheila Foster, *Environmental Justice in an Era of Devolved Collaboration*, 26 HARV. ENVTL. L. REV. 459 (2002) (examining intersection between movement toward participatory and collaborative decision-making and environmental justice movement).

[152] Some examples are the Urban Land Institute, https://uli.org/about/, and the many statewide groups inspired by and modeled after 1000 Friends of Oregon https://friends.org/about-us/our-story.

[153] Cass R. Sunstein, *Deciding by Default*, 162 U. PA. L. REV. 1 (2013); Douglas A. Kysar & Michael P. Vandenbergh, *Introduction: Climate Change and Consumption*, 38 ENVTL. L.REP. NEWS & ANALYSIS 10825 (2008).

[154] Rena I. Steinzor, *Reinventing Environmental Regulation: The Dangerous Journey from Command to Self-Control,* 22 Harv. Envtl. L. Rev. 103 (1998)(describing and critiquing voluntary programs); *see also* Eric W. Orts, *Reflexive Environmental Law*, 89 Nw. U. L. Rev. 1227 (1995) (proposing a reflexive approach modeled on voluntary efforts).

[155] *See* James Salzman & J.B. Ruhl, *Currencies and the Commodification of Environmental Law*, 53 Stan. L. Rev. 607, 609-610 (2000) (describing extensive literature on environmental trading markets); *see also* Jonathan Remy Nash & Richard L. Revesz, *Markets and Geography: Designing Marketable Permit Schemes to Control Local and Regional Pollutants*, 28 Ecology L.Q. 569 (2001).

[156] *See* J.B. Ruhl, *Valuing Nature's Services: The Future of Environmental Law?*, 13 NAT. RESOURCES & ENV'T, (Summer 1998) 359; Barton H. Thompson, Jr., *Ecosystem Services & Natural Capital: Reconceiving Environmental Management*, 17 N.Y.U. ENVTL. L.J. 460 (2008).

tent by bringing in practitioners from complementary and alternative medicine, some environmental advocates began to see the value of collaborating with practitioners from other fields and using tools not found in the limited toolbox of conventional environmental law. These efforts helped to counter the technology-dominated approach of conventional environmental law and the alienation and exclusion of the public from law and policy development, as well as responding to cost critiques.

Also, coalitions, like the Blue-Green Alliance[157] developed, crossing traditional advocacy boundaries. However, beyond a small number of new groups formed to pursue these cross-cutting alliances, efforts to broaden the missions of environmental advocacy organizations to incorporate other social issues were limited and often appeared to be superficial efforts to respond to funding trends or to take advantage of an opportunity to claim a broader mission without the need for a major shift in the organization's priorities.[158] When compared to the shift embraced in medicine, these new approaches in environmental law were not transformative. They did not challenge environmental law to embrace different ways of understanding the world. Environmental law and its practitioners generally remained within the dominant legal paradigm. Thus, the path so far while moving towards new techniques and approaches has failed to produce a transformative integration of other practices and expertise.[159]

Conventional environmental law has also taken only small, halting steps to reimagine the role of the practitioner. Although the client is in theory central under ethical rules, lawyers remain at the center of much environmental law practice today. Citizen suits and judicial review of agency action remain some of the most important fora where environmental law develops, and lawyers celebrate these outcomes as victories, much as doctors take success for a cure. In other words, the lawyer is more the gladiator who does battle and less an educator who seeks to empower the client.[160]

Some have proposed bold efforts to reinvent this role. An early example is provided by the practitioners in the EJ movement, who emphasized community empowerment as a key element of their practice.[161] And the influence of urban planners and landscape architects in land use-oriented work have helped environmental lawyers to shape processes like design charrettes and workshops that educated and engaged communities as they helped to resolve problems. As

[157] *See* www.bluegreenalliance.org

[158] Some traditional environmental groups like the Sierra Club have had longstanding programs dedicated to environmental justice. *Environmental Justice Policy,* https://www.sierraclub.org/environmental-justice/history-environmental-justice.

[159] By its nature, environmental law had always demanded that lawyers rely on experts from fields like science and engineering. Their expertise was always part of the field of environmental law and could be said to represent a degree of integration that inhered in even traditional environmental law. Part IVB2 explores what more transformative approaches to collaboration might entail.

[160] The very real distinctions between client and patient discussed *supra*, Part IIIA, become relevant here. To the extent that the real subject of legal action is a species, natural system, or geographic area that lacks agency, let alone the means to communicate its wishes, empowering the subject would be impossible.

[161] Cole, *Empowerment as the Key*, *supra* note __. Some initiatives grounded in traditional environmental statutes have supported community engagement and empowerment, including some public input processes and technical assistance grants made available under CERCLA and other statutes. *See supra* note __ [citing Freeman & Farber and Foster re stakeholder engagement].

adaptation planning has become an increasingly important context for addressing environmental issues, these tools have become even more widely used, especially by local governments.

B. The Path Forward: A Prescription for Integrative Environmental Law

Part IVA chronicled reform efforts to date that align with the path towards Integrative Environmental Law, albeit not as part of any coherent or systematic effort or design to pursue this path. This Part identifies key additional steps that would be essential to move us truly along a path toward integrative environmental law. The goal is to highlight those aspects of conventional environmental law that are most in need of an integrative adjustment. It identifies the three most important unaddressed challenges as: (1) reductionism (2) an insufficiently ambitious and integrative goal; and (3) the need to transform environmental law into a tool to educate and empower. It also illustrates how a focus on these three components incidentally addresses the other limitations that conventional environmental law shares with conventional biomedicine – that it is reactive, treats symptoms rather than causes, and encourages the perception of environmental law as too costly. Drawing on the analogy to Integrative Medicine, this part describes what progress on each of these fronts might look like.

1. A Further Response to Reductionism: Toward a Focus on Mind, Body, and Spirit

A key step in the path leading to Integrative Medicine was the recognition that the patient was not merely a series of body parts and systems but a whole person, comprised of mind, body, and spirit, and that all these dimensions affected the well-being of that person.[162] Thus, IM embraces a focus on all these elements of the patient's existence. Even though conventional medicine cannot address all the problems that can weigh on mind and spirit, nor all the problems that emerge from relationships and community, IM recognizes that without *considering* these dimensions, it is impossible to identify the causes of ill health and to enlist others with relevant expertise who might help empower the patient to address these.

Although the analogy is not a perfect one, I suggest that environmental law, like conventional medicine, has focused primarily on the "body" – that is, on physical manifestations of environmental degradation and associated human health impacts.[163] Our laws tend to look at degradation and its physical consequences, but to ignore anything outside that lens.[164] Although environmental law has sought to integrate an ecological perspective, which rectifies a certain type of reductionism, the continued focus on physical impacts and their proximate causes is a

[162] In addition, IM incorporates the recognition that the individual doesn't live in isolation, and that the patient's relationships with their community also are a significant determinant of the health of the individual. Rakel and Weil, *supra* note __, at 6, 7.

[163] Pope Francis's encyclical emphasizes the mistaken focus on technological solutions which causes us to overlook the social, cultural, and spiritual implications of environmental degradation. See *supra* note __, at ¶¶ 8-9, 11, 109, 139, 141.

[164] This is related to Aagaard's observation that the canonical environmental law model – adoption of major statutes with a dominant focus on environmental concerns and implemented by environmental agencies – creates obstacles to integrating environmental concerns into the broader law. Aagaard, *supra* note 1, at 1288. See also Light, *supra* note __.

fundamental limitation of environmental law.[165] As is noted above, sustainability seemed to offer the potential to broaden the lens of environmental law to include the economy and a wide array of social values. However, progress in truly integrating sustainability's three pillars has been limited, leaving environmentalists focused largely on environmental impacts, while corporate actors and activists focus on economy, and other civil society groups focus on other social values.[166]

Thus, if we draw on the analogy to IM, avoiding reductionism would mean truly broadening the focus of environmental law from body alone to body, mind, and spirit. At the risk of straining the analogy, I offer one way to translate these concepts of mind and spirit in the context of environmental law.[167] Given the general acceptance of the idea that we cannot consider humanity as wholly apart from nature, I propose that "mind" in the context of environmental law might be translated to mean human culture, including socio-economic, political, and cultural systems and institutions, as well as the arts and the narratives they generate.[168] Even if not a goal that is perfectly attainable, keeping human economics, culture, and the pattern of human-environmental interactions all within our focus at all times may lead to a more efficient and effective use of our limited resources and help us to identify and therefore address the roots of problems, not just the symptomatic environmental degradation and health effects.[169] By analogy, the broadened lens on health that included patients' mental state and well-being enabled IM practitioners to recognize the roots of some health problems and to be able to treat them with more effective tools.[170]

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[165] An integrative approach to environmental law would address this in part by adopting a broader problem definition, thus broadening the range of possible solutions. However, I do not mean to suggest that a broader lens will eliminate the very real challenges that environmental protection poses because of what many describe as its scalar and temporal challenges. See e.g. LAZARUS, supra note 1, at 54-62, 221-223; BENSON AND CRAIG, supra note 1 at __; Purdy, *Limits of the Possible*, *supra* note __, at 291-95.

[166] BENSON AND CRAIG, *supra* note 1, at 34, note that despite its promise of integration of these various factors, sustainability never actually propelled consideration of the interaction among the three so-called pillars of sustainability and the difficult trade-offs inherent in this reality.

[167] Some indigenous traditions focus on the mind or spirit of the environment. Because the dominant American culture does not generally recognize these dimensions in the non-human environment, I don't focus on how environmental law could consider the mind and spirit of the natural world, but an integrative approach could also incorporate such an effort.

[168] Richard Lazarus notes the fundamental need to consider social problems and cultural norms in fashioning environmental laws. LAZARUS, *supra* note 1, at xv. He points out that the long-term success of some environmental laws reflects their political success as much as their technical strength as a response to the relevant problem. Id. at 170-71. Pope Francis emphasizes this throughout his encyclical. POPE FRANCIS, *supra* note __, at ¶¶ 6, 9, 16, 48, 112, 137, 139, 162. He also stresses the importance of the health of a society's institutions and preservation of culture. *Id.* at ¶¶ 142-145. Purdy's description of the challenging political psychology of climate change highlights the limitations of socioeconomic analysis and the often-overlooked the importance of cultural narratives and education in shaping behavior. Purdy, *Limits of the Possible*, *supra* note __, at 295-98.

[169] International human rights law has taken a more holistic approach to securing human rights by recognizing that the full enjoyment of life, liberty, and dignity depend on a healthy environment, and effective environmental protection depends on the exercise of human rights. Human Rights Council, Preliminary Report of the Independent Expert on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment (John H. Knox)(December 24, 2012) UN Doc. A/HRC/22/43, ¶¶ 7-11, 18-25.

[170] *See supra* Part II. This does not mean that identifying the proper steps to address climate change and other environmental problems would be easy. LAZARUS, *supra* note 1, notes the challenging reality of the increasing distance between cause and effect in a global economy, and how this leads to consumer (and arguably voter)

Incorporating a concern for "spirit" into the context of environmental law might translate to a clearer focus on the values or ethics humans bring to their concern for the environment.[171] An integrative approach to environmental law would surface the values at play in its application, educating and empowering the actors involved to examine their ethics and values. This responds to some of the challenges others have noted, such as Americans' growing distance from the natural world, and the reduced sense of attachment to place occasioned by our frequent moves.[172] And it might lead advocates to meet people where they are in terms of the values that motivate them to protect health and environment, instead of continuing to push preservation values that may no longer reflect social values.[173] Incorporation of spirit into environmental law practice would demand a humility on the part of advocates in the face of social change and a willingness to cede exclusive control of the agenda. This would require a radical shift by environmental law practitioners to abandon privilege or priority for environmental law. It would also demand processes for and affirmative efforts to incorporate the values and perspectives of those who have been excluded from the focus of conventional environmentalism.[174]

An approach to environmental law that incorporated mind, body, and spirit so defined, would be premised on the recognition, as in Integrative Medicine, that the problems to be addressed -- environmental degradation and environmental health impacts – are often a product of mind (socio-economic, political, and cultural forces) and spirit (values), as well as body (physical activities and their impact on humans and the environment). Thus, any meaningful solutions must consider ways to address all these dimensions.[175]

One criticism of this broadened approach would be that it expands environmental law to the breaking point, by including everything in human society as well as the environment.[176] I offer two preliminary responses to this criticism. First, as with IM, the goal of integrative environmental law is not to "fix" all the problems identified, as is the stated goal with narrowly defined environmental law. Rather, the integrative environmental practitioner works with others

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disempowerment and weakening accountability. *Id.* at 220. As I argue later, this reinforces the need for systematic and focused attention on empowering people.

[171] In addition to laying out the spiritual dimension of concern for the environment grounded in the Roman Catholic religious tradition, POPE FRANCIS, *supra* note __, at ¶¶65-100, Pope Francis states the imperative for a clearer focus on the ethical dimensions of environmental degradation and its root causes, *id.* at ¶¶ 9,15, 160, 162 and argues the need for "forthright and honest debate." *Id*. at 16.

[172] *See, e.g.* LAZARUS, *supra* note __, at 222-223.

[173] Wood, *supra* note __, at 113, writes of the benefits of meeting people where they are in discussing the implications of the Nature's Trust approach. Purdy's insistence on the need to develop a more robust and democratic grounding for environmentalism is premised on better reflecting the values of a broader population. *See also* Purdy, *supra* note , (*Environmentalism for the Next Economy*) at 51; Speth, *supra* note __, at 40-44.

[174] *See* Krakoff, *supra* note __, at 218, highlighting how the broadening of environmentalism to incorporate environmental justice in the context of the creation of Bears Ears National Monument presented a possibility for a different relationship with the planet and its creatures.

[175] Pope Francis advocates such an approach and employs the term "Integral Ecology" to describe it. POPE FRANCIS, *supra* note __, at ¶¶112, 137, 139, 141-142.

[176] Purdy, *supra* note _, (*Environmentalism for the Next Economy*) at 65-66, discusses this challenge.

in collaboration, enlisting complementary techniques and approaches that help to address the root causes of environmental and health impacts.[177] This is a long game, not a quick or easy fix.

Thus, broadening the lens to seek comprehensive well-being for people and the planet with a focus on mind, body, and spirit, would of necessity demand that environmental law practitioners *broaden the tent*. An integrative environmental law practitioner confronting a particular instance of environmental degradation might collaborate with others to determine whether economic forces, consumption patterns, a dysfunctional popular narrative, the financial regulation of business entities, or some combination of these, was driving the actions with adverse environmental consequences.[178] Working with advocates with expertise in consumer advocacy and education, social psychology and communications, financial regulation or other relevant fields, as well as community leaders, the integrative environmental law practitioner would participate in developing a solution to the root cause of the physical environmental impacts of concern. This would not obviate more targeted legal action to alleviate the direct impacts using tools from the conventional environmental law toolbox, but the legal action would be taken in the context of a broader, coherent, and systematic effort to address the root causes of the problems. So for example, with the problem of carbon emissions, recognizing the economic roots of our fossil fuel dependence and the impacts of a clean energy transition would ensure that solutions would be designed to address not just environmental but also economic and social dimensions of the problems – for example providing economic transition assistance and perhaps training in renewable energy for workers affected by regulatory or other policy moves designed to speed the transition to renewables.[179] Geographical areas or vulnerable communities that would be hardest hit by the transition would be focuses for attention and support. A broadened view of relevant values that included fairness alongside environmental values might lead to a decision that unsustainable and counter-indicated subsidies for fossil fuel development could be shifted to programs that benefit these communities.

A further response to the critique that incorporating consideration of culture, economics, ethics, and the human interrelationship with the environment is asking too much is this: it may be a herculean task, but reality demands it. Culture, ethics, economics, and the complexities of the ongoing human relationship to the environment all lie at the root of most environmental conflict. Ignoring them may simplify the problem, but as with biomedicine, it may lead to less effective and more costly treatments. The reality of the Anthropocene is that there is no clear boundary to environmental problems.[180] The result of awakening to this may be a less clear definition of environmentalism and environmental law. But this integrative version of environmental law can still be distinguished from many branches of law by its core connection to health and environment. Thus, much of criminal law, for example, might have such a slight connection to

[177] Pope Francis describes his encyclical as an attempt to "get to the roots of the present situation, so as to consider not only its symptoms but also its deepest causes.," POPE FRANCIS, *supra* note __, at ¶15, and argues for the need of a politics and political processes capable of a new integral and interdisciplinary approach." *Id*. at ¶197.
[178] *See* Aagard, *supra* note 1, at 1297 (noting that recognizing the blurry boundaries of environmental law broadens the array of potential regulatory responses).
[179] Part VB2 offers ongoing advocacy for a just energy transition as a promising case study in an integrative approach.
[180] See Aagard, *supra* note 1, at 1293-94; Purdy, *supra* note __, (*Environmentalism for the Next Economy*) at 55-56.

this field that it is rarely implicated.[181] Contract law may not be generally implicated, but certain issues related to crop contracts or contracts related to energy generation, transmission, or distribution might prove relevant. The general touchstone for what is an environmental problem would remain: a significant connection to use of natural resources or human activities that impact human health or the environment.[182] But the overlap with a wide range of other fields of legal practice would become more widely recognized.[183] And a deeper embrace of an integrative approach might dictate the design and adoption of a new generation of statutes grounded in this trans-disciplinary perspective.

This is not to dismiss or diminish the challenges that accompany an effort to move to an integrative approach to environmental law. Broadening the focus of practitioners and laws concerned with environmental degradation and its impacts to incorporate consideration of other values associated with the root causes of that degradation presents huge practical obstacles. First, simply setting boundaries of what problems should be considered "environmental" under an integrative approach is a considerable challenge.[184] The challenge of choosing the proper scale at which to address these problems is also amplified by an integrated approach.[185] And conflicts among the newly broadened set of values and concerns would abound: how should advocates or officials resolve a conflict between concern for protection of a species or ecosystem and the immediate economic impact on a low income community? Should limited resources be directed to efforts to reduce pollution from a manufacturing facility with emissions that disproportionately affects a fence-line community or to a facility in the same community with a broader overall impact on air quality? And what of the likely impact of these efforts on

[181] Of course certain aspects of criminal law such as white collar crime or criminal enforcement would continue to be implicated in efforts to attack root causes of environmental conditions. See Richard J. Lazarus, *Meeting the Demands of Integration in the Evolution of Environmental Law*, 83 GEO. L. J. 2407 (1995) (on the overlap and need for better integration of criminal and environmental law).

[182] The Inter-American Court of Human Rights demonstrated a broadening of the human rights lens by reaffirming the right to a healthy environment as an integral component for the realization of all human rights, particularly vulnerable population, and by creating a positive duty for states to prevent environmental harms within and beyond their physical boarders. The Environment and Human Rights (Arts. 4(1) and 5(1) American Convention on Human Rights), Advisory Opinion OC-23/17, Inter-Am. Ct. H.R. (ser. A) No. 23, ¶¶ 67, 244 (5)-(8), (Nov. 15, 2017). The Court discussed the interdependency of human rights and environmental protections beyond the right to a healthy environment in that "numerous other human rights are vulnerable to environmental degradation, all of which results in a series of environmental obligations for States to comply with their duty to respect and to ensure those rights" in which the Court relied on international environmental law as a means to interpret the scope of state duty. *Id* at ¶ 55.

[183] Lazarus, *supra* note __, (*Meeting the Demands of Integration*). Sarah Light's recent article spells out how corporate law already has broad implications for environmental law practice and argues persuasively the implications for legal education. *See* Light, *supra* note __. If the diagnosis of Gus Speth and other proponents of the New Economy movement is correct, a dramatic reshaping of our markets, economy and the many associated facets of law governing these, including environmental law, is needed. Speth, *supra* note __, at 38. Pope Francis has explicitly linked corporate responsibility and corporate criminal law as necessary tools to address crimes against the environment. John Queally, *While Warning of Nazi-Like Fascism and Corporate Crimes, Pope Francis Proposes Adding 'Ecological Sin' to Church Teachings*, https://www.commondreams.org/news/2019/11/16/while-warning-nazi-fascism-and-corporate-crimes-pope-francis-proposes-adding (Nov. 16, 2019).

[184] *See* Purdy, *supra* note __, (*Environmentalism for the Next Economy*) at 65-66. Speth proposes the idea that an environmental issue is anything that determines environmental outcomes, including the ascendancy of corporate power, commercialism, and wealth inequality. Speth, *supra* note __ at 36.

[185] *See* Lazarus, *supra*, note 1, at __, for a useful discussion of the problem of scale. Scanlan, Speth, and others associated with the New Economy movement posit the need for wholesale systems change at the level of political economy. See Scanlan, *supra* note 1, at 12-25; Speth, *supra* note __ at 37-39.

employment opportunities in the region? These challenges are real and exist today, but too often they surface only after environmental advocates have defined the problem and solution and have developed a primary strategy. These countervailing values and concerns often underlie or fuel opposition that may subvert the "environmental" strategy.

An integrative approach demands that a broader lens be used at the stage of problem identification. Adverse impacts on health and environment, and distributive injustice are not problems competing for attention, rather they are symptoms to consider. Conscious selection of the scale at which the problem is addressed -- such as at the community, state, or federal level -- demands an awareness of alternative scales and coordination to ensure efforts are as effective as possible. Attacking the emissions from a single source may be a worthy effort at the community level, particularly if concerns of social equity are implicated, but only if this is a small part of a thoughtfully-developed, broader, coordinated strategy. This will demand new approaches, a broader tent with collaborators from many disciplines, and an array of tools and techniques. But we can begin to meet this challenge by applying a broader lens each time a new law is drafted or implemented, each time a decision is made by an agency, advocacy group, or funder on priorities and initiatives to launch.

2. Embracing a Broader Integrative Goal

If environmental law adopts a focus on mind, body, and spirit, as is outlined above, then, as with IM, the goals of environmental law would also necessarily broaden. Rather than seeking simply to prevent environmental degradation or adverse human health impacts, the goal would be to work toward a more broadly framed affirmative goal such as achieving a state of human and environmental well-being.[186] As with IM's broadly defined goal of health – a state of physical, mental, and social well-being – this new goal is a tall order.[187] Such a goal would demand that environmental law drafters and practitioners consider the role of the socio-economic and cultural context in which activities occur.[188] As with IM practitioners, environmental law practitioners would need to approach the goals with humility and a recognition of their limitations, mindful that they cannot accomplish these broad goals alone.

A broader more integrative goal such as human and environmental well-being may obviate the ongoing search for a narrower "environmental" goal that has produced a series of concepts and theories like ecosystem health, sustainability, and resilience. While all of these are useful concepts or narratives that can play useful roles as guiding principles or goals in limited contexts, when they are asked to serve as overarching goals, they collapse under the weight

[186] Pope Francis's description of the earth as "our common home" throughout his encyclical and in its subtitle "On Care for Our Common Home," might be incorporated into a new integrative goal to emphasize the underlying value of our common humanity and our connection to the environment. This idea is echoed in Purdy's embrace of the idea that the world belongs to everyone and is a common heritage and gift. Purdy, *Environmentalism for the New Economy*, *supra* note __, at 52.

[187] In some ways, this broader goal might be said to hark back to the reconceptualization of the Leopold land ethic that Jedediah Purdy eloquently argues for. Purdy, *Our Place in the World, supra* note __, at 922-927. Scanlan, *supra* note 1, at 22-23, 24-25, writes of the power of changing and need to change the goals of our socio-economic system as well as the paradigm out of which our mindset and goals arise.

[188] Speth, *supra* note __, at 35-36, and Pope Francis, described in Queally, *supra* note __, suggest that this leads to a broader challenge to the pursuit of self-interest and economic growth that leads to concentrations of wealth and externalization of the costs of affluence.

assigned them. Their technical content seems to implicitly promise to resolve difficult trade-offs and value questions which they cannot. The ambitious and overarching goal I propose is explicitly a question mark, not a period. It doesn't resolve the challenge of identifying what values and priorities will help us define what constitutes well-being of people and the planet, but perhaps to make true progress we need to confront a challenge this basic. It demands that we ask these questions and make our values explicit before we define problems and set priorities.

As with broadening the lens to include mind, body, and spirit, embracing this broader integrative goal similarly necessitates that environmental practitioners broaden the tent. The goal of promoting human and environmental well-being demands that the environmental law practitioner identify obstacles to human and environmental thriving and work in collaboration with others to address them. Coalitions addressing issues like inequality and democratic reform need to be woven into the fabric of environmentalism, not merely convenient, transactional alliances.[189] This also produces the type of collaboration characteristic of IM. Environmental lawyers would need to work directly with lawyers and non-lawyers from a wide variety of fields, not just on an occasional, ad hoc basis, but as a fundamental part of their practice.[190] Experts from other fields of social justice advocacy would play a role not just in helping to care for the environment but to identify the causes of the problems that brought the environmental lawyer to the table. The power of engaging and embracing faith communities as partners is illustrated by the eloquent and comprehensive endorsement of an integrative approach by Pope Francis in his Encyclical on Climate Change.[191]

One consequence of a commitment to collaboration with a broad array of experts would be to expand the toolbox beyond conventional environmental law techniques and approaches to routinely include tools like securities litigation, consumer boycotts, and cross-cutting public education campaigns that integrate concerns like racial and economic justice. Some have

[189] *See* Speth *supra* note __, at 36-37. Movements towards integrating climate justice into other social movements can be found in the adoption by some unions of an approach known as Bargaining for the Common Good. Todd E. Vachon et al., *How Workers Can Demand Climate Justice*, THE AMERICAN PROSPECT (September 2, 2019) https://prospect.org/labor/workers-can-demand-climate-justice/. This approach demands that workers consider community needs and advocate for a broader array of benefits for the community including environmental justice and rectifying structural inequities. It also involves incorporating these partners and values at the start of developing a strategy. *Id.* Another example can be found in the coalition of public and private medical and healthcare organizations which have taken a more integrative approach to advocacy, identifying the climate crisis as the greatest public health challenge of the 21st Century. Climate Health Action, *U.S. Call to Action On Climate, Health, and Equity: A Policy Action Agenda* (2019) https://climatehealthaction.org/cta/climate-health-equity-policy/. Similarly, a resolution adopted by forty-three of the world's largest organizations of psychologists indicates a commitment to work in an interdisciplinary fashion with other advocates to address the psychological obstacles to communicating and adopting policy related to climate change. *See* Maya Earls, *Psychologists to Help People with Warming, but not Trump*, E&E News (Nov. 18, 2019); American Psychological Association, Resolution on Affirming Psychologists' Role in Addressing Global Climate Change. https://www.apa.org/about/policy/climate-change.

[190] Experience in the medical field suggests that effective collaboration itself may require new skills and training. Willison, *supra* note __ at 346-48. A 2008 literature review suggested that interprofessional education helped promote teamwork and produced improved patient outcomes. *Id.* at 342-344.

[191] See Pope Francis, *supra* note __, at ¶¶ 111-112. The encyclical uses the term "Integral Ecology" to describe its approach. See also John D. Dunne, et al. ECOLOGY, ETHICS, AND INTERDEPENDENCE: THE DALAI LAMA IN CONVERSATION WITH LEADING THINKERS ON CLIMATE CHANGE (2019).

suggested that recognizing the power of tools like private environmental governance,[192] autonomous monitoring and correction systems, and big data-based community platforms offers advocates and those shaping policy important new opportunities.[193] As is noted above, various environmental law coalitions and organizations already specialize in or incorporate these types of approaches. A broader adoption of an integrative approach to environmental law would make this not a boutique option, but central to environmental law design and practice. And by its nature, this broader perspective would help to alleviate the technocratic limitations of conventional environmental law.

However, such a shift would create the same types of challenges that IM has encountered in medicine. The structure of conventional medical practices works against collaborative and integrative practice. And the financial reimbursement structure that rewards procedures rather than ongoing patient care has proved a similar obstacle. In environmental law, some of the most prominent and important advocacy comes from environmental NGOs that are organized to focus narrowly on environmental issues. With some exceptions,[194] the advocacy of these organizations is structured to offer conventional environmental law solutions – generally fines, damages, injunctions against damaging conduct by private actors, or invalidation of or a mandate for regulatory action. To achieve the benefits that IM has achieved in efficacy and efficiency requires that advocates be prepared to forgo their conventional tool of choice when an alternative approach is likely to be more effective and efficient way to address root causes of identified problems or to achieve a more broadly defined goal.

Transformative thinking and embrace of the integrative approach by funders and others within the environmental movement would be essential to enable NGOs to cede this priority-setting control and instead collaborate with other practitioners. Moreover, as in medicine, the financing structure would pose challenges and require reform. Many environmental advocacy groups with a legal mission rely on fee-shifting provisions to cover the costs of their work. As with IM, much work would need to be done to develop a solution to this mismatch of incentives.

3. Transforming Environmental Law to a Tool that Empowers and Educates

A key final component of an integrative approach is rethinking the role of environmental law and lawyers. As noted above, if environmental law practitioners are to broaden their goals to encompass more than legal victories that address the symptoms of health and environmental degradation, lawyers must of necessity collaborate with social justice advocates and experts in other fields. Consideration of non-legal tools and approaches would be part of every strategy decision, not an add-on to a pre-conceived legal strategy.[195] This necessarily moves the lawyer into a new role as collaborator rather than principle.

[192] *See* Light, *supra* note __; Scott Fulton & David Rejeski, *A New Environmentalism: The Need for a Total Strategy for Environmental Protection,* 48 ENVTL. L. REP. NEWS & ANALYSIS 10780, 10783 (2018)
[193] *See* Fulton & Rejeski, *supra* note __.
[194] *See infra* Part VB. (describing examples of groups embracing more integrative approaches).
[195] *See* Laurie Ristino, *Legal Democracy: Using Legal Design, Technology and Communications to Reform Food and Agriculture Systems,* in SCANLAN ET AL., *supra* note 1, at 271 (describing how the use of design thinking in legal problem-solving leads to seeing law as "part of the fabric of solutions – not as the solution itself")..

Even this challenging shift to a collaborative role, however, is not all that is required to parallel medicine's goal for the IM practitioner. A new humility about the capacity of law and lawyers, and a more collaborative approach with clients and the communities affected by environmental degradation would be central to a truly integrative approach.[196] This is something that EJ lawyers like pioneer Luke Cole advocated from the beginnings of the EJ movement.[197] Litigation was only one tool to which EJ lawyers looked, and in many ways, it was a very limited one for addressing EJ issues. Educating, empowering, and assisting communities to organize has always been a critical part of EJ lawyers' role.[198] This is exactly the type of shift demanded by an integrative approach. Successes cannot be measured in litigation victories alone, but only in enduring progress toward a healthy culture, environment, ethic, economy, and pattern of human-environmental interactions.

This also suggests the need for law and lawyers to embrace new tools that empower and educate as central to their goals.[199] This aligns with a growing trend to use information as a driver of sound decisions by both consumers and industry, building on the growing sense of consumer support for options that promote environmental and public health.[200] Empowering communities and businesses, and taking a multi-disciplinary approach also offers the best chance of developing coherent strategies before harm occurs, rather than merely reacting to the latest environmental insult. Designing tools that make environmental law more usable by the public, and communicating in ways that the public can understand will be essential to this effort.[201] As Laurie Ristino notes, "we under-utilize the law's power to scale change by failing to empower others and ourselves."[202]

V. CAN AN INTEGRATIVE APPROACH BETTER ADDRESS THE UNIQUE CHALLENGES OF CLIMATE CHANGE?

One of the biggest measures of success for Integrative Medicine was its ability to reduce the incidence of chronic, lifestyle illnesses for which biomedicine could only manage symptoms. The combination of a focus on mind, body, and spirit, incorporation of unconventional

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[196] See Purdy, *supra* note __, (*Environmentalism for the Next Economy*) at 60 (describing shift in mainstream groups in response to EJ movement from "swooping down with an agenda" to a more responsive relationship with local communities, but noting that it is unclear how far-reaching the impact of this has been); Ristino, *supra* note __, at 271.

[197] Luke Cole, *Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law*, 19 ECOL. L.Q. 619 (1992).

[198] *Id*.; LUKE W. COLE AND SHEILA R. FOSTER, ENVIRONMENTAL RACISM AND THE RISE OF THE ENVIRONMENTAL JUSTICE MOVEMENT (2000),

[199] Ristino, *supra* note __, at 265-73, provides a case study of this approach at the Center for Agriculture and Food Systems at Vermont Law School. Pope Francis also emphasizes the role of education as a key tool in addresing the complex causes of environmental degradation and climate change. POPE FRANCIS, *supra* note __, at ¶¶15, 202, 209-215.

[200] *See* LAZARUS, *supra* note __ at 228-29, 230. Lazarus also mentions tools like national indicators that support this strategy of education and empowerment. *Id*. at 231.

[201] *See* Ristino, *supra* note __, at 265-66. Ristino describes creation of legal resources that lower the cost of access and are relevant and responsive to end users' needs. Pope Francis describes the importance of including communities in the shaping of new processes in order to respect the rights of people and their cultures. POPE FRANCIS, *supra* note __, at ¶144.

[202] Ristino, *supra* note __, at 265.

techniques and approaches, and a recognition of the importance of educating, engaging, and empowering patients produced this breakthrough. The question this raises is whether the integrative approach to environmental law described above could achieve similar successes in addressing our pervasive, severe, and chronic, lifestyle environmental problem: climate change,

It is impossible to know whether integrative environmental law would achieve greater success than conventional law has achieved to date in seeking to address climate change, but several features of an integrative approach provide reason to predict that it can. Part VA describes the cause for optimism that it could improve our ability to address climate change, while also noting some obstacles. Part VB then briefly describes three case studies of progress in addressing environmental problems employing what could be called an integrative approach and how they hold promise for addressing climate change by broadening both the lens and the tent.

A. Cause for Hope: How an Integrative Approach Would Better Address Climate Change

Some of the features that make climate change a "wicked" problem[203] also suggest that we may have greater success in addressing its challenges through an integrative approach. By broadening the focus of environmental law to recognize the contributions to climate change from the interconnected systems of electricity generation, transportation, industrial activity, and consumer choices, the full array of options for addressing climate change can be evaluated in concert to identify the opportunities for the greatest gain. Early approaches to control greenhouse gas emissions in the U.S. have relied on conventional legal tools – environmental legislation and regulation – and heavily technology-dependent and technocratic solutions.[204] They focused narrowly on achieving emission reductions through traditional regulation and markets. While these were worthy approaches with much to recommend them, legislative efforts failed to secure sufficient legislative and public support and were frequently attacked using the technocratic tools of cost-benefit analysis and an emphasis on their cost. The Obama Administration successfully adopted a regulatory response in the form of the Clean Power Plan, but this was never implemented and has now been abandoned by the Trump Administration. The technology and cost of the plan dominated the debate about its merits, leaving little room for full discussion of the other human values at stake. Media coverage of climate deniers' claims has allowed the uncertainty inherent in the science to take center stage, distracting attention and providing cover for those who have benefited from our continuing reliance on fossil fuels -- the root cause of climate change.

Another shortcoming frequently identified in early legislative and regulatory efforts to address climate change at the national level was the failure to consider the psychological, social, and cultural dimensions of the problem when framing the messages surrounding proposed solutions. An integrative approach would have dictated earlier incorporation of the lessons from

[203] See, e.g., Benson, *supra* note __, at 101; Lazarus, *Super Wicked Problems*, supra note 1; see also Blake Hudson, *Land Development: A Super-Wicked Environmental Problem*, 51 ARIZ. ST. L. J. 1123, 1124-25 (forthcoming 2019) available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3335571.

[204] These included failed efforts to adopt legislation incorporating a cap and trade model and the eventual adoption of the Clean Power Plan by the EPA under the existing authority of the Clean Air Act which was stayed before implementation and which the Trump administration has repudiated and seeks to replace.

other disciplines such as social psychology and communications and a stronger emphasis on education, which might have created a smoother path for garnering solid public support, and perhaps would have led to strategies and messaging that were less technology-focused dependent, fear-based, and negative.[205]

The challenging spatial and temporal scale of climate change,[206] as well as the multiple contributing causes and scientific complexity of the problem and the very real costs associated with addressing it remain profoundly challenging, even for an integrative approach. However, an integrative approach might address these challenges by engaging communities and their experiences and values directly. Successes occurring now at the local level, where states and cities are embracing limits on carbon emissions notwithstanding the Trump administration's retreat from the Paris Accord, suggest the value of this approach, rather than relying exclusively on one national legislative or regulatory approach.[207] Indeed these local efforts in cities and states may lay a stronger grounding for future legislative and regulatory approaches.

All of these limitations of early efforts are matched by the potential benefits that an integrative approach offers. An integrative approach would draw on trans-disciplinary solutions rather than legal tools in isolation, focus on the socio-economic and cultural context in identifying both problems and solutions,[208] and explicitly address social justice and other relevant human values along with environmental concerns. The three brief case studies discussed in Part VB are promising initiatives that have these hallmarks of an integrative approach. They are all works in progress and none are or likely will ever be unequivocal successes. But they offer examples of how an integrative approach may help to overcome the limitations that constrain conventional environmental law and in particular may help to address our chronic challenge: climate change.

B. Three Case Studies of Promising Integrative Approaches

1. The Atmospheric Trust Theory and Our Children's Trust

One promising initiative that incorporates qualities of an integrative approach is the Atmospheric Trust advocacy undertaken by the group Our Children's Trust (OCT).[209] This advocacy breaks with earlier conventional environmental law approaches to climate change in several ways. First, the organization undertaking the advocacy, OCT, is explicitly conceived as a human rights organization, not an environmental NGO.[210] Second, it draws on novel legal

[205] See Thomas Frank, Scientists' Climate Warnings are Believed—Then Ignored, E&E ClimateWire (Oct. 15, 2019) https://www.eenews.net/climatewire/2019/10/15/stories/1061280109; *see also* Earls, *supra* note __. (discussing declaration of forty-three of world's leading psychological associations pledging to use their expertise to help address psychological dimensions of climate change impacts and policy design).

[206] Purdy, *Limits of the Possible*, *supra*, note 1, at 291; Biber, *supra* note __, (Climate Change and Backlash) at (discussing climate change as a delayed harm problem).

[207] This recent "We're Still In" phenomenon builds on earlier state and local efforts to address climate change, see Kirsten Engel and Barak Y. Orbach, *Micro-Motives for State and Local Climate Change Initiatives*, 2 HARV. L. & POL'Y REV. 119, 122-27 (2008).

[208] *See generally* Scanlan, *supra* note __.

[209] See Michael C. Blumm and Mary Christina Wood, *No Ordinary Lawsuit: Climate Change, Due Process and the Public Trust Doctrine*, 67 AM. U. L. REV. 1 (2017); see also www.ourchildrenstrust.org.

[210] Andrea Rodgers, Senior Staff Attorney OCT, Remarks at University of Florida Imagining Climate Change Panel (Feb. 6, 2019).

theories that build on the public trust theory but apply it in a new setting, thus, moving beyond statutory duties and regulation. The strategy in the litigation prong of the advocacy focuses on plaintiffs whose ages highlight the values at stake including protection of children and issues of intergenerational equity. This choice brings the elements of values (spirit) and of social equity (mind) to the fore. Children are also a politically disempowered group yet one whose force in changing public attitudes has been recently highlighted by the prominent attention the Parkland High School students brought to gun violence,[211] and Greta Thunberg's powerful advocacy.[212] The strong public narrative this creates engages culture (mind) that grabs headlines and draws attention to the dissonance between our policies and a core value (spirit) with which most Americans identify: protection of children and their interests. The advocacy strategy of Our Children's Trust also seeks to broaden the lens by drawing explicit connections between our energy economy and the lives of children around the country. Although litigation is a central tool OCT employs, it also uses tools and expertise beside that of litigation, thus broadening the tent. OCT's public proceedings and events around the country serve as rallying points for education, organizing, and empowering, and it eschews reliance on legal victories in isolation as a strategy. Thus, OCT's work can have a broad impact on public narratives and views regardless of whether any particular piece of litigation ultimately succeeds.

2. *The Just Energy Transition*

A second promising development that illustrates the benefits of an integrative approach is the growing movement for a clean and just energy transition.[213] Advocacy focused on the promise of renewable fuels and a renewable energy transition employs a lens that is broader than the traditional focus on avoiding environmental degradation. The rapid rise in interest in this movement illustrates the promise of an approach that draws very little on conventional environmental law, yet one in which environmental lawyers and scholars are deeply engaged.[214] This promising front in the efforts to address climate change focuses on leveling the playing field for renewable energy, promoting changes in consumption patterns, transforming the grid to enhance reliability, and moving toward a distributed energy grid that offers consumers new opportunities. Advocates from the Sunrise Movement, which first gained widespread public attention for the Green New Deal insist on the need to ensure the policies ultimately adopted link to everyday values and concerns and address not just environmental concerns, but issues of economic and racial equity.[215] It draws not just on conventional environmental legal tools but on private governance solutions.[216] Significantly, the focus goes beyond a *clean* energy transition

[211] See, e.g., Margaret Kramer and Jennifer Harlan, Parkland *Shooting: Where Gun Control and School Safety Stand Today*, THE NEW YORK TIMES (Feb. 13, 2019) https://www.nytimes.com/2019/02/13/us/parkland-shooting.html; Emily Witt, *From Parkland to Sunrise: A Year of Extraordinary Youth Activism*, THE NEW YORKER (Feb. 13, 2019) https://www.newyorker.com/news/news-desk/from-parkland-to-sunrise-a-year-of-extraordinary-youth-activism.

[212] See, e.g., Charlotte Alter, Suyin Haynes and Justin Worland, *Greta Thunberg: Time 2019 Person of the Year*, TIME (Dec. 23, 2019) https://time.com/person-of-the-year-2019-greta-thunberg/.

[213] *See, e.g.*, Gregg P. Macey, *Introduction to Symposium: The Post-Carbon World: Advances in Legal and Social Theory*, 82 BROOK. L. REV. 429 (2017).

[214] *See, e.g.*, DERNBACH ET AL., *supra* note __.

[215] Guido Girgenti & Aru Shiney-Ajay, *The Green New Deal Isn't a Wish List—It's Good Strategy*, THE NATION (April 23, 2019) https://www.thenation.com/article/the-green-new-deal-must-be-all-encompassing/.

[216] *See, e.g.*, Cassie Phillips et al., *Beyond Politics: The Private Governance Response to Climate Change*, 48 ENVTL. L. REP. NEWS & ANALYSIS 11049 (2018); JOHN C. DERNBACH ET AL., LEGAL PATHWAYS TO DEEP

by emphasizing the need for a *just* transition – incorporating social justice and not just environmental goals and values,[217] although social equity is still not consistently incorporated in green transition initiatives.[218]

The rapid and massive public attention given to the Sunrise Movement's embrace of a "Green New Deal" suggests the power of a broadly ambitious and integrative goal that seeks to build popular support for action on climate change using the framing of economic opportunity and a just energy transition.[219] Social and economic equality and opportunity, alliance with other movements for change, and attention to culture are core principles guiding the Sunrise Movement's four year plan, demonstrating a broadened tent.[220] While this particular approach is in very early stages, it resonates with an integrative approach in that it builds on citizen outreach and empowerment and broad political advocacy to elect candidates who support its general principles, while developing a detailed legislative strategy.[221]

3. The Food Law Movement

Finally, a third development showing promise integrates concerns about food security, public health, animal rights, agricultural pollution, and climate change into a single advocacy movement: the food law movement. This focus broadens the lens beyond any of these individual fields, linking concern about an industry and regulation of its health and environmental impacts, (as agricultural law has historically done), with several central affirmative values and concerns of humans – access to healthy food, local economies, and the well-being of animals.[222] It also broadens the tent by bringing the issue to the local level, drawing on the growing local food movement, enabling greater engagement by the public.[223] Where agricultural law and animal rights law in isolation have existed largely as a face-off between environmentalists and industry, broadening the focus addresses additional values and considers the role of individuals, community, and new economic models, along with an industry's adverse impacts. The food law movement incorporates concerns of public health and nutrition, income inequality, and humane treatment of animals, the structure and institutions of industrial agriculture, along with

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DECARBONIZATION IN THE UNITED STATES: SUMMARY AND KEY RECOMMENDATIONS (Michael B. Gerrard & John C. Dernbach eds. 2018).

[217] Uma Outka, *Fairness in the Low-Carbon Shift: Learning from Environmental Justice*, 82 BROOK. L. REV. 789 (2017) (arguing for an approach that integrates social justice goals into new legal structures for the low-carbon transition).

[218] Outka, *supra* note __, at 819.

[219] This is not to suggest that it is universally popular, nor that it will be adopted any time soon. However, it has struck a chord with a significant segment of the public and avoided the public disinterest that has greeted many other national climate-focused policy initiatives..

[220] Sunrise Movement, *It's Time for the Sunrise: Sunrise Movement Plan* https://drive.google.com/file/d/1lcpb6Tuyh4-mEjGV7aO8b8Hq9zkQ782w/view available at: https://www.sunrisemovement.org/our-strategy/.

[221] *Id.*

[222] The food law movement and ethical treatment of animals, along with climate change, are the three examples offered by Jed Purdy as areas of ethical change in environmental law. Purdy, *Our Place in the World*, *supra* note 1, at 905-27.

[223] See Diana R.H. Winters, *The Decentralization of Food Policy and Building a Stronger Food System*, in SCANLAN ET AL., *supra* note 1 at 235. Winters highlights the increased responsiveness, democratic engagement and accountability, opportunity for experimentation, and broad system change potential of decentralized state and local initiatives in this field. *Id.* at 235.

environmental impacts that include climate change.[224] In this, it mirrors the integrative approach – incorporating culture and socio-economic context (mind), along with ethics (spirit), as well as physical impacts (body). And rather than a zero-sum effort to stop damaging pollution, prevent inhumane treatment of animals, or regulate industry, it focuses on a positive vision of community nutrition and human-animal interactions, with consideration of social equity, new economic opportunities, and improved public and environmental health.

CONCLUSION

Integrative Medicine developed because medical practitioners and scholars recognized the limitations of conventional allopathic medicine and saw the potential of a radical rethinking of the values, goals, and techniques that lay at the core of their profession. This paper proposes the value of examining environmental law with a similar focus. It suggests that environmental law could benefit from a careful consideration of the limitations of our conventional approaches and the lessons to be learned from the medical profession's path to date.

Integrative Medicine ultimately took root because of proof of the successes it offered in addressing biomedicine's most visible shortcomings, such as its failure to address chronic and lifestyle diseases, and because of increasing public interest and confidence in CAM. Commitment to an integrative path for environmental law will likely depend on similar evidence that the risks and challenges are worth taking and that it will help us to better address climate change. This paper presents a new approach to designing and practicing environmental law in an era of climate change. It highlights the similarities between the challenges faced by biomedicine and those faced by conventional environmental law and offers a sketch of the path toward integrative environmental law, offering a new perspective and path for scholars and practitioners seeking to move beyond our current approach. While not a panacea, the vision of integrative environmental law may provide a benchmark for evaluating whether specific reform proposals move us in the right direction and whether they are sufficient, by asking whether they will broaden the lens and broaden the tent beyond the conventional environmental law approach.

[224] Winters, *supra* note __, at 237-39, 244-45. Advocacy for regenerative agriculture and carbon farming are also part of this broad movement linking agricultural practices and climate actrion. *See, e.g.*, Nancy Matsumoto, *Investment in Regenerative Agriculture Connects the Dots Between Soil and Plates*, Civil Eats (Sept. 17, 2019) https://civileats.com/2019/09/17/investment-in-regenerative-agriculture-connects-the-dots-between-soil-and-plate/; Climate Reality, What is Regenerative Agriculture? (July 2, 2019) https://www.climaterealityproject.org/blog/what-regenerative-agriculture.