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# What is Earth Jurisprudence?: Key Principles to Transform Law for the Health of the Planet

Judith E. Koons\*

But we have only begun  
to love the earth.

We have only begun  
to imagine the fullness of  
life.

How could we tire of hope?  
– so much is in the bud.  
– *Denise Levertov*<sup>1</sup>

## I. INTRODUCTION

Earth Jurisprudence is an emerging legal theory based on the premise that rethinking law and governance is necessary for the well-being of Earth and all of its inhabitants.<sup>2</sup> Earth Jurisprudence is an

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1. Denise Levertov, *Beginners*, in JOAN CHITTISTER, *THE CRY OF THE PROPHET: A CALL TO FULLNESS OF LIFE* 55 (Mary Lou Kownacki ed., 2009).

2. The term “Earth Jurisprudence” arose out of a meeting hosted by the Gaia Foundation with environmental thinker Thomas Berry in April of 2001 at the Airlie Center in Virginia. See CORMAC CULLINAN, *WILD LAW: A MANIFESTO FOR EARTH JUSTICE* 17 (2d. ed. 2003). The major works of Thomas Berry are *THE DREAM OF THE EARTH* (1988), *THE UNIVERSE STORY* (co-authored with Brian Swimme, 1992), *THE GREAT WORK* (1999), and *EVENING THOUGHTS* (2006). Chief among other works significant to the spawning of Earth Jurisprudence are Christopher D. Stone, *Should*

inclusive and systems-based theoretical perspective that supports robust environmental regulation and recognizes a kinship with the field of environmental ethics.<sup>3</sup> In addition, Earth Jurisprudence embraces the connection between Earth justice and social justice.<sup>4</sup>

Yet, Earth Jurisprudence brings an innovative jurisprudential dimension to the environmental movement.<sup>5</sup> At the heart of this dimension lies the premise of a necessary shift in thinking from a purely human-centered to an Earth-centered system of law and governance.<sup>6</sup> Without such a jurisprudential shift, Earth and humanity remain at peril.

The ecological predicament of Earth, at the beginning of the 21st century, is exemplified by global warming. A recent report of the Intergovernmental Panel on Climate Change advised: “Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.”<sup>7</sup>

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*Trees Have Standing? Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972) and CORMAC CULLINAN, *WILD LAW: A MANIFESTO FOR EARTH JUSTICE* (2d. ed. 2003).

3. See CULLINAN, *supra* note 2, at 18; see also RODERICK FRAZIER NASH, *THE RIGHTS OF NATURE: A HISTORY OF ENVIRONMENTAL ETHICS* (1989).

4. See EARTH CHARTER COMMISSION, *THE EARTH CHARTER 1* (2000), available at <http://www.earthcharterinaction.org> [hereinafter *Earth Charter*]; COMMISSION FOR RACIAL JUSTICE, UNITED CHURCH OF CHRIST, *TOXIC WASTES AND RACE IN THE UNITED STATES: A NATIONAL REPORT ON THE RACIAL AND SOCIO-ECONOMIC CHARACTERISTICS OF COMMUNITIES WITH HAZARDOUS WASTE SITES* xiv (1987) (reporting that three out of five Black and Hispanic Americans resided in communities with uncontrolled toxic waste sites); see also LUKE W. COLE & SHEILA R. FOSTER, *FROM THE GROUND UP: ENVIRONMENTAL RACISM AND THE RISE OF THE ENVIRONMENTAL JUSTICE MOVEMENT* (2001).

5. The environmental movement comprises a wide variety of groups and individuals who, for many decades, have campaigned to stop human activities destructive to other-than-human species and Earth systems. See, e.g., KIRKPATRICK SALE, *THE GREEN REVOLUTION: THE AMERICAN ENVIRONMENTAL MOVEMENT, 1962-1992* (1993). The movement often uses legal means to protect Earth. Some of these campaigns have also questioned the prevailing anthropocentric paradigm of law. See, e.g., *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709 (Cal. 1983) (Mono Lake case). Earth Jurisprudence follows this philosophical thread of the environmental movement and takes the inquiry to a systemic level. While environmental legal approaches have advanced a number of changes in law, they generally have not questioned the basic assumptions of humanity's relationship to the natural world or the structure of the legal system that supports continued destruction of the environment. Earth Jurisprudence makes this deeper, and necessary, inquiry into the premises of our system of law and governance in which the environmental movement operates.

6. THOMAS BERRY, *THE GREAT WORK: OUR WAY INTO THE FUTURE* 56-57, 80-81 (1999) [hereinafter *BERRY, GREAT WORK*] (reasoning that Earth is the context and normative basis for human existence); see also the discussion of humans as part of the broader Earth community in IV, *infra*.

7. S. Solomon et al., *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 5 (Cambridge University Press 2007),

Moreover, a scientific consensus has formed that global warming is human-induced.<sup>8</sup>

A temperature increase of two degrees Celsius, which is expected to take place by mid-century, will produce significant impacts, including the onset of an “irreversible melting of the Greenland ice sheet.”<sup>9</sup> With an anticipated global warming of two degrees, significant changes in ecological relationships will occur. Melting glaciers will increase the risk of flooding and then will place one-sixth of the world’s population in jeopardy through reduced water supplies.<sup>10</sup> An increase in sea temperatures will prompt a projected five to ten percent increase in hurricane wind speed, which may double the annual costs of hurricanes in the United States.<sup>11</sup> By 2025, two-thirds of the world’s population will be water-stressed, with a devastating effect on human health.<sup>12</sup> Declining crop yields will threaten hundreds of millions of people with a greater risk of hunger, particularly in Africa.<sup>13</sup>

At a two-degree Celsius level of warming, scientists anticipate that fifteen to forty percent of species may become extinct.<sup>14</sup> We are entering what has been described as the largest mass extinction of species since the end of the age of the dinosaurs, sixty-five million years ago.<sup>15</sup>

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available at [http://www.ipcc.ch/publications\\_and\\_data/publications\\_ipcc\\_fourth\\_assessment\\_report\\_wg1\\_report\\_the\\_physical\\_science\\_basis.htm](http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm) [hereinafter IPCC Working Group I]; see also, *Massachusetts v. E.P.A.*, 549 U.S. 497, 504 (2007) (observing that the rise in global temperatures is “well-documented” and that “[r]espected scientists” believe that global warming is related to the increase in carbon dioxide in Earth’s atmosphere).

8. See *id.* at 2 (“Global atmospheric concentrations of carbon dioxide, methane and nitrous oxide have increased markedly as a result of human activities since 1750. . .”).

9. See Nicholas Stern, *Stern Review: The Economics of Climate Change, Executive Summary*, v (2006), available at [http://www.hm-treasury.gov.uk/media/4/3/Executive\\_Summary.pdf](http://www.hm-treasury.gov.uk/media/4/3/Executive_Summary.pdf) [hereinafter Stern]; see also M.L. Parry et al., *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 16 (Cambridge University Press 2007) available at [http://www.ipcc.ch/publications\\_and\\_data/publications\\_ipcc\\_fourth\\_assessment\\_report\\_wg2\\_report\\_impacts\\_adaptation\\_and\\_vulnerability.htm](http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg2_report_impacts_adaptation_and_vulnerability.htm) [hereinafter IPCC Working Group II] (describing major impacts associated with levels of increasing temperature).

10. Stern, *supra* note 9, at vi.

11. *Id.* at viii.

12. KOFI A. ANNAN, MILLENNIUM REPORT OF THE SECRETARY GENERAL OF THE UNITED NATIONS, *Sustaining Our Future*, in “WE THE PEOPLES”: THE ROLE OF THE UNITED NATIONS IN THE 21ST CENTURY 60 (United Nations 2000).

13. Stern, *supra* note 9, at v-vi.

14. See *id.* at vi; see also IPCC Working Group II, *supra* note 9, at 6 (“Approximately 20-30% of plant and animal species assessed so far are likely to be at increased risk of extinction if increases in global average temperature exceed 1.5-2.5°C.”).

15. See, e.g., CULLINAN, *supra* note 2, at 37 (“Periods of mass extinction have only occurred five times in Earth’s fifteen billion year history.”).

During the 20th century, scientists estimate that ninety percent of large fish disappeared from the oceans.<sup>16</sup> In marked contrast with the historical background rate of extinctions at one species per five hundred to one thousand years, the current rate of extinction has been estimated by Harvard biologist E.O. Wilson at three species per hour, seventy per day, and twenty-seven thousand per year.<sup>17</sup>

Given the ecological crises of the 21st century, it is apparent that humanity cannot afford to take a “business as usual” approach to environmental law.<sup>18</sup> It is also apparent that a dramatic ecological decline is taking place despite the widespread adoption of environmental regulations in the latter part of the 20th century.<sup>19</sup> Environmental groups have long articulated the need for greater legal protections for Nature.<sup>20</sup> However, a recent shift of consciousness has swept across the globe, recognizing the need for systemic changes in law, governance, and human behavior for the sake of the planet.<sup>21</sup>

The purpose of this article is to contribute to the development of the field of Earth Jurisprudence by suggesting some key principles and their

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16. Ransom A. Myers & Boris Worm, *Extinction, Survival or Recovery of Large Predatory Fishes*, 360 PHILOSOPHICAL TRANSACTIONS OF ROYAL SOC'Y B: BIOLOGICAL SCI. 13 (Jan. 29, 2005), available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1636106/pdf/rstb20041573.pdf>.

17. See EDWARD O. WILSON, *THE DIVERSITY OF LIFE* 280 (1992); see also CULLINAN, *supra* note 2, at 40 (estimating the background rate of extinction at one per five hundred to one thousand years). In 2008, the Red List of Threatened Species identified an estimated 1141 mammals (21% percent of the species described), 1222 species of birds (12% percent), and 1905 species of amphibians (30% percent) as threatened with extinction. The International Union for the Conservation of Nature and Natural Resources, *The IUCN Red List of Threatened Species, Summary Statistics*, [http://www.iucnredlist.org/documents/2008RL\\_stats\\_table\\_1\\_v1223294385.pdf](http://www.iucnredlist.org/documents/2008RL_stats_table_1_v1223294385.pdf) (last visited Oct. 31, 2009) (estimating the number of described species and the percentage of threatened species from 1996-2008); CULLINAN, *supra* note 2, at 40 (noting similar statistics).

18. Stern, *supra* note 9, at iv (explaining that, under a business as usual (BAU) approach to emissions, “the stock of greenhouse gases could more than treble by the end of the century, giving at least a 50% risk of exceeding 5° C global average temperature change during the following decades” which would “transform the physical geography of the world.”).

19. See NASH, *supra* note 3, at 172-79 (discussing the movement for regulations to protect endangered species in the United States beginning in 1964).

20. See, e.g., PAUL HAWKEN, *BLESSED UNREST: HOW THE LARGEST SOCIAL MOVEMENT IN HISTORY IS RESTORING GRACE, JUSTICE, AND BEAUTY TO THE WORLD* 29-47 (2007) (summarizing conservation efforts in the 19th and early 20th centuries).

21. See Lynette Evans, *The Buzzwords for 2007 Are All Synonymous With Green*, S. F. CHRON., Dec. 30, 2006, at F1; Fiona Harvey, *Sleek, Stylish and Sustainable Eco-properties Are Coming of Age*, FIN. TIMES (LONDON), Oct. 15, 2005, at House & Home 1; Frank Davies, *Smithsonian Tackles Global Warming*, ORLANDO SENTINEL, Apr. 15, 2006, at A4.

applications to law and governance.<sup>22</sup> Drawing from the functioning of the universe, this article will explore a vision of Earth Jurisprudence through three principles: the intrinsic value of Earth; the relational responsibility of humanity toward Earth; and the democratic governance of the Earth community. These jurisprudential principles will be illustrated through a legal framework of rights, responsibilities, and duties and through the representative legal doctrines of standing, the public trust doctrine, and intergenerational equity. To begin the creative enterprise envisioned in this article, the next section invites the redesign of our systems of law and governance.

## II. AS THE WORLD TURNS: A NEW VISION OF JURISPRUDENCE<sup>23</sup>

Two things are needed to guide our judgment and sustain our psychic energies for the challenges ahead: a certain alarm at what is happening at present and a fascination with the future available to us if only we respond creatively to the urgencies of the present.

– Thomas Berry<sup>24</sup>

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22. See THE GAIA FOUNDATION & UK ENVIRONMENTAL LAW ASSOCIATION, *WILD LAW: IDEAS INTO ACTION—WHERE CAN WE FIND EXAMPLES OF EARTH JURISPRUDENCE IN PRACTICE* 6 (2008) (noting infancy of Earth Jurisprudence in Draft Initial Findings); see also Arne Naess & George Sessions, *Platform Principles of the Deep Ecology Movement*, in *THE DEEP ECOLOGY MOVEMENT: AN INTRODUCTORY ANTHOLOGY* 49 (Alan Drengson & Yuichi Inoue eds., 1995).

23. Jurisprudence may be defined as the “philosophical discipline that examines the fundamental nature or elements of law.” See Patricia Smith, *On Law and Jurisprudence: Feminism and Legal Theory*, in *FEMINIST JURISPRUDENCE* 485 (Patricia Smith ed., 1993); see also ROBERT L. HAYMAN ET AL., *JURISPRUDENCE: CLASSICAL AND CONTEMPORARY* ix (2d ed., 2002) (“Jurisprudence encompasses the study of a legal system’s scope, function, methodology, and guiding precepts. It considers the basic, general, universal and theoretical ideas of law, as well as their underlying premises.”). Some scholars look to Natural Law as the basis for Earth Jurisprudence. E.g., CULLINAN, *supra* note 2, at 74-79. Yet, in discussing Natural Law and “laws of nature,” Cullinan also noted that one of the reasons for the waning of Natural Law is the tendency of various groups in society “to claim that their beliefs are ‘natural’ and therefore inherently superior to competing beliefs, which they pillory as ‘unnatural.’” *Id.* at 76. Detractors from Natural Law assert that since no external referent for the validation of natural law is necessary, the regressive edge of biological determinism is exposed, which has been oppressive to outsider groups. E.g., Mary Hawkesworth, *Confounding Gender*, 22 *SIGNS* 649, 680-81 (1997) (critiquing the “natural attitude” toward gender and its links to “an ideology of procreation”). Thomas Berry recognized Earth, itself, as the referent for human affairs. See THOMAS BERRY, *EVENING THOUGHTS: REFLECTING ON EARTH AS SACRED COMMUNITY* 81, 84 (2006) [hereinafter BERRY, *EVENING*]. Ecofeminism offers another perspective, critiquing dualistic thinking and suggesting ways of healing the culture - nature split. See Joan L. Griscom, *On Healing the Nature/History Split in Feminist Thought*, in *FEMINIST THEOLOGICAL ETHICS* 271-81 (Lois K. Daly ed., 1994); see also CAROLYN MERCHANT, *THE DEATH OF NATURE: WOMEN, ECOLOGY, AND THE SCIENTIFIC REVOLUTION* (1980).

24. BERRY, *EVENING*, *supra* note 23, at 17 (2006).

If citizens' commissions were convened to rethink our systems of law and governance for the 21st century, where might the members begin?<sup>25</sup> They might start with current snapshots of what is happening in the world. The first snapshot would depict global warming, with images of melting glaciers, rising oceans, cataclysmic weather events, and perishing species.<sup>26</sup> A second snapshot would show humanity at war with itself over efforts to amass power and resources as well as over ethnic and religious differences.<sup>27</sup> A third snapshot would illustrate the disparity in wealth across the world.<sup>28</sup> Although other snapshots would depict areas of peace and cooperation among people, the new visions of law and governance should be equipped to address overarching problems in the world while also preserving its successes.

The environmental, social, and economic distress depicted in the snapshots should provide great impetus to consider ways to design human institutions to preserve ecological and human health. A threshold step would be to conceive of Earth at the center of law and governance, shifting away from purely human-focused systems. An aligned step would be to refocus on ways that law and governance could support ecosystems and the complex interactions among animate and inanimate entities upon which life depends.

Some citizens might recognize that Earth-centeredness, as a guiding philosophy, is not new. This theme has long animated environmental reformers, social justice activists, indigenous rights movements, and grassroots campaigns for sustainability.<sup>29</sup> Once independent of each

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25. Compare CULLINAN, *supra* note 2, at 151 ("Beware the Universal Panacea") with JOHN RAWLS, *POLITICAL LIBERALISM* 22 (expanded ed. 2005) (1993) ("The Idea of the Original Position"). For a discussion of eco-centered citizens' political movements through the lens of Earth Democracy, see section V., *infra*.

26. *E.g.*, IPCC Working Group II, *supra* note 9, at 13 (depicting major impacts of increasing temperature, including coral bleaching, increased damage from floods and storms, increased malnutrition and infectious diseases, changed distribution in some disease vectors, and increased morbidity from heat waves, floods, and droughts for a temperature increase below two degrees).

27. See, *e.g.*, Daniel Whitaker, *World View: Race for Riches is Africa's Torment*, *THE OBSERVER*, Nov. 12, 2006, at 33; Martin Chulov, *Poll Brings Hopes of New Start*, *THE AUSTRALIAN*, Oct. 17, 2005, at 14.

28. See, *e.g.*, Mohsen Al Attar Ahmed, *Monocultures of the Law: Legal Sameness in the Restructuring of Global Agriculture*, 11 *DRAKE J. AGRIC. L.* 139, 149 (2006) (arguing that the struggle between the industrial countries of the north and the developing countries of the south obscures class and economic divisions within a country); JOHN NAISH, *ENOUGH: BREAKING FREE FROM THE WORLD OF MORE* 49, 97 (Hodder & Stoughton 2008) (discussing epidemics of obesity and acquisition in developed countries that are shipping rubbish to developing countries).

29. See, *e.g.*, HAWKEN, *supra* note 20, at 5, 12, 110. The religious and philosophical roots of environmental justice may be seen in ancient writings. See, *e.g.*, Anonymous, *The Earth, Mother of All, Homeric Hymns XXX*, in *ESSENTIAL SACRED WRITINGS FROM AROUND THE WORLD* 55 (Mircea Eliade ed., 1967) (circa 800 B.C.E).

other, these movements are coalescing to effect a wider change in consciousness that is necessary to bring about peace, social justice, and environmental health.<sup>30</sup> Into this momentous niche of time and onto the foundation laid by a multitude of environmental groups and workers, Earth Jurisprudence is stepping forward to formalize and systematize Earth-oriented concepts in the field of law.<sup>31</sup>

In considering a philosophical framework for Earth-centered systems of jurisprudence, the citizens might focus on principles that govern the workings of Earth and the universe.<sup>32</sup> With such a focus, human systems of governance would reflect the attributes of the natural systems in which they are embedded.<sup>33</sup> According to ecological philosopher Thomas Berry, the universe is organized according to three main themes—subjectivity, communion, and differentiation.<sup>34</sup> As precepts that arise out of scientific theory and philosophy, these themes could serve as a platform for rethinking law and governance.<sup>35</sup>

The first theme is subjectivity. Through subjectivity (autopoiesis), the universe may be seen as self-organizing, with self-manifesting power.<sup>36</sup> Stars regulate hydrogen and helium to produce light and chemical elements.<sup>37</sup> Earth is a self-regulating system; the balance of chemicals in the atmosphere, oceans, and soil is continually renewed and adjusted.<sup>38</sup> Every atom of the universe is a self-organizing system, “a storm of organized activity.”<sup>39</sup>

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30. See BERRY, GREAT WORK, *supra* note 6, at 200.

31. See *id.* at 3, 7, 201; CULLINAN, *supra* note 2, at 7-8, 211; see also HENRY DAVID THOREAU, WALDEN 16 (Brooks Atkinson ed., Random House 1992) (1854) (“I have been anxious to improve the nick of time, and notch it on my stick too; to stand on the meeting of two eternities, the past and future, which is precisely the present moment; to toe that line.”). Proponents of Earth Jurisprudence do not claim that its principles alone will save Earth. However, Earth Jurisprudence can play a critical part in changing legal institutions and human behavior, and eventually help to transform other institutions and human consciousness.

32. See CULLINAN, *supra* note 2, at 27-28.

33. See *id.*

34. BERRY, GREAT WORK, *supra* note 6, at 162; THOMAS BERRY, THE DREAM OF THE EARTH 45 (1988) [hereinafter BERRY, DREAM]; see also Andrew C. Revkin, *Thomas Berry, Writer and Lecturer with a Mission for Mankind, Dies at 94*, N.Y. TIMES, June 4, 2009, at B12 (reporting the death of Berry on June 1, 2009).

35. See CULLINAN, *supra* note 2, at 85-86; BERRY, DREAM, *supra* note 33, at 44.

36. BRIAN SWIMME & THOMAS BERRY, THE UNIVERSE STORY: FROM PRIMORDIAL FLARING FORTH TO THE ECOZOIC ERA 75 (1992) [hereinafter UNIVERSE STORY].

37. *Id.*

38. See ELISABET SAHTOURIS, EARTH DANCE: LIVING SYSTEMS IN EVOLUTION 5 (2000); see also Stern, *supra* note 9, at xi (noting Earth’s absorption capacity of five gigatonnes of carbon dioxide equivalent, which is “more than 80% below the absolute level of current annual emissions.”).

39. SWIMME & BERRY, UNIVERSE STORY, *supra* note 36, at 75.



The second theme is communion. Through communion (interdependence), the universe may be seen as a “web of relationships” that form a unity that is comprehensive.<sup>40</sup> From the first moment of existence, when the first particles exploded into being, each particle has been related to every other particle in the universe.<sup>41</sup> Scientists, particularly in the 20th century, have noted the full extent of relatedness of the universe: Isaac Newton brought forth our understanding of gravitational attraction; Darwin offered evidence of genetic connections in the web of beings; Einstein and quantum theorists presented new understandings of relatedness in the universe at sub-atomic levels.<sup>42</sup> “To be,” according to the universe, “is to be related.”<sup>43</sup>

The third theme is differentiation. Through differentiation (complexity), the universe may be seen as a reality of “unending diversity.”<sup>44</sup> The originating explosion expressed a creativity that formed galaxies “of highly individuated starry oceans of fire.”<sup>45</sup> That creativity is ongoing. Multiplicity governs the structures of galaxies, stars, and planets.<sup>46</sup> On Earth, life is reflected in an abundance of diversity. We humans manifest ourselves in an astonishing array of modes of being. “To be,” according to the universe, “is to be

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40. See *id.* at 76; BERRY, DREAM, *supra* note 34, at 46.

41. SWIMME & BERRY, UNIVERSE STORY, *supra* note 35, at 76. The Universe Story is “the story of the evolutionary development of the universe” from the moment of the Big Bang to the present era. Herman F. Greene, *Where is the Universe in the Universe Story?*, THE ECOZOIC, REFLECTIONS ON LIFE IN AN ECOLOGICAL AGE, 2008, at 1. As an epic narrative and a scientific account, it blends meaning-making through story-telling and scientific theory. *Id.* at 2. However, the Universe Story is not dependent on a closed scientific rendering of the origins and development of the universe. The scientific story of the Big Bang theory, for example, may stand for many ages, or as is more likely, may be modified by accounts based on new discoveries and understandings. *Id.* at 23. In approaching the scientific account, caution should be exercised to avoid overshadowing the philosophical story because the point of the story is not primarily to validate any particular scientific theory. *Id.* at 22. Rather, the purpose of the Universe Story is to invite “an understanding of the inner dynamics of the universe and the human place in it.” *Id.* For Earth Jurisprudence, the Universe Story provides a context for law and other human institutions. Traditional jurisprudence places humanity at the center of the universe and provides theoretical approaches to legal doctrine from this anthropocentric stance. However, the Universe Story reminds us that humanity is not the center of the universe, but instead is a part of a whole. See CULLINAN, *supra* note 2 at 113. Consequently, law should reflect the position of humankind as a member of the Earth community. *Id.* The Universe Story sets the standard for humanity to act in ethical relations with the rest of the broader community of which we are a part.

42. SWIMME & BERRY, UNIVERSE STORY, *supra* note 35, at 77.

43. *Id.* at 73.

44. BERRY, DREAM, *supra* note 33, at 45.

45. See *id.*

46. SWIMME & BERRY, UNIVERSE STORY, *supra* note 35, at 72.

different.”<sup>47</sup> Throughout the universe, tiny particles and enormous spiraling nebulae are expressing, “I am fresh.”<sup>48</sup>

How could the philosophical and scientific themes of subjectivity, communion, and differentiation translate into principles for systems of jurisprudence . . . and into working legal standards? A jurisprudential reflection of subjectivity may lie in the principle that all beings, systems, and entities in Nature have intrinsic value, to be expressed in law and governance. The theme of communion may be translated into jurisprudence as the responsibility of humanity to appreciate our relationship with Earth as a sacred trust.<sup>49</sup> Finally, differentiation may be reflected in the notion of an Earth democracy that supports, at all levels of governance, legal recognition of all components our Earth community, both present and future.<sup>50</sup>

The next three sections of this article will elaborate on the jurisprudential principles of intrinsic worth, relational responsibility, and Earth democracy. To illustrate how these principles may be reflected in legal doctrine, this article will highlight standing, the public trust doctrine, and intergenerational equity.

### III. THE PRINCIPLE OF SUBJECTIVITY: INTRINSIC VALUE OF EARTH

Each individual thing in the universe is ineffable.

– Brian Swimme and Thomas Berry<sup>51</sup>

In discussing subjectivity, Thomas Berry and Brian Swimme observed that all of existence—from atoms to galaxies and from colonies of ants to the sun—exhibits creative and self-organizing dynamics.<sup>52</sup> Despite the often careless way we interact with Earth and the entities of Earth,<sup>53</sup> Nature is a subject and not a collection of objects.<sup>54</sup> Recognizing the subjectivity of Nature carries legal, philosophical, and moral significance. Western law, philosophy, and morality have long

47. *Id.* at 74.

48. *Id.* at 75.

49. Earth Charter, *supra* note 4, at “Earth, Our Home.”

50. See CULLINAN, *supra* note 2, at 192; BURNS H. WESTON & TRACY BACH, RECALIBRATING THE LAWS OF HUMANS WITH THE LAWS OF NATURE: CLIMATE CHANGE, HUMAN RIGHTS, AND INTERGENERATIONAL JUSTICE 17-27 (Vermont Law School) (2009).

51. SWIMME & BERRY, UNIVERSE STORY, *supra* note 35, at 74.

52. See *id.* at 75; see also CULLINAN, *supra* note 2, at 25-26.

53. See John S. Rausch, *The Bottleneck Behind Bottled Water*, CORNER POST, NATIONAL CATHOLIC RURAL LIFE CONFERENCE, (Aug. 2007), available at [http://www.ncrlc.com/corner-post-webpages/Bottled\\_Water](http://www.ncrlc.com/corner-post-webpages/Bottled_Water) (for example, Americans used fifty billion polyethylene terephthalate bottles in 2006, but only recycled twenty-three percent of them, leaving thirty-eight billion bottles for landfills).

54. See CULLINAN, *supra* note 2, at 115 (quoting THOMAS BERRY, THE ORIGIN, DIFFERENTIATION AND ROLE OF RIGHTS (2001)).

been structured around dualistic thinking.<sup>55</sup> For example, law focuses on plaintiff and defendant, judge and jury, law and facts, theory and practice.<sup>56</sup> In philosophy, key polarities are reason and passion, mind and body, community and autonomy, culture and nature.<sup>57</sup> In morality, we think in terms of right and wrong, is and ought, good and evil, cognition and volition, liberty and constraint.<sup>58</sup> Our everyday thinking is structured in terms of male and female, fast and slow, early and late, tall and short, loud and soft, thin and fat.<sup>59</sup>

One of the chief dualisms underlying Western thought is subject and object.<sup>60</sup> Subjects (those like me) are assigned value and everything unlike me is an “other.”<sup>61</sup> The consequences of this dualism include justifying mistreatment of others based on perceived differences and interacting with the world through privilege, but being unaware of it.<sup>62</sup> Some scholars propose that othering or objectification is the basis of violence because the belief is internalized that only beings identified as subjects are capable of suffering cognizable harm.<sup>63</sup>

For Berry and Swimme, the subjectivity of the universe is manifest everywhere. Within everything in the universe is an “inner principle of being” that connotes a power to participate in the ongoing creation story.<sup>64</sup> In this cosmology, sentience and potential sentience pervade the world.<sup>65</sup>

While the subjectivity of “higher life forms,” such as mammals, may be granted, some may balk at considering natural entities or “mere

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55. See MARY F. BELENKY et al., *A TRADITION THAT HAS NO NAME: NURTURING THE DEVELOPMENT OF PEOPLE, FAMILIES, AND COMMUNITIES* 19-22 (1997).

56. *E.g.*, HENRY M. HART, JR. & ALBERT M. SACKS, *THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW* 349 (William N. Eskridge, Jr. & Philip P. Frickey eds., 1994).

57. *E.g.*, GENEVIEVE LLOYD, *THE MAN OF REASON: “MALE” AND “FEMALE” IN WESTERN PHILOSOPHY* 5-6, 99 (2d ed. 1993).

58. *E.g.*, ISAAK I. DORE, *THE EPISTEMOLOGICAL FOUNDATIONS OF LAW* 566 (2007).

59. BELENKY, *supra* note 55, at 19.

60. IRIS MARION YOUNG, *JUSTICE AND THE POLITICS OF DIFFERENCE* 99 (1990).

61. *Id.* at 58-60, 96-99. Simone de Beauvoir developed the notion of the “Other” in 1949 as the metaphor by which women have been set aside and subordinated. SIMONE DE BEAUVOIR, *THE SECOND SEX* (Howard M. Parshley trans., Vintage Books 1989) (1949).

62. Iris Marion Young noted the paradox of othering, in which certain groups are marked, subordinated, and rendered invisible. See YOUNG, *supra* note 60, at 58-59; see also STEPHANIE M. WILDMAN, *PRIVILEGE REVEALED: HOW INVISIBLE PREFERENCE UNDERMINES AMERICA* 8-13 (1996).

63. See Fr. John Kavanaugh, *Challenging a Commodity Culture*, in *ON MORAL BUSINESS: CLASSICAL AND CONTEMPORARY RESOURCES FOR ETHICS IN ECONOMIC LIFE* 606, 608 (Max L. Stackhouse, Dennis P. McCann, & Shirley J. Roels eds., 1995).

64. SWIMME & BERRY, *UNIVERSE STORY*, *supra* note 36, at 72, 75.

65. *Id.* at 76.

things” to possess subjectivity.<sup>66</sup> Consider one of the most challenging cases—the subjectivity of rock formations. Russian biologist Vladimir I. Vernadsky defined life in terms of dispersal of rock, or rock that is rearranging itself.<sup>67</sup> The crust of the Earth, to Vernadsky, has sufficient energy to transform the passive geological parts into living parts through metabolic action.<sup>68</sup> In this way, living organisms may be understood as composed of inorganic minerals from the crust of Earth, which cycles living matter into inorganic minerals and then transforms those minerals back to living form.<sup>69</sup> It was of some significance to Vernadsky that the same atoms alternate between animate and inanimate matter.<sup>70</sup>

From the perspective of the Universe Story, Berry and Swimme imagined that Earth, once a fiery rock, now “fills its air with songs of birds.”<sup>71</sup> Consequently, from the dynamic activity of molten magma, the self-organizing power of the universe brought forth new shapes—“animals capable of being racked with terror or stunned by awe of the very universe out of which they emerged.”<sup>72</sup>

Subjectivity may be translated into Earth Jurisprudence as the principle of the intrinsic worth of Nature. This claim stands on the premise that beings, systems, and entities in Nature warrant *moral consideration*. In 1978, the notion of “moral considerableness” was first used in the environmental context by ethicist Kenneth Goodpaster.<sup>73</sup> To Goodpaster, moral considerableness meant that “something falls within the sphere of moral concern, . . . it is morally relevant, . . . it can be taken into account when moral decisions are made.”<sup>74</sup> Having moral considerableness is broader than holding moral rights and is “like

66. Judith E. Koons, *Earth Jurisprudence: The Moral Value of Nature*, 25 PACE ENVTL. L. REV. 263, 269, 295 (2008) [hereinafter *Moral Value of Nature*].

67. The English translation of Vernadsky’s 1926 monograph proposed that “the Biosphere is not only the ‘face of the Earth,’ but is the global dynamic system transforming our planet since the beginning of biogeological time.” See VLADIMIR I. VERNADSKY, *THE BIOSPHERE* 25 (Peter N. Nevraumont ed., David B. Langmuir trans., Copernicus 1998) (1926); see also SAHTOURIS, *supra* note 38, at 117.

68. SAHTOURIS, *supra* note 38, at 118-119.

69. *Id.* at 118.

70. *Id.*

71. SWIMME & BERRY, *UNIVERSE STORY*, *supra* note 35, at 76.

72. *Id.* at 76-77.

73. See Kenneth E. Goodpaster, *On Being Morally Considerable*, 75 J. OF PHIL. 308 (June 1978) [hereinafter Goodpaster, *On Being*] (beginning with the formulation of G.J. WARNOCK, *THE OBJECT OF MORALITY* 148 (University Paperbacks 1971) that principles of morality apply from the standpoint “not of the agent, but of the ‘patient.’”); see also CLARE PALMER, *ENVIRONMENTAL ETHICS AND PROCESS THINKING* 63 (Oxford University Press 1998) (discussing Goodpaster’s contribution to moral philosophy).

74. See PALMER, *supra* note 73, at 63; see also Goodpaster, *On Being*, *supra* note 73, at 309, 311 (interpreting moral consideration “broadly to include the most basic forms of practical respect” and contrasting moral significance).

showing up on a moral radar screen—how strong the signal is or where it is located on the screen are separate questions.”<sup>75</sup>

The claim of the intrinsic value of Nature also stands on the premise that beings, systems, and entities in Nature warrant *legal consideration* and should be given legal recognition. Christopher Stone presented the argument of the legal considerateness of Nature in various writings beginning in 1972.<sup>76</sup> Stone argued that having legal consideration, like moral consideration, should not be confused with holding rights.<sup>77</sup> An entity that has legal recognition may or may not be a rights-bearing entity.<sup>78</sup> Legal recognition may be given in a number of different ways. A jural person may be granted rights, be given duties and responsibilities, be the recipient of immunities and privileges, or be held liable—all of which are intermediate, operative notions that flow from the broader principle of legal considerableness.<sup>79</sup> Having legal status means being enabled to participate in the legal system, although not necessarily as a rights-holder.<sup>80</sup>

Legal doctrines routinely allow “persons” that are not human beings to participate in the legal system. Among the “persons” permitted to sue are ships, trusts, municipalities, estates, joint ventures, universities, railroads, churches, states . . . not to mention business corporations.<sup>81</sup> Lack of moral decision-making capacity does not undermine the recognition of moral and legal status, for example, of humans with

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75. W. Murray Hunt, *Are Mere Things Morally Considerable?*, 2 ENVTL. ETHICS 59, 50 (1980).

76. E.g., Christopher D. Stone, *Should Trees Have Standing? Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972) [hereinafter Stone 1972]; Christopher D. Stone, *Should Trees Have Standing? Revisited: How Far Will Morals and Law Reach? A Pluralist Perspective*, 59 S. CAL. L. REV. 1(1985) [hereinafter Stone 1985]; CHRISTOPHER D. STONE, *EARTH AND OTHER ETHICS: THE CASE FOR MORAL PLURALISM* (HarperCollins 1987); CHRISTOPHER D. STONE, *SHOULD TREES HAVE STANDING? AND OTHER ESSAYS ON LAW, MORALS AND THE ENVIRONMENT* (25<sup>th</sup> anniv. ed. 1996) [hereinafter STONE 1996].

77. See Stone 1985, *supra* note 76, at 46. This article encourages a broader view of Earth Jurisprudence than simply granting rights to Nature. Rights-based approaches can be seen as reductive and deflecting attention away from deeper structural inequities in law. E.g., HAYMAN, *supra* note 23, at 403-04. Rights are better understood as part of a legal framework that includes a number of instrumental notions—such as duties, responsibilities, liabilities, and immunities—that are recognized for those with legal status. Stone 1985, *supra* note 76, at 23-25, 64-66.

78. Stone 1985, *supra* note 76, at 65.

79. See *id.* at 23-25, 64-66; see also STONE 1996, *supra* note 76, at 67, 136 (discussing responsibilities, “which are typically viewed to run wider, and be less inflexible and imperative, than rights and duties”).

80. STONE 1996, *supra* note 76, at 50-51.

81. See *Sierra Club v. Morton*, 405 U.S. 727, 742-743 (1972) (Douglas, J., dissenting); STONE 1996, *supra* note 76, at 3, 13; see also Note, *What We Talk About When We Talk About Persons: The Language of Legal Fiction*, 114 HARV. L. REV. 1745 (2001).

mental disabilities.<sup>82</sup> Furthermore, guardians and trustees regularly appear in our legal system to give voice to people and entities who are unable to speak.<sup>83</sup> Federal and state agencies already serve as guardians and trustees of natural entities such as public lands, marine mammals, and “natural resources” that have suffered damage.<sup>84</sup> There are many ways of bringing natural entities into legal consideration.

The legal status of natural entities may be understood in terms of a floor of commonalities as well as a ceiling of limitations. For commonalities, we all share this ground, this air, this water, and this history of Earth and the universe. To give effect to these commonalities, Berry asserted that each component of Earth embodies three rights: “the right to be, the right to habitat or a place to be, and the right to fulfill its role in the ever-renewing processes of the Earth community.”<sup>85</sup> For limitations, Stone reasoned that a natural entity’s legal status must be “intelligible.”<sup>86</sup> If a tree were to be granted rights, for example, it would not be to sit on a jury, but perhaps to be given voice through a guardian to be saved from a chain saw.<sup>87</sup> In similar fashion, Berry understood rights to be role- and species-specific: “Difference in rights is qualitative, not quantitative. The rights of an insect would be of no value to a tree or a fish.”<sup>88</sup> Rights may vary for different rights-holders, but also allow for participation in the legal system.

How the legal status of jural natural entities is to be recognized—via rights, duties, or responsibilities, for example—and how that legal status is to be considered when in conflict with the rights, duties, and responsibilities of other jural persons and entities are matters for complex weighing.<sup>89</sup> However, the imagined difficulties of adjudicating and legislating Earth’s legal status does not alter the principle that Nature, having intrinsic value, is worthy of legal consideration.<sup>90</sup> Courts and legislators commonly sort through weighty conflicts in complex cases, including those raising negligence in mass disasters, competing rights and duties of terminally ill patients and caregivers, criminal liability of corporations, patentability of life forms, and responsibilities of nations

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82. Stone 1985, *supra* note 76, at 45.

83. Laura G. Kniaz, *Animal Liberation and the Law: Animals Board the Underground Railroad*, 43 *BUFF. L. REV.* 765, 833 (1995).

84. STONE 1996, *supra* note 76, at 18, 165.

85. BERRY, EVENING, *supra* note 23, at 149.

86. Stone 1985, *supra* note 76, at 37; STONE 1996, *supra* note 76, at 170.

87. Stone 1985, *supra* note 76, at 37-38.

88. BERRY, EVENING, *supra* note 23, at 150.

89. See Stone, 1985, *supra* note 76, at 150-51.

90. See Stone, 1985, *supra* note 76, at 23-39, 154; see also Koons, *Moral Value of Nature*, *supra* note 66 *passim*.

for war crimes.<sup>91</sup> In similar fashion, our legal system must be able to consider rights and obligations of other-than-human animals and ecological entities.

One way the principle of intrinsic value of Earth could be given legal expression is through the doctrine of standing. A number of scholars have called for rethinking the doctrine of standing, which at present denies other-than-humans and natural entities the right to sue in their own status.<sup>92</sup> Instead, in efforts to protect other-than-human species and natural entities, human plaintiffs must allege injury to their own associational, recreational, aesthetic, scientific, and educational interests.<sup>93</sup> The result is often strained, if not tortured and sad.<sup>94</sup>

A prototypical allegation to support standing appears in *Lujan v. Defenders of Wildlife*.<sup>95</sup> The affiant, a member of an environmental organization, alleged that she had traveled to Sri Lanka and “observed the habitat” of the endangered Asian elephant and the leopard.<sup>96</sup> Although the affiant was not able to see the endangered species, she was harmed because she “intend[s] to return to Sri Lanka in the future and hope[s] to be more fortunate in spotting at least the endangered elephant and leopard.”<sup>97</sup> Allegations such as these miss the appropriate focal point for judicial inquiry, which should be on the threatened injury to endangered species, not on fictionalized human injury to gain access to court.<sup>98</sup> That the doctrinal requirements for entry into our legal system find their expression in sworn statements that are superficial and off-focus serves not only to diminish the dignity of human beings and our legal system, but also to ignore and jeopardize Nature. Focusing on real

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91. Stone, 1985, *supra* note 76, at 33.

92. See *Valley Forge Christian Coll. v. Ams. United for Separation of Church and State, Inc.*, 454 U.S. 464, 472 (1982) (articulating injury-in-fact, causation, and redressability criteria for standing); *Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992); *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 169 (2000) (“The relevant showing for Article III standing, is not injury to the environment but injury to the plaintiff.”); see also David N. Cassuto, *The Law of Words: Standing, Environment, and Other Contested Terms*, 28 HARV. ENVTL. L. REV. 79, 94, 102 (2004) (discussing Supreme Court’s “tortured” standing doctrine) [hereinafter Cassuto]; Jonathan Remy Nash, *Standing and the Precautionary Principle*, 108 COLUM. L. REV. 494 (2008).

93. *Laidlaw*, 528 U.S. at 183; STONE 1996, *supra* note 76, at 166.

94. Cassuto, *supra* note 92, at 102; STONE 1996, *supra* note 76, at 175.

95. *Lujan*, 504 U.S. at 563.

96. *Id.*

97. *Id.* at 564.

98. *Sierra Club v. Morton*, 405 U.S. 727, 741 (Douglas, J., dissenting); *Cetacean Cmty v. Bush*, 386 F.3d 1169, 1176 (9th Cir. 2004) (observing that there is nothing in the Constitution that would prevent Congress from allowing suit in the name of other-than-human species); STONE 1996, *supra* note 76, at 174.

harm to valued participants in our legal system would bring nurturing depth and meaning to law and governance.<sup>99</sup>

#### IV. THE PRINCIPLE OF COMMUNION: RELATIONAL RESPONSIBILITY

The global environment with its finite resources is a common  
concern of all peoples. The protection of Earth's vitality, diversity,  
and beauty is a sacred trust.  
– *Earth Charter*<sup>100</sup>

The prior section discussed the notion of dualistic thinking, which sets up subject-object relationships that operate as a hierarchy. Linguists are careful to note that each binary is marked by a favored pole, generally expressed first, followed by a disfavored pole (for example, judge-jury, male-female, reason-passion, theory-practice).<sup>101</sup> This type of thinking, embedded in law and language, has been cited as the basis for the subject-object relationships that structure gender, race, and class injustice.<sup>102</sup> Binary thinking also supports the exploitation and degradation of Nature, viewed as a “resource” to be used by humans without compunction and as a wilderness to be tamed, as in Humanity versus Nature.<sup>103</sup> The consequences of a worldview based on dualistic thinking are tragically apparent in the separation of humanity from Earth and the grotesque overuse of the goods of Earth to support consumptive lifestyles.<sup>104</sup> Dualistic thinking creates and reinforces humanity's disassociation from Nature.

However, the functioning of the universe is not reflected in hierarchy or separation, but in a circling dance of spheres, orbits, and rotations.<sup>105</sup> Life on Earth may be seen as a circle, with the cycle of seasons, the rhythm of birth and death, and the movement of water from clouds to rain to transpiration in plants and back again.<sup>106</sup> In fact, “Western physicists confirm that the same atoms and sub-atomic particles may be part of the soil on Monday, a plant on Tuesday and us

99. Christopher Gilkerson, *Poverty Law Narratives: The Critical Practice and Theory of Receiving and Translating Client Stories*, 43 HASTINGS L.J. 861, 920 (1992).

100. Earth Charter, *supra* note 4, at ¶ 2.

101. BELENKY et al., *supra* note 55, at 21 (featuring the work of psychologists and linguists to explain the gendered nature of the binaries that constitute our language).

102. Judith E. Koons, *Gunsmoke and Legal Mirrors: Women Surviving Intimate Battery and Deadly Legal Doctrines*, 14 J.L. & POL'Y 617, 683-85 (2006).

103. Griscom, *supra* note 23, at 271-81.

104. See, e.g., RICHARD LOUV, *LAST CHILD IN THE WOODS: SAVING OUR CHILDREN FROM NATURE-DEFICIT DISORDER* (2008); NAISH, *supra* note 28, at 4-6; E.F. SCHUMACHER, *SMALL IS BEAUTIFUL: ECONOMICS AS IF PEOPLE MATTERED* (Harper & Row, Publishers Inc. 1979) (1989).

105. SAHTOURIS, *supra* note 38, at 16-26.

106. See THICH NHAT HANH, *BEING PEACE* 45-46 (1996) (1987).



on Wednesday.”<sup>107</sup> Even the predator and prey relationship bespeaks of a circle of intimacy.<sup>108</sup> Beings on Earth serve as food for others.<sup>109</sup>

Thomas Berry referred to this tendency of the universe as communion.<sup>110</sup> In the circle of interdependence, humankind is part of the whole.<sup>111</sup> Our proper relationship with Earth is not one of separation and exploitation, but one of membership in the Earth community.<sup>112</sup> Healthy natural systems function according to “whole-maintaining” characteristics so that each part of a system acts in a way that supports the well-being of the entire system.<sup>113</sup> Any aspect of the system that functions to undermine the whole will eventually stop operating, along with the full system.<sup>114</sup>

To take a lesson from natural systems on Earth, humanity must begin to function as a component of a larger natural community.<sup>115</sup> Much of humankind has been behaving in ways that are at odds with being “part of a whole.”<sup>116</sup> Failing to orient toward our relationship to the whole, the bulk of humanity has been acting as a whole within itself, as the center of the universe.<sup>117</sup> The current environmental distress serves as a witness to humanity’s inattention to or rejection of our interdependence with Nature.<sup>118</sup>

The theme of communion in the universe may be translated into jurisprudence as a principle of relational responsibility. Humanity is endowed with special capacities of thought and consciousness that are a means for the universe to reflect on itself, with gratitude and wonder.<sup>119</sup> Nurtured by Earth, humanity has developed abilities to establish systems of law and governance that should reflect our role as guardians of the

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107. See CULLINAN, *supra* note 2, at 146; see also *Moral Value of Nature*, *supra* note 66, at 290 (“Because quantum physics challenges the worldview of separation of humanity and nature, its findings also challenge any moral assertion that harm done to one part of nature does not harm another part of the world.”).

108. BERRY, EVENING, *supra* note 23, at 150.

109. See *id.*; see also CULLINAN, *supra* note 2, at 29.

110. BERRY, GREAT WORK, *supra* note 6, at 16.

111. Koons, *Moral Value of Nature*, *supra* note 66, at 292.

112. ALDO LEOPOLD, A SAND COUNTY ALMANAC AND SKETCHES HERE AND THERE 204 (Oxford University Press 1989) (1949).

113. CULLINAN, *supra* note 2, at 89 (quoting EDWARD GOLDSMITH, THE WAY: AN ECOLOGICAL VIEW (1996)).

114. See *id.*

115. See Oliver A. Houck, *Are Humans Part of Ecosystems?*, 28 ENVTL. L. 1, 11 (1998).

116. See CULLINAN, *supra* note 2, at 112-13.

117. See *id.*; see also Koons, *Moral Value of Nature*, *supra* note 66, at 292 (“In quantum physics, *the whole determines the behavior of the parts.*”).

118. See, e.g., Ecology Action et al., *The Unanimous Declaration of Interdependence*, (1969), available at <http://rexweyler.com/greenpeace/greenpeace-history/declaration-of-interdependence/#5>.

119. BERRY, EVENING, *supra* note 23, at 71.

Earth that birthed, clothed, and fed us.<sup>120</sup> Because we have the capacity to understand and appreciate Earth, as well as our place within the whole, we bear a unique responsibility for developing and using that knowledge to preserve the Earth community.<sup>121</sup>

In a more concrete way, humanity's relationship to Earth may be best expressed as a trust and our responsibility as a trustee.<sup>122</sup> The public trust doctrine gives legal effectiveness to the notions of communion and relational responsibility. With roots in the Magna Carta and Roman law, the ideas and values of the public trust doctrine may be traced to ancient societies in Europe, Africa, and East Asia, as well as to Native American and Muslim cultures.<sup>123</sup>

As traditionally expressed, the public trust doctrine applied trust principles to watercourses, shorelines, and underwater lands as the inherent property of the public at large or as subject to inherent easements for certain public purposes.<sup>124</sup> This tradition reflected a widespread appreciation for the public value of water and a deep reluctance to allow our waterways to be subject to extensive private acquisition.<sup>125</sup>

In the United States, courts began using trust language to describe the relationship between states and waterways in 1842.<sup>126</sup> However, the case that established the viability of the public trust doctrine in the United States was decided fifty years later, in 1892.<sup>127</sup> In *Illinois Central Railroad v. Illinois*, the United States Supreme Court recognized that the state could revoke an absolute grant of more than one thousand acres of waterfront and submerged lands in Chicago on Lake Michigan.<sup>128</sup>

120. Koons, *Moral Value of Nature*, *supra* note 66, at 329-31.

121. BERRY, GREAT WORK, *supra* note 6, at 173 (“[O]ur responsibility to the Earth is not simply to preserve it, it is to be present to the Earth in its next sequence of transformations.”). See also Patricia Siemen, *Weaving an Ethic of Right Relationships for the Earth Community*, in 3 WOMEN MOVING FORWARD 63, 78 (Judith Barr Bachay & Raul Fernandez-Calienes eds., 2008) (proposing that humans “must now consciously involve ourselves in efforts of immense spiritual and ethical maturation so as to insure the integral functioning and well being of the planet into the future”).

122. Carol M. Rose, *Joseph Sax and the Idea of the Public Trust*, 25 ECOLOGY L.Q. 351, 351 (1998).

123. Charles F. Wilkinson, *The Headwaters of the Public Trust: Some Thoughts on the Source and Scope of the Traditional Doctrine*, 19 ENVTL. L. 425, 429-30 (1989).

124. See *id.* at 427; see also Rose, *supra* note 122, at 351; Patricia E. Salkin, *The Use of the Public Trust Doctrine as a Management Tool over Public and Private Lands*, 4 ALB. L.J. SCI. & TECH. 1, 2 (1994).

125. Wilkinson, *supra* note 123, at 430-431.

126. See *Martin v. Waddell*, 41 U.S. 367 (1842) (involving approximately one hundred acres covered by water in the state of New Jersey that had been set aside by the legislature for oyster farming).

127. See *Ill. Cent. R.R. v. Illinois*, 146 U.S. 367 (1892).

128. See *id.* at 453-55; see also Wilkinson, *supra* note 123, at 452.

According to the court, the state had received title to the harbor at statehood, but the title was impressed with a trust to maintain the waterways for public use.<sup>129</sup>

A milestone in the evolution of the public trust doctrine in the United States took place in 1970 with the publication of *The Public Trust Doctrine in Natural Resources Law* by Professor Joseph L. Sax.<sup>130</sup> Acknowledging the conventional boundaries of the public trust doctrine, Sax also “unhooked it from its traditional moorings on or around water bodies and applied it to dry land as well.”<sup>131</sup> In widening the concept of the public trust, Sax was instrumental in shifting the focus of the doctrine to environmental protection.<sup>132</sup> As a reflection of changing public values toward Earth, the public trust doctrine has addressed “conservation, scenic resources, open space, generation of energy, and preservation of ecosystems and historical sites.”<sup>133</sup>

As applied to water, the public trust doctrine is a “set of modest beliefs,” including a belief in the propriety of short-term private interests accommodating broader public values, an understanding of the necessity of property rights yielding to responsible regulation, a recognition that polluting rivers is wrong, as well as “a belief that our rivers and canyons are more than commodities, that they have a trace of the sacred.”<sup>134</sup> As applied to other aspects of Nature, the public trust doctrine has the potential to catalyze us into the next phase of our relationship with Earth, a phase in which human law and governance express our responsibility to safeguard the well-being of Earth as a trust.<sup>135</sup> With this catalyst, what is changed is not only the law, but also human hearts and minds. Without a change in human consciousness to embrace our responsibilities as members of the Earth community, no set of legal doctrines will resolve the environmental crises of the 21st century.

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129. *Ill. Cent. R.R.*, 146 U.S. at 452-459.

130. See Joseph L. Sax, *The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970); see also Joseph L. Sax, *Liberating the Public Trust Doctrine from its Historical Shackles*, 14 U.C. DAVIS L. REV. 185 (1980-81); Rose, *supra* note 122, at 352.

131. Rose, *supra* note 122, at 352.

132. Salkin, *supra* note 124, at 2.

133. See *id.* at 3; M. Casey Jarman, *The Use of the Public Trust Doctrine for Resource-Based Area-Wide Management: What Lessons Can We Learn from the Navigable Waters Trust?*, 4 ALB. L.J. SCI. & TECH. 7, 8 (1994) (“While not perfect, the public trust doctrine has the potential for protecting the integrity of ecosystems in a way that legislative and other common law remedies do not.”); see also Mary Christina Wood, *Protecting the Wildlife Trust: A Reinterpretation of Section 7 of the Endangered Species Act*, 34 ENVTL. L. 605 (2004).

134. Wilkinson, *supra* note 123, at 471-72.

135. Mary Christina Wood, *Nature’s Trust: Reclaiming an Environmental Discourse*, 25 VA. ENVTL. L.J. 243, 431, 462 (2007); BERRY, GREAT WORK, *supra* note 6, at 201.

## V. THE PRINCIPLE OF DIFFERENTIATION: EARTH DEMOCRACY

Nature abhors uniformity.  
 – Thomas Berry<sup>136</sup>

Creativity is at the heart of the workings of the universe.<sup>137</sup> With ever-expanding complexity, the universe expresses an “outrageous bias for the novel, for the unfurling of surprise in prodigious dimensions throughout the vast range of existence.”<sup>138</sup> On Earth, Nature produces an unending demonstration of diversity, from species and structures to individuals and dynamics: “No two days are the same, no two snowflakes, no two flowers, trees, or any other of the infinite number of life-forms.”<sup>139</sup>

In considering systems of governance inspired by patterns of Nature, Cormac Cullinan proposed that the diversity of Earth’s regulatory systems might be expressed through Earth Democracy.<sup>140</sup> At present, constitutional democracies articulate the purpose of governance to be “of the people, by the people, and for the people.”<sup>141</sup> In our present circumstances, we may ask how well governance “for the people” has worked. A short-term focus on human economic gains has placed Earth’s biosphere, species, and ecosystems in jeopardy. Instead, diversified systems of Earth governance would be of the people and by the people, but *for* the whole Earth community.<sup>142</sup>

Through an approach to governance called Earth Democracy, humanity’s role is recontextualized within the Earth family and girded with a purpose that safeguards the wider Earth community.<sup>143</sup> With roots in ancient societies, Earth Democracy is an emerging political movement that is gathering under banners of peace, justice, and sustainability.<sup>144</sup> According to physicist and environmental activist Vandana Shiva, “Earth Democracy connects the particular to the universal, the diverse to the common, and the local to the global.”<sup>145</sup>

To respect the particular, Earth Democracy emphasizes local governance.<sup>146</sup> As a “living democracy,” this type of governance “grows

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136. BERRY, GREAT WORK, *supra* note 6, at 149.

137. SWIMME & BERRY, UNIVERSE STORY, *supra* note 36, at 71.

138. *Id.* at 73.

139. BERRY, GREAT WORK, *supra* note 6, at 149.

140. CULLINAN, *supra* note 2, at 91.

141. A. Lincoln, Gettysburg Address (Nov. 19, 1863). *See also* CULLINAN, *supra* note 2, at 133-34.

142. CULLINAN, *supra* note 2, at 133-34.

143. *See* VANDANA SHIVA, EARTH DEMOCRACY 1, 9-11, 88-89 (2005).

144. *Id.* at 1.

145. *Id.*

146. *See id.* at 10, 64.

like a tree, from the bottom up.”<sup>147</sup> People who are grounded in a place, who know the plants and animals, seasons and signs, ecosystems and processes of that place on Earth are in the best position to speak and care for the lands, waters, and beings of that community.<sup>148</sup> Localization may pose “an antidote to globalization,” which has led to the loss of biological and cultural diversity through global economics, transnational corporations, and industrial agribusiness.<sup>149</sup>

Earth Democracy recognizes that decisions should be made at the most appropriate level. Not every decision is made at the local level.<sup>150</sup> Instead, Earth Democracy is guided by the principle of subsidiarity, calling for decisions to be made at the lowest appropriate level of governance.<sup>151</sup> Through subsidiarity, local control would be denominated for urban air pollution, regional control would be appropriate for transboundary air pollution, and global control would be recognized for global atmospheric pollution.<sup>152</sup>

An example of Earth Democracy at the local level may be found in the Democracy Schools<sup>153</sup> that have arisen from the efforts of Pennsylvania townships to keep corporate factory hog farms out of their communities.<sup>154</sup> With assistance from the Community Environmental Legal Defense Fund, local groups drafted ordinances banning corporate actors from bringing such business into their communities, and then broadened home rule powers to grant constitutional rights to ecosystems while stripping corporations of constitutional rights.<sup>155</sup> Citizens in the conservative farming communities then became engaged in Democracy Schools after state regulators allowed waste hauling corporations to

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147. *Id.* at 10.

148. *See id.* at 82-83; *see also* ERIC T. FREYFOGLE, *BOUNDED PEOPLE, BOUNDLESS LANDS: ENVISIONING A NEW LAND ETHIC* 158 (1998).

149. *See* SHIVA, *supra* note 143, at 88-91; *see also* BERRY, *GREAT WORK*, *supra* note 6, at 149 (asserting that industrial agriculture violates the universe covenant and the Earth covenant).

150. SHIVA, *supra* note 143, at 64.

151. *See id.*; *see also* Armin Rosencranz, *Enforcing Environmental Norms Under International Law: The Origin and Emergence of International Environmental Norms*, 26 *HASTINGS INT’L & COMP. L. REV.* 309, 310 (2003) (linking the norm of subsidiarity to the 10th Amendment of the U.S. Constitution).

152. Rosencranz, *supra* note 151, at 310.

153. The Community Environmental Legal Defense Fund, Democracy School, <http://www.celdf.org/DemocracySchool/tabid/60/Default.aspx> (last visited Sept. 7, 2009) (noting that a Democracy School “explores the limits of conventional regulatory organizing and offers a new organizing model that helps citizens confront the usurpation by corporations of the rights of communities, people, and the Earth.”).

154. Thomas Linzey, *Of Corporations, Law, and Democracy: Claiming the Rights of Communities and Nature*, Twenty-Fifth Annual E. F. Schumacher Lectures (Hildegard Hannum ed., October 2005), (transcript available at [http://www.schumachersociety.org/publications/linzey\\_06.html](http://www.schumachersociety.org/publications/linzey_06.html)).

155. *Id.*

spread toxic sewage sludge in their communities.<sup>156</sup> Democracy Schools provide communities with tools “to bypass the regulatory system, where they are destined to lose, and to learn to defend themselves where they have a fighting chance”—on citizens’ rights in a constitutional democracy.<sup>157</sup>

At the bioregional level, Earth Democracy supports efforts to institute forms of governance based on ecosystems.<sup>158</sup> A proposal for “collaborative ecosystem governance” articulates the need for decision-making at the ecosystem level and gives examples such as the “watershed approach” to protection of aquatic ecosystems that is taking place in the Chesapeake Bay and Great Lakes Programs.<sup>159</sup> Because ecosystems such as the Chesapeake Bay do not fit within conventional governmental boundary lines, one important feature of this model is horizontal and vertical coordination across governments at the same level as well as across multiple tiers of government.<sup>160</sup> In addition, ecosystem governance requires interagency coordination among, for example, officials from wildlife management and fisheries, land and water supply managers, staff members of an array of environmental protection agencies, and land use, forestry, and agriculture officials.<sup>161</sup> Ecosystem governance also calls for coordination among a host of public and private actors, including representatives of environmental organizations, industry, and citizen groups.<sup>162</sup> This type of collaborative governance

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156. *Id.* See also Jeffrey Kaplan, *Consent of the Governed: The Reign of Corporations and the Fight for Democracy*, ORION, Nov. 1, 2003, at 54, available at <http://www.orionmagazine.org/index.php/articles/article/132/>; see also Press Release, The Community Environmental Legal Defense Fund, Packer Township Prohibits Corporate Sludge Dumping (June 12, 2008), <http://www.celdf.org/Default.aspx?tabid=528>.

157. The Community Environmental Legal Defense Fund, Organizing a Democracy School, <http://www.celdf.org/DemocracySchool/OrganizingaDemocracySchool/tabid/360/Default.aspx> (last visited June 16, 2009).

158. See Bradley C. Karkkainen, *Collaborative Ecosystem Governance: Scale, Complexity, and Dynamism*, 21 VA. ENVTL. L.J. 189, 207-08 (2002) (recognizing “natural kinds” of ecosystems, such as estuaries, which have “a common core of objectively discernible physical characteristics . . . and . . . thick and localized concentrations of interacting and mutually interdependent plant and animal communities cohabiting those distinctively estuarine habitats.”).

159. *Id.* at 191. An “ecosystem approach” to federal oceans and land use decision-making may be seen on a wide scale, spurred by the growth of the field of ecosystem science. E.g., Robert B. Keiter, *Ecological Concepts, Legal Standards, and Public Land Law: An Analysis and Assessment*, 44 NAT. RESOURCES J. 943 (2004); Alfred R. Light, *The Waiter at the Party: A Parable of Ecosystem Management in the Everglades*, 36 ENVTL. L. REP. 10771 (2006); Howard S. Schiffman, *Moving from Single-Species Management to Ecosystem Management in Regional Fisheries Management Organizations*, 13 ILSA J. INT’L & COMP. L. 387 (2007).

160. See Karkkainen, *supra* note 158, at 207, 212, 217-18.

161. *Id.* at 218.

162. *Id.* at 218-19.

system, by bringing together actors at many different levels for a common purpose, demonstrates how an ecosystem focus has the potential for renewing democracy.<sup>163</sup>

At the global and nation-state level, Earth Democracy can be expressed in ways that recognize our duty to future generations.<sup>164</sup> The current evidence on global warming clearly demonstrates that actions taken now will have an impact on the systems and inhabitants of the world in the middle to latter half of the 21st century.<sup>165</sup> The severity and irreversibility of anticipated impacts of global warming mandate a response from the present generation.<sup>166</sup> That response should match the scientific data that has been presented, requiring greenhouse gases to be reduced to the level that accords with the natural capacity of Earth to remove them from the atmosphere.<sup>167</sup> Moreover, the looming extinction rates of other species put significant pressure on the existing moral and legal framework to expand consideration not only to future generations of human beings, but also to remote species and Earth systems.<sup>168</sup> Reconstructing law and governance along the lines of Earth Democracy has the potential to keep humanity from creating a “garbage heap” for the diversity of life that will follow us.<sup>169</sup>

In these ways, Earth Democracy is not only an environmental philosophy, but it is also a political philosophy. In assuming our duties to Earth, humanity also creates diverse democratic approaches to

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163. *Id.* at 239, 242.

164. See United Nations Conf. on Env't and Dev.: Convention on Biological Diversity pmbl., art. 2, June 5, 1992, 31 I.L.M. 818, available at <http://www.cbd.int/convention/convention.shtml> (declaring the determination “to conserve and sustainably use biological diversity for the benefit of present and future generations” and defining “sustainable use” in terms of maintaining the “potential to meet the needs and aspirations of present and future generations”); see also SHIVA, *supra* note 143, at 1.

165. See Stern, *supra* note 9, at i.

166. Weston & Bach, *supra* note 50, at 14. See Bryan G. Norton, *Future Generations, Obligations to*, in 2 ENCY. OF BIOETHICS 892, 895 (Warren T. Reich ed., 1995) (defining sustainability in moral terms: “each generation is obligated to use the earth, and especially the processes that sustain its productivity, so that future generations face options and possibilities as rich as the preceding generation had.”).

167. See Stern, *supra* note 9, at xi (relaying information about the absorption capacity of the Earth, five gigatonnes of carbon dioxide equivalent (5 GtCO<sub>2</sub>e), which is being greatly exceeded by current annual emissions); see generally The Tomorrow Project, *What Will Shape the Next 20 Years?* (June 26, 2007), available at <http://www.tomorrowproject.net/pub> (noting that present annual emissions are over forty GtCO<sub>2</sub>e).

168. See Stone 1985, *supra* note 76, at 13 (suggesting that the extinction rate “puts pressure on the existing moral and legal framework to come up with new principles for the conservation and stewardship” of Earth).

169. Joel Feinberg, *The Rights of Animals and Unborn Generations*, in *Philosophy and Environmental Crisis* 64-65 (W. Blackstone ed., 1980).

governance. Consequently, the preservation of the Earth community is linked with the reinvention of local, regional, and global governance.

## VI. CONCLUSION

How can desire fail?  
-- we have only begun

to imagine justice and mercy,  
only begun to envision

how it might be  
to live as siblings

with beast and flower,  
not as oppressors.

– *Denise Levertov*<sup>170</sup>

Earth Jurisprudence seeks to shift the focus of jurisprudence from a narrow, anthropocentric perspective solely on the welfare of humanity to an eco-centered perspective that recognizes humankind as a part of the broader Earth community. To make that shift, this article has proposed that we need a depth of vision that appreciates the intrinsic value of Earth and all beings, systems, and entities in Nature, a clarity of vision to embrace our relationship with Earth as a trust, and a breadth of vision to support Earth Democracy in all forms of governance.

We have entered a pivotal time in the history of Earth, when the likelihood of global warming of at least two degrees Celsius will result in the compromise of all major ecosystems of Earth and the extinction of thousands of species.<sup>171</sup> As the moral agents on this planet, humankind has the responsibility to recreate human institutions to meet this challenge. It is not too late for a renewal of systems of law and governance. The time is right for humanity to envision new systems of jurisprudence for the well-being of the entire Earth community. Earth Jurisprudence is in bud.<sup>172</sup>

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170. Levertov, *supra* note 1, at 55.

171. Stern, *supra* note 9, at iii, v.

172. Levertov, *supra* note 1, at 55 (“So much is unfolding that must complete its gesture. . .”).



