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The Greening of Religion Hypothesis (Part One): From Lynn White, Jr and Claims That Religions Can Promote Environmentally Destructive Attitudes and Behaviors to Assertions They Are Becoming Environmentally Friendly

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Abstract

Lynn White, Jr's 'The Historical Roots of Our Ecologic Crisis', which was published in *Science* in 1967, has played a critically important role in environmental studies. Although White advanced a multifaceted argument, most respondents focused on his claim that the 'Judeo-Christian' tradition, especially Christianity, has promoted anthropocentric attitudes and environmentally destructive behaviors. Here, in Part One of a two-part study, I demonstrate that White was not the first to make such an argument and analyze how White's article precipitated efforts by religionists and scholars alike to uncover or invent pro-environmental interpretations of many religious traditions. I then label subsequent claims that the world's religions are becoming more environmentally friendly as 'The Greening of Religion Hypothesis' and argue that this cultural history of the post-White ferment sets the stage for a much-needed comprehensive review of research illuminating this hypothesis, which is taken up in Part Two of this study.

Keywords

Lynn White Jr, Greening of Religion Hypothesis, religion and ecology, environmental mobilization, environmental behaviors, nature religions, environmental stewardship, reverence for life, kinship ethics, biocentrism, ecocentrism, dark green religion, religious naturalism.

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Introduction

In March 1967, *Science* published what would become one of its most cited articles. 'The Historical Roots of Our Ecologic Crisis' was written by UCLA historian Lynn White, Jr, who first advanced his argument on 26 December 1966 in a lecture to the Association of the American Academy of Science.[1] By May 2016, White's article had been cited 924 times in the Web of Science's core collection and, according to Google Scholar, 4,600 times in the wider scholarly world.

The article was published at the cusp of an age in which increasing numbers of people were eager to understand the causes of and to find solutions to our increasingly obvious environmental predicaments, which helps to account for its high impact. White offered a diagnosis and prescription that was provocative, plausible, and controversial, as well as difficult to prove or falsify. The intense, subsequent ferment represents the efforts of thousands to come to terms with his claims.

My effort in Part One of this study is to provide a cultural history of the types of claims White made and reactions to them. Part Two, written with Gretel Van Wieren and Bernard Zaleha, provides a comprehensive review of qualitative and quantitative research that illuminates the role of religion in environment-related perceptions, values, and behaviors. Additionally, in Part Two, we propose fresh lines of inquiry and research that we hope will clarify areas of confusion and dramatically advance understanding of the barriers to and possibilities for mobilizing human beings toward more rapid, creative, and effective responses to the ongoing and intensifying environmental crisis, which motivated White to write a half century ago.

I begin by reviewing White's views, including aspects of them some analysts have ignored or neglected.

1. 'The American Association for the Advancement of Science, the "Triple A-S" (AAAS), is an international non-profit organization dedicated to advancing science around the world by serving as an educator, leader, spokesperson, and professional association. In addition to organizing membership activities, AAAS publishes the journal *Science*…and spearheads programs that raise the bar of understanding for science worldwide. Founded in 1848, AAAS serves some 262 affiliated societies and academies of science, serving 10 million individuals. *Science* has the largest paid circulation of any peer-reviewed general science journal in the world, with an estimated total readership of one million' (AAAS 2013).

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The Theses of Historian Lynn White, Jr

White began his wide-ranging essay by noting how little we know about anthropogenic variables precipitating negative environmental changes. He suggested, nevertheless, that technological innovations in medieval times (fifth–fifteenth centuries)—especially what he said was violent plow agriculture—played an important role in a cultural transformation in which Western peoples changed from understanding themselves as part of nature to exploiters of it. These technological innovations also set the stage for an instrumental and reductionist science, which was most clearly exemplified by Francis Bacon during the Renaissance. It was White's hypothesis about the role of religion in environmental decline, however, that was most controversial and gained the greatest attention.

White contended that Western scientific and religious ideas, working in concert, were largely responsible for the widely perceived ecological crisis. Although much of the world was self-consciously secular, he averred, 'Human ecology is deeply conditioned by beliefs about our nature and destiny—that is, by religion' and specifically, by 'Christian teleology' with its 'implicit faith in perpetual progress' (1967: 1205). The most important variables in environmental decline, White went on to argue, were Christianity's deep anthropocentrism and its disenchantment of nature. The anthropocentrism was established in early Judaism in the Genesis texts of the Hebrew Bible, according to White, in which 'man named all the animals, thus establishing his dominance over them' (1967: 1205). Indeed, 'God planned all of this explicitly for man's benefit and rule: no item in the physical creation had any purpose save to serve man's purposes. And he is not simply part of nature: he is made in God's image' (1967: 1205). The disenchantment also could be traced to early Judaism and to the wider monotheistic antipathy toward pagan animism.[2] This antipathy, according to White, became especially devastating in medieval Christianity:

2. '"*Animism*" is etymologically rooted in the Latin word *anima*, meaning life, breath, and soul. Today it commonly refers to perceptions that natural entities, forces, and nonhuman life-forms have one or more of the following: a soul or vital lifeforce or spirit, personhood (an affective life and personal intentions), and consciousness, often but not always including special spiritual intelligence or powers. Animistic perceptions are often accompanied by ethical mores specifying the sorts of relationships that human beings should have or avoid having with nature's diverse forces and beings. Sometimes animism involves communication, and/or communion with such intelligences or lifeforces, or beliefs that nature's intelligences and forces are divine and should be worshiped and/or beseeched for healing or other favors. Animism generally enjoins respect if not reverence for and veneration of such intelligences and

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> In Antiquity every tree, every spring, every stream, every hill had its own *genius loci*, its guardian spirit… Before one cut a tree, mined a mountain, or dammed a brook, it was important to placate the spirit in charge of that particular situation, and to keep it placated. By destroying pagan animism, Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects… The spirits *in* natural objects, which formerly had protected nature from man evaporated…and the old inhibitions to the exploitation of nature crumbled (White 1967: 1205).

As evidence, White noted, 'For nearly 2 millennia Christian missionaries have been chopping down sacred groves, which are idolatrous because they assume spirit in nature' (1967: 1206).

White thought that although Western people were becoming increasingly secular, the West's 'set of basic values' are nevertheless shaped by Christianity, and therefore, 'we shall continue to have a worsening ecologic crisis until we reject the Christian axiom that nature has no reason for existence save to serve man' (1967: 1207). Then he implicitly took his argument in a global direction with this broad claim: 'Since the roots of our trouble are so largely religious, the remedy must also be essentially religious, whether we call it that or not' (1967: 1207).[3]

White's basic contention raised a further question: What is the religious antidote to an environmentally destructive, despotic, Christianity-rooted anthropocentrism?

Although White considered Zen Buddhism to be a tradition that had some affinity with animism, he thought it was too alien to Western culture to influence it significantly. He alternately suggested Saint Francis of Assisi, who stressed 'the virtue of humility [and] tried to depose man from his monarchy over creation and set up a democracy of all God's creatures' (1967: 1207). White acknowledged that Francis expressed ethical ideas that were considered by many, including St. Bonaventure, to be heterodox and subversive. White contended, however, that Francis was no pantheist but rather, 'His view of nature

forces and promotes a felt kinship with them. Put simply, animism has to do with the perception that spiritual intelligences *or* lifeforces animate natural objects or living things' (Taylor 2010b: 15). 'Animism postulates that people can, *at least by conjecture and imagination*…come to some understanding of these living forces and intelligences in nature, and develop mutually respectful and beneficial relationships with them' (2010b: 15-16). The term was coined by anthropologist Edward B. Tylor (1871). See also the *Online Etymology Dictionary* at http://www.etymonline.com. For more on the term and its history and usage see Chidester 2005, 2011; Harvey 2006, 2013.

3. Oelschlaeger (1994) advanced a similar rationale in his effort to reform Christianity, and Fowler (1995), Gatta (2004), Berry (2015), and Stoll (2015) later made a similar assertion about the cultural influence of Christianity with a modification, that it was Calvinist Christianity that has been especially influential.

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and of man rested on a unique sort of pan-psychism of all things animate and inanimate, designed for the glorification of their transcendent Creator' (1967: 1207). White concluded his famous *Science* article with these words: 'We must rethink and refeel our nature and destiny. The profoundly religious, but heretical, sense of the primitive Franciscans for the spiritual autonomy of all parts of nature may point a direction. I propose Francis as a patron saint for ecologists' (1967: 1207).

As William French observed, however, Francis of Assisi 'was a medieval friar; not an ecologist' (2005: 672), and although Francis saw God's presence in nature, he was not advancing the idea that ecosystems and non-human organisms have intrinsic worth; moreover, his spiritual priority was evangelical and intended to lead people toward a future life in heaven, and many of his ideas devalued the corporeal world (Hart 2006). Nevertheless, given his obvious love of nature and her creatures, as French concluded, 'it is not surprising that many today who are ecologically minded find in him a kindred spirit' (2005: 672).

Indeed, in 1979, Pope John-Paul II took White's advice by declaring Francis the patron saint of 'those who promote ecology'.[4] Thirty-five years later, when he was elected Pope in March 2013, Cardinal Jorge Mario Bergoglio selected Francis as his papal name, in part because of his pro-environment sentiments. Pope Francis subsequently issued an encyclical, '*Laudato si*' ('Praise Be to You: On Care for our Common Home'), arguing strongly for environmental protection.[5] In it, as if responding directly to White, Francis acknowledged that Christianity is anthropocentric, asserting that only human beings were created in the divine image and that this confers on them a special dignity and moral value. Nevertheless, he averred, Christianity demands loving care for the entire created order.

Apart from White's view that Christian anthropocentrism precipitated environmentally destructive attitudes and behaviors (a critique that in '*Laudato si*' Pope Francis acknowledged has been influential), probably the most important claim White made in the article was the previously quoted one about the roots of our trouble being largely religious. In subsequent years, White embellished his argument, contending that man/nature dualism is so deep in the minds and hearts of Western

4. Bula, Inner Sanctos, Proclaiming St Francis of Assisi as Patron Saint of Ecology, John Paul II, as a perpetual memorial. Online: http://francis35.org/pdf/papal_declaration.en.pdf.

5. Issued in 2015, the official version is available online at http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html.

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peoples that 'to make fundamental changes in our attitudes and actions affecting ecology' we must 'find a viable equivalent to animism' (1973: 62).

Despite his harsh critique of the forms of Christianity he knew best, White remained a devoted Christian his entire life and urged Christians to reform—not reject—their tradition (Riley 2016). The Christianity White advocated, however, was highly heterodox. He was, for example, influenced at least to some degree by Albert Schweitzer, whose 1923 'The Ethics of Reverence for Life' he mentioned favorably. Schweitzer was agnostic and impatient with metaphysical speculation, but he was nevertheless deeply influenced by the ethics of Jesus,[6] as well as by Buddhist and Jain ethics. Schweitzer further insisted that humanity must reject traditions in which only human beings have value, and he thought most religious traditions including his own Christian tradition were steeped in such a premise. Most importantly, Schweitzer's views were rooted in feelings of human insignificance in the face of an immense and mysterious universe, a felt sense of belonging to nature and empathy for non-human organisms, and recognition (in concert with evolutionary understandings) that all life shares a profound 'will to live'. This latter recognition was the heart of ethics for Schweitzer, who fervently believed that all moral creatures should respect the lives of other living things, and that such ethics come when 'experiencing the compulsion to show to all will-to-live the same reverence as I do to my own. There we have given us that basic principle of the moral which is a necessity of thought. It is good to maintain and to encourage life; it is bad to destroy life or to obstruct it' (1923).[7]

Although White had obvious affinities with Schweitzer and made essentially the same argument about the root of spiritually informed morality five decades later—asserting that 'the core of spiritual comity is courtesy, that is, not impinging on the ability of our companions to satisfy their needs' (White 1978: 107)—he did not specifically credit Schweitzer with the idea. But in a number of ways White sounded much like Schweitzer and like Aldo Leopold, who rooted his own live-and-let-live ethics in an evolutionary understanding of biotic kinship and promoted a holistic ecosystem-centered ethics (discussed presently). But

6. Indeed, Schweitzer (1931) wrote a famous book about the quest to understand the historical Jesus.

7. Schweitzer adapted the 'will to live' notion from Schopenhauer's metaphysics (Callicott 2013: 213-15). For his essay online (without the original pagination) see http://www1.chapman.edu/schweitzer/sch.reading1.html.

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White went beyond Schweitzer's biocentrism and Leopold's ecocentrism, urging Christians to extend 'comradeship' not only to all living things but to glaciers, atoms, and the universe itself (White 1978: 107; Riley 2016).[8] With the above background in mind, I suggest that White's views can be summarized with these propositions:

1. Human beings are constantly changing the environmental and social systems they belong to and depend upon, and some of the most important variables in the way this occurs are related to mutually influential technologies and religious ideas.
2. Little is known with certainty about the relative influence of technological, religious, and other variables on environmental systems.
3. There is strong historical evidence that a powerful mix of scientific, technological, and religious ideas precipitated anthropocentric attitudes that separated people from feelings of belonging to nature, suppressed animistic perceptions and beliefs, and fostered indifference to the wellbeing of non-human organisms, all of which contributed significantly, if not decisively, to the contemporary environmental crisis.
4. If hypothesis 3 holds true, then reversing the environmental crisis will require dramatic change in the collective religious consciousness that produces feelings of belonging to nature and kinship with non-human organisms, as well as ethics and behaviors that cohere with such feelings.

8. White wrote: 'Today, we have the creaturely companionship not only of the flowering tree that so enraptured Schweitzer, or the earthworm that he removed from the perils of the sidewalk: we can sense our comradeship with a glacier, a subatomic particle or a spiral nebula' (1978: 107). This passage makes it clear that White resonated with Schweitzer. But because I have never seen White quote Henry David Thoreau, John Muir, Aldo Leopold, or Rachel Carson, I asked Matthew Riley, who published an insightful 2016 dissertation focused on White, whether there was evidence that White had been influenced by these environmental luminaries. Riley replied that although White was well read and was probably familiar with them, he has found 'absolutely no mentions of them whatsoever' (24 May 2016, pers. comm.). Riley's dissertation successfully argued that White should be understood as both a critic of mainstream Western Christianity and a constructive eco-theologian (see especially 2016: 177-78). Among other things, Riley documented the influence on White of major Protestant theologians including Reinhold Niebuhr and Friedrich Schleiermacher, while detailing White's efforts to push his own religious tradition toward pro-environmental action.

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5. Some existing religious traditions, or streams within traditions, are more conducive to such understandings, feelings, and practices, than others, and could play such a role. But a radical revision of Christianity, as well as novel religious innovations, may also play such a role.

Although White focused on Christianity, it is important to note that his critique applies also to Judaism and Islam. All three of these monotheistic, Abrahamic religions, in their orthodox forms at least, have regarded paganism and animism as spiritually dangerous expressions of idolatry that must be resisted if not also violently suppressed.

An Operational, 'Family Resemblance' Approach to Analyzing 'Religion'

Before going further, I must provide an operational definition of 'religion', a term that has had scores of definitions that are often deeply contested. Rather than taking sides in these disputes, I take a strategic approach that expands the range of social phenomena that are subject to analysis. Contrary to some definitions, I do not assume that there is some *essence* to 'religion', namely, that it necessarily involves beliefs and perceptions related to non-material divine beings or supernatural forces.[9] My strategy, rather, is to take what has been labeled the 'family resemblances' approach to the study of religion. This approach seeks to illuminate the multifarious dimensions of religious experience and religion-resembling phenomena that some observers will not consider religious, without establishing definitively where the boundary lies between 'religion' and whatever is *not* religion (Saler 1993). For family-resemblance theorists, the effort to determine (or enforce) the religion boundary is a quixotic quest. The family-resemblance approach has the analytic advantage of being able to consider and analyze what some

9. A typical, traditional definition of 'religion' is 'a system of beliefs and practices that are relative to superhuman beings' (Smith and Green 1995: 893). The authors of this article state their preference for such a definition, arguing, 'This definition moves away from defining religion as some special kind of experience or worldview. It emphasizes that religions are systems or structures consisting of specific kinds of beliefs and practices: beliefs and practices that are related to superhuman beings… They need not be gods or goddesses, but may take on the form of an ancestor who can affect lives [or] benevolent or malevolent spirits who cause good or harm to a person or community. Furthermore, the definition requires that such superhuman beings be specifically related to beliefs and practices, myths and rituals' (1995: 893). Although these are good things to attend to, by essentializing religion, such definitions exclude much in human experience that could be illuminated with the lenses of religious studies.

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observers distinguish as 'religious' and 'spiritual' social phenomena. With this approach, this commonly made distinction—such as that religion is organized and institutional and involves supernatural beings, while spirituality is individualistic and concerned with the quest for meaning, personal transformation, and healing—is not considered heuristically valuable because both of these terms share most of the same characteristics. The approach also enables analyses using the lenses typically deployed by scholars of religion to illuminate the beliefs and practices of those who do not consider themselves religious (or spiritual), but who nevertheless use language typically associated with religion (expressing views such as that deforested landscapes are desecrated and relatively pristine ones are sacred).

What leads to insights about the affective or spiritual dimensions of human perception and behavior is analysis of the entire range of characteristics that are typically associated with religious phenomena. These characteristics include perceptions and practices regarding:

- sacred and profane/mundane times, spaces, objects, and organisms, as well as rituals and ethical mores regarding how people orient themselves to these things and the communities to which they are in some way related;
- food acquisition and preparation, birth, sexuality, partnerships, families, and death;
- spiritual or physical health, healing, transformation, and redemption; and
- cosmologies and cosmogonies that purport to explain the origin and unfolding of the universe and the human place and future in or beyond the biosphere.

Other common religious elements include practices and processes that:

- evoke and reinforce proper perception (both this and otherworldly), emotions (including feelings of awe, mystery, shame, love, empathy, devotion, hatred, or rage), and behavior (including toward non-human organisms and environmental systems);
- recognize or establish leaders and justify their authority and governance;
- classify organisms of all sorts into hierarchies of differing spiritual and moral value, or erode such differentiations; and
- provide meaning and community in ways that enhance wellbeing and help people cope with the fear, suffering, and death that are part of earthly experience.[10]

10. This list is adapted from Saler (1993) and Taylor (2007).

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When alert to these sorts of qualities, a wider range of environmentally-engaged individuals and groups who are engaged in religion-resembling phenomena come into view, all of which can then be analyzed through a social scientific lens. This approach enables us to examine social phenomena beyond, as well as within, the so-called 'world religions'.

Precursors to Lynn White and his Theses

White is widely but wrongly understood to have *initiated* the critique that blames Abrahamic religions for promulgating environmentally destructive beliefs and behaviors. His views were noticed and spotlighted in part because of the *zeitgeist* in which he wrote—a time of war, increasingly obvious environmental degradation and globalization, and an increased exposure in the West to non-Western worldviews. The most important reason, however, was probably because of the prominent venue, *Science,* in which White advanced his argument, which accounts for its widespread dissemination as well as its quick embrace by many readers (Callicott 1995).[11]

A decade before White's article was published Perry Miller (1956), and in the same year White's short article was published, Roderick Nash (2001 [1967]), had argued that there is a strong anti-nature impulse in North American Christianity, as did Clarence Glacken (1967) in his wider sweep of history, whose analysis was later bolstered by Donald Worster (1994). For his part, Glacken also noted that some pro-environment themes, such as the notion of 'stewardship', were also present in the tradition. As did White, all of these historians had their precursors. As early as the first century BCE, for example, the Roman epicurean, Titus Lucretius Carus, in his poem *On the Nature of Things*, rejected claims that Earth evidenced a divine, creative, intelligence. He argued, to the contrary, that much of the earth is of no use to humanity (rocks, mountains, scorching deserts and icy wildernesses), and many of its plants and animals are directly harmful to human beings (Glacken 1967: 68-69).

Two millennia later in *The Essence of Christianity*, Ludwig Feuerbach (1854 [1841]: 282) asserted, 'Nature, the world, has no value, no interest for Christians. The Christian thinks only of himself, and the salvation of

11. In November 1997 the Executive Director of the Sierra Club, Carl Pope, participated in a 'Symposium on Religion, Science and the Environment Under the Auspices of His All Holiness Bartholomew I, Ecumenical Patriarch' in Santa Barbara, California. In his comments he stated that he and an entire generation of environmentalists misread the article and adopted a simplistic view that Christianity was inherently anti-nature. His speech was abbreviated and published a year later (Pope 1998).

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his soul'. Feuerbach then provided many examples from leading Christian theologians and scoffed at Christians of his day who were trying to fuse their religion with contemporary science. Most significantly, he attacked themes in the tradition, especially the notion that God so loves human beings that he sacrificed himself for them; Feuerbach argued that this notion separates human beings from their natural history and is (to use contemporary parlance) both anthropomorphic and anthropocentric. Although Feuerbach's contention that religion is rooted in anthropomorphic projection was not new—it echoed David Hume's (1889 [1757]) assertion to this effect a century earlier—Feuerbach's view that Christian theology leads to an indifference to this world is an important precursor to White's claims that religion hinders environmental concern and action.

In the United States, also in the mid-nineteenth century, a very different critique of Christianity as a hindrance to environmental concern and action emerged, and it applied equally well to all Abrahamic religions, although Judaism and Islam were usually unmentioned. Some of the critique was indirect, such as that by Ralph Waldo Emerson, who offered an alternative to Christianity, arguing that spiritual truths could be found directly in nature, more so than in the bible and the traditions related to it. Emerson's more naturalistic protégé, Henry David Thoreau, proclaimed that he had nothing to learn from Christian priests but much to learn from Hindu and Native American societies, particularly, what he considered to be the more nature-beneficent spiritualities he thought these traditions expressed and promoted.

It was the Scottish American John Muir, however, who developed what may be the first direct and explicit critique of Christian doctrines as leading directly to nature-destroying values and behaviors. In 'Cedar Keys' (1997 [1916]: 818-25), an essay named after a small town on Florida's Gulf coast where in 1867 he concluded a long and grueling journey (mostly by foot) from Wisconsin, Muir targeted the claim in the book of Genesis that the world had been made for man.[12] He contended that this view was widespread and pernicious and that it provides theological underpinnings for anthropocentrism and indifference, if not also hostility, to non-human organisms. Muir advanced his case sardonically:

> The world, we are told, was made especially for man—a presumption not supported by all the facts. A numerous class of men are painfully astonished whenever they find anything, living or dead, in all God's universe, which they cannot eat or render in some way what they call useful to themselves…

12. According to William Cronon (1997: 852), the essay was drawn from Muir's 1867 journal and was first published posthumously in *A Thousand Mile Walk to the Gulf*.

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> To such…people…whales are storehouses of oil for us, to help out the stars in lighting our dark ways until the discovery of the Pennsylvania oil wells. Among plants, hemp, to say nothing of the cereals, is a case of evident destination for ships' rigging, wrapping packages, and hanging the wicked… But if we should ask these profound expositors of God's intentions, How about those man-eating animals—lions, tigers, alligators—which smack their lips over raw man? Or about those myriads of noxious insects that destroy labor and drink his blood? Doubtless man was intended for food and drink for all these? Oh, no! Not at all! These are unresolvable difficulties connected with Eden's apple and the Devil. Why does water drown its lord? Why do so many minerals poison him? Why are so many plants and fishes deadly enemies? Why is the lord of creation subjected to the same laws of life as his subjects? Oh, all these things are satanic, or in some way connected with the first garden (Muir 1997 [1916]: 825-26).

Muir concluded by fusing his scathing critique of illogical, theological anthropocentrism, with his belief in the value of all life:

> It never seems to occur to these far-seeing teachers that Nature's object in making animals and plants might possibly be first of all the happiness of each one of them, not the creation of all for the happiness of one. Why should man value himself as more than a small part of the one great unit of creation? And what creature of all that the Lord has taken the pains to make is not essential to the completeness of that unit—the cosmos? The universe would be incomplete without man; but it would also be incomplete without the smallest transmicroscopic creature that dwells beyond our conceitful eyes and knowledge (Muir 1997 [1916]: 826).

Rivaling Muir's passionate critique of Abrahamic anthropocentrism, but dramatically surpassing him in the number of historical, biblical, and scientific warrants deployed to reject it, was historian and linguist Edward Payson Evans, who spent the last three decades of the nineteenth century writing from Germany. Despite the richness of his analysis, Evans has been almost entirely ignored by subsequent scholars, but he promoted what would become a fervent belief among many environmental thinkers after White, namely, the notion that religions originating in Asia had more beneficent and empathetic attitudes and practices toward non-human animals than those rooted in Abrahamic religions. Especially noteworthy was his insistence, on evolutionary grounds, that humans were animals and kin to them, a part of nature, and that they should not consider themselves superior to it and indifferent to the well-being of other creatures (Evans 1897).[13] Evans also emphasized a sensory

13. Choice examples of Evans's perspectives include his view, presaging White, about the importance of religious ideas in behaviors toward non-human organisms: 'Throughout the Old and New Testament animals are always regarded from an

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and scientific epistemology in contrast to what he considered superstitious religions, a view he would share with much nature-based spirituality to follow. With such sensory spirituality, direct, personal experience in nature was believed to produce spiritual and moral insights, including ecological metaphysics of interdependence and mutual dependence, and feelings of belonging to nature and kinship with other organisms. Such nature experiences were also thought to subvert notions of human superiority that justify human domination over nature. This sort of sensory spirituality was present not only in Evans but in Emerson, Thoreau, and Muir;[14] and it would grow in the twentieth century, as shown in Liberty Hyde Bailey's *The Holy Earth* (1915).[15]

Muir's contemporary, the back-to-the-land philosopher John Burroughs, writing primarily in the early twentieth century, was another

anthropocentric point of view, or in some satellite relation to man' (1897: 151-52); 'There can be no doubt that this general attitude of [anthropocentric and tyrannical] mind is, in a great degree, the result of our current religious ideas and traditions and the early training that grows out of them' (1897: 148). Evans also expressed ideas that are very typical of what I will presently describe as 'dark green religion': 'Man is as truly a part and product of Nature as any other animal, and this attempt to set him up on an isolated point outside of it is philosophically false and morally pernicious' (1897: 99-100); 'A correct conception of the origin and evolution of man and his kinship with the lower forms of life is essential to the proper appreciation of his dignity and destiny, and the full comprehension of his peculiar place in Nature' (1897: 15); 'The recognition of an original affinity between man and beast, however remote the kinship may be, or whether it be based upon the ancient dogma of metempsychosis or the modern doctrine of evolution, necessarily creates a current of sympathy extending even to the most insignificant members of the great and widely diversified family of sentient beings, and rendering it impossible willfully to neglect or maltreat the "poor relations", to whom we are united by the warm and living ties of blood' (1897: 135).

Roderick Nash highlighted Evans's contribution to the critique of Abrahamic anthropocentrism (R.F. Nash 1989: 50-51), but did not go into much detail, and Donald Worster briefly noted that Evans was an early critic of anthropocentrism (Worster 1994: 185), and also included an abbreviated version of an 1894 essay that Evans wrote (the gist of which appeared Evans's 1897 book), in his anthology of significant early writings in American environmental history (Worster 1973: 198-208).

14. During his first summer in California's Sierra Nevada mountains, on 27 July 1869, Muir wrote, 'When we try to pick out anything by itself we find that it is bound fast by a thousand invisible cords that cannot be broken to everything else in the universe. I fancy I can hear a heart beating in every crystal, in every grain of sand and see a wise plan in the making and shaping and placing of every one of them. All seems to be dancing to divine music' (from his *Journal*, in Fox 1981: 291. The published version is shorter).

15. Bailey was a theist who read the Hebrew Bible as enjoining reverent care for nature.

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naturalist who considered the predominant creeds in his day incredible and instead found spiritual and moral truth in nature:

> The forms and creeds of religion change, but the sentiment of religion—the wonder and reverence and love we feel in the presence of the inscrutable universe—persists… If we do not go to church so much as did our fathers, we go to the woods much more, and are much more inclined to make a temple of them than they were (Burroughs 2001 [1912]: 246).

And in the middle of the twentieth century, two of the most influential environmental scientists and thinkers—Aldo Leopold and Rachel Carson—asserted that Western religions were deeply complicit in the environmentally destructive trends they had identified and criticized.

Writing in 1923, and later in the preface to *A Sand County Almanac* (a volume that was published posthumously in 1949 and would become a sacred text for many environmentalists), Leopold echoed Muir, whom he had once favorably quoted attacking the widespread belief that the natural world was created exclusively for humanity, with these words:[16]

> Conservation is getting nowhere because it is incompatible with our Abrahamic concept of land. We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect (Leopold 1966 [1949]: xviii-xix).[17]

16. This 1923 article, which was not be published until long after Leopold's death, included this evocative prose embracing an organicist metaphysics of interdependence, while quoting Muir to challenge anthropocentric religious beliefs: 'The essential thing for present purposes is that both admit the interdependent functions of the elements. But "anything invisible is a living being," says Ouspensky [here, referring to the Russian philosopher Petr Ouspensky]. Possibly, in our intuitive perceptions, which may be truer than our science and less impeded by words than our philosophies, we realize the indivisibility of the earth—soil, mountains, rivers, forests, climate, plants, and animals, and respect it collectively not only as a useful servant but as a living being, vastly less alive than ourselves in degree, but vastly greater than ourselves in time and space—a being that was over when the morning stars sang together, and, when the last of us has been gathered unto his father's, will still be young' (Leopold 1991 [1923]: 95); 'Most religions, in so far as I know, are premised squarely on the assumption that man is the end and purpose of creation, and that not only the dead earth, but all creatures thereon, exist solely for his use… This high opinion of his own importance in the universe Jeanette Marx stigmatizes as "the great human impertinence". John Muir, in defense of rattlesnakes, protests: "as if nothing that does not obviously make for the benefit of man had any right to exist; as if our ways were God's ways"' (in Leopold 1991 [1923]: 95-96).

17. Later in the volume, in his famous 'land ethic' essay, Leopold added sarcastically, 'Abraham knew what the land was for: it was to drip milk and honey into Abraham's mouth. At the present moment, the assurance with which we regard this assumption is inverse to our education' (1966 [1949]: 240).

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As an alternative, Leopold offered what he called 'the land ethic'—which 'enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land' (Leopold's shorthand for the entire ecological community). With such an ethic, 'A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise' (Leopold 1966 [1949]: 239, 61).

Leopold not only believed that Christianity's anthropocentrism had been destructive and that such worldviews must be overturned in favor of ethics grounded in an evolutionary and ecological worldview (Callicott 2011, 2013); he also thought the new, science-grounded worldview would be characterized by kinship feelings with non-human organisms, an understanding of ecological interdependence, a felt sense of belonging *to* nature and a delight and wonder *in* nature, as well as a 'live and let live' ethics (reminiscent of Schweitzer) that prioritized the conservation of biodiversity—even a holistic ethic of planetary care (Callicott 2013):

> All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts… It is a century now since Darwin gave us the first glimpse of the origin of species. We know now…that men are only fellow-voyagers with other creatures in the odyssey of evolution. This new knowledge should have given us, by this time, a sense of kinship with fellow-creatures; a wish to live and let live; a sense of wonder over the magnitude and duration of the biotic enterprise… It is inconceivable to me that an ethical relation to land can exist without love, respect, and admiration for land, and a high regard for its value (Leopold 1966 [1949]: 239, 116-17, 263).

Leopold's land ethic was thus rooted in a Darwinian understanding and affective experience. For Leopold, these perceptions and emotions assumed a religious character, as a kind of mystical, naturalistic pantheism, according to his family members who knew him best (Meine 1988: 506-7).[18] And as he put some of this shortly before his untimely death in 1948,

18. My interpretation is based on those closest to Leopold, as related to biographer Curt Meine by Leopold's youngest daughter Estella, who, not long before Leopold's death, asked him about his religious beliefs. As recalled by Estella, 'He replied that he believed there was a mystical supreme power that guided the universe but to him this power was not a personalized God. It was more akin to the laws of nature… His religion came from nature, he said' (Meine 1988: 506). Leopold's son Luna added that his father, 'like many of the rest of us, was kind of pantheistic. The organization of the universe was enough to take the place of God, if you like. He certainly didn't believe in a personal God, as far as I can tell. The wonders of nature were, of course, objects of admiration and satisfaction to him' (1988: 506-7).

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> No important change in human conduct is ever accomplished without an internal change in our intellectual emphases, our loyalties, our affections, and our convictions. The proof that conservation has not yet touched these foundations of conduct lies in the fact that philosophy, ethics, and religion have not yet heard of it (Leopold 1991 [1947]: 338).

My exposition demonstrates that more than two decades before White, Leopold averred that religion was both a *hindrance* and *essential* to the emotional and ethical changes needed to arrest the decline of the world's biota and ecosystems. And soon after its publication, Leopold's *A Sand County Almanac* began its dramatic ascent as one of the most influential works of environmental philosophy ever—both in and beyond the United States—a process that accelerated dramatically after the publication of a mass-market paperback edition in 1966 (Meine 1988: 25-27; Taylor 2010b: 31-35, 38, 44, 57, 75, 77, 79, 203, and especially 10-12).

By the 1960s, environmentally concerned Americans were ready to canonize such writings and authors, as they did with Rachel Carson after she published *Silent Spring* in 1962. In it, Carson presented a scientific case against the widespread use of pesticides, after which she would often be credited with inaugurating the modern environmental movement. But she also criticized human arrogance and attitudes that assumed humans should conquer nature: 'The "control of nature" is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man' (Carson 1994 [1962]: 297).

Soon after writing these words, on 12 June 1962 in a little-known commencement speech, Carson got even more specific. As did Muir and Leopold, Carson traced anti-environmental anthropocentrism to the predominant religious traditions of her time and place. 'It is good that fear and superstition have largely been replaced by knowledge', she stated while setting up her argument, 'but we would be on safer ground today if the knowledge had been accompanied by humility instead of arrogance' (Carson 1962: 7). Perhaps recalling Psalm 8.6-8's explicit declaration that in granting humans 'dominion' the Israelite God had 'put all things'—'the beasts of the field, the fowl of the air and the fish of the sea'—'under [humanity's] feet', Carson spoke to what she saw as the religious roots of this arrogance:

> In the western world our thinking has for many centuries been dominated by the Jewish-Christian concept of man's relation to nature, in which man is regarded as the master of all the earth's inhabitants. Out of this there easily grew the thought that every*thing on earth—animate or inanimate, animal, vegetable, or min*eral [*sic*, italics]—and indeed the earth itself—had been created expressly for man (Carson 1962: 7).

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To dramatize her assertion, Carson quoted the previously cited statements by Muir about the instrumental way humans view whales and other living things and concluded that Muir brilliantly 'pointed out the incredible absurdity of such views' (1962: 7). She further lamented, almost certainly drawing on other famous Muir sayings, 'We still have not become mature enough to see ourselves as a very tiny part of a vast and incredible universe, a universe that is distinguished above all else by a mysterious and wonderful unity that we flout at our peril' (1962: 8).[19]

Throughout her work, Carson subtly expressed biocentric values as an alternative to hubristic anthropocentrism. In *Under the Sea Wind* (1941), for example, she imaginatively and empathetically entered the world of marine organisms and expressed kinship with them, while also giving agency to the ocean itself by making it her central character.[20] In a candid lecture to female journalists in 1954, she underscored her conviction that human beings needed the direct and healing contact with 'the beauties of the earth'; moreover, she claimed—presaging what would later be labeled 'essentialist' ecofeminism—the notion that women are by nature closer to nature than men: 'Women have a greater intuitive understanding of such things' (Carson 1998: 161). In an equally innovative way she contended, 'This affinity of the human spirit for the earth and its beauties is deeply and logically rooted' because 'as human beings, we are part of the whole stream of life' (1998: 160). In this, Carson anticipated the biophilia hypothesis that the biologist E.O. Wilson (1984) would advance a generation later.

19. Mark Stoll (2007, 2015) and Lisa Sideris have noted that, despite such criticisms, Carson's views were deeply shaped by the Protestantism of her upbringing. As Sideris put it, 'Carson does not urge us to repent and turn to God, nor does she advocate faith as a means of correction, but her language nevertheless evokes the theology of the tradition in which she was raised'. Sideris added that Carson instead urges us to 'discover our place in the amazing universe we actually inhabit, the world as it really is' and Sideris concluded that 'this, in a nutshell, was her religion' (2008: 245).

20. Further evidence of Carson's biocentrism and her animism-and-pantheism-resembling spirituality can be found in her 'Memo to Mrs. Eales' (1998: 54-62), the recipient of which was a woman in the marketing department for the publisher of her first book. In it, she explained her effort to imagine her way empathetically and bring her readers along as well into the perspective of sea creatures and even the ocean herself. Yet, in *Silent Spring* Carson does not seem to fully embrace ecological interdependency when she refers to insects as pests and does not speak about their value within the wider ecological system (e.g., all the calories they provide to birds, bats, and other organisms), and she does not worry about introducing non-native species to control insect populations. Overall, however, she spoke most strongly of the need to reject an ideology of control, and she helped set the stage for more comprehensive consideration of the impact of pesticides and herbicides on the earth's living systems.

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All these sorts of claims would become important alternatives to the views that White had challenged. After White, environmental thinkers and activists were widely convinced that anthropocentric worldviews had to be overturned if human beings were to stop exterminating species and live harmoniously with other kinds on Earth. Nothing was more telling in this regard than in Carson's affinity with Albert Schweitzer's 'reverence for life' ethics, which she directly expressed in her posthumously published *A Sense of Wonder* (1965) and implicitly articulated by dedicating *Silent Spring* to Schweitzer.

As should be expected, the environmental luminaries described in this section differed in important ways; after all, they had different cultural, religious, chronological, and geographical contexts. Of these Emerson, Thoreau, and Muir were the best known, but there is no evidence that Leopold knew Schweitzer's or Carson's writings,[21] and Schweitzer did not know of Leopold's. And despite expressions of belonging to the biosphere, unlike Leopold, Schweitzer's ethics remained focused on individual organisms and not holistically on ecosystems, let alone the biosphere (Callicott 2013: 6, 212-15, 23-25, 32). There is, moreover, no evidence Carson read any of Leopold's writing except his 'Round River essays',[22] which were replete with hunting tales that she found distasteful (Meine 1988: 525). But despite their differences, the affinities these thinkers shared were greater than their differences, and in their own ways, their ideas presaged White's thesis.[23]

White also did not mention several Christian thinkers who had also argued that Christian responsibility demanded environmental ethics, such as forester Walter Lowdermilk, who in 1940 contended that an '11th commandment' enjoining environmental responsibility was needed; he also noted that the Chinese had severely degraded their forests and therefore, clearly, the problem was far from Christianity's alone. In the 1950s and 1960s, theologians Joseph Sittler and Richard Baer added to this fledgling ecological theology. In 1954, Sittler contended that obedient

21. According to Leopold's biographer, Curt Meine, personal correspondence, 9 July 2014. Callicott documented that the English translation of Schweitzer's *Civilization and Ethics* did not appear until 1949, after Schweitzer's death (Callicott 2013: 212), and indicated there is no evidence that either Schweitzer or Carson influenced Leopold.

22. Personal correspondence with Curt Meine, 8 July 2014.

23. Callicott argued compellingly that Schweitzer's reverence for life ethic remained highly individualistic compared to Leopold's more holistic environmental ethics, and would most aptly be described as biocentric not ecocentric (Callicott 2013: 1, 212-15), and he thinks Carson also followed Schweitzer in this regard (personal correspondence 8 July 2014).

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Christians would recognize that the creation belongs to God and is not simply for human use; in 1960 he also presented his views to the World Council of Churches, which by 1964 had begun to integrate environmental concerns in their programs (R.F. Nash 1989: 99, 103). In 1966, Baer argued similarly to Sittler but emphasized that in Genesis, after each creative act, God pronounced it good. Baer argued that the goodness referred to applied to entire ecosystems and everything that constitutes them, thereby providing an early Christian, 'intrinsic value' theory (Baer 1966b, 1966a; see also R.F. Nash 1989: 98-104). Directly or indirectly, these Christian thinkers all acknowledged that their traditions had lacked environmental concern but they also suggested that their traditions were capable of environmental reform.

All those discussed in this section believed that worldviews decisively shaped environment-related behaviors and that Abrahamic traditions, with their anthropocentric worldviews, were complicit if not directly responsible for environmental decline. Those most critical and distant from the Abrahamic traditions drew on the sciences to displace humans from the pinnacle of some great chain of being, viewing such beliefs as based on and perniciously perpetuating the delusion that the entire world was made for humanity. Indeed, many of them offered a form of what I have termed 'dark green religion' or at least, the more naturalistic pole of it, namely, a science-and-emotion-rooted spirituality of belonging and connection to nature, fused with an understanding of the tiny place humans occupy in the cosmos, and combined with kinship feelings toward non-human organisms—perceptions that are often derived from a Darwinian understanding that all forms of life have evolved from a common ancestor and are therefore related (Taylor 2010b: 13). Also integrated in such dark green worldviews are science-based perceptions of ecological interdependence, and all of these ideas contribute to a sensibility in which life on Earth is considered sacred, and worthy of reverence and protection.[24] It is worth noting, therefore, that the critique offered of anthropocentric religion has often been tied to innovative efforts either to reform radically such religions or to break dramatically from them, building new nature-revering spiritualities from an evolutionary and ecological worldview (Taylor 2008, 2010c; Callicott 2014).

24. For an extended analysis and documentation regarding Emerson, Thoreau, Muir, Burroughs, Carson, and Leopold, see Taylor 2010b: 50-58, 227-47.

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After Lynn White and The Greening of Religion Hypothesis

Religion and Nature Ferment from the Late 1960s to the 1990s

I have demonstrated White was not the first to link environmentally destructive attitudes and behaviors to anthropocentric religion and suggested that, because he wrote in a prominent venue at time of dramatic ecological change, his arguments—or rather, simplified versions of them—found fertile cultural ground in which to grow and spread. Another reason for the staying power of White's argument was that by the late 1960s others were making assertions that complemented its critique. White was especially important for those who argued that religions originating in Asia and indigenous traditions offered more ecologically beneficent ideals and practices than those found in the Western religious and philosophical traditions. Among the most influential and early of these were the writings of Ernest Friedrich Schumacher, who published an influential article, 'Buddhist Economics', and a book, *Small Is Beautiful*, bracketing White's own (Schumacher 1966, 1973a, 1973b); Gary Snyder, whose work lauded indigenous cultures and Zen Buddhism and whose 1969 book of poetry and prose, *Turtle Island*, would be awarded a Pulitzer prize (Snyder 1969); and Arnold Toynbee (1972).

Toynbee's critique of the Abrahamic traditions was especially pointed. He argued that the traditions' injunction to subdue the earth was 'immoral, impracticable, and disastrous' and that it had spread so widely that it had come to characterize modernity itself. Toynbee contrasted this hegemonic and destructive impulse with pre-monotheistic pagan societies in the West and with East Asian religions; he considered most pre- and non-monotheistic religions to be more environmentally friendly:

> My observation of the living religion of Eastern Asia, and my book-knowledge of the extinguished Greek and Roman religion, has made me aware of the startling and disturbing truth that monotheism, as enunciated in the Book of Genesis, has removed the age-old restraint that was once placed on man's greed by his awe. Man's greedy impulse to exploit nature used to be held in check by his pious worship of nature. This primitive inhibition has been removed by the rise and spread of monotheism… For people who have been brought up in the monotheist tradition, it is difficult to regain the awe of nature that was shattered by the pronouncement in Genesis 1, 28… We have been taking unlimited liberties with nature because we have been thinking of her, in monotheistic terms, as unsacrosanct 'raw material'… Monotheism is exceptional among mankind's religions and philosophies in its doctrine about what is the right relation between man and nature. The Book of Genesis licenses man to subdue nature. Confucianism and Taoism and Shinto, like the pre-Christian Greek

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> cults of the corn-goddess Demeter (Ceres, in Latin) and the wine-god Dionysus, counsel man to respect nature even when he is applying his human science to coax nature into bestowing her bounty on man… Confucianism and Shinto stand for a harmonious cooperation between man and nature. Taoism stands for letting nature take her course, undisturbed by impertinent and clumsy human interference (Toynbee 1972: 144-45).

The way to save mankind, Toynbee concluded, 'lies in reverting from the *Weltanschauung* of monotheism to the *Weltanschauung* of pantheism, which is older and was once universal' (1972: 145), embracing instead the 'more perceptive and less aggressive religious and philosophical traditions such as Confucianism, Taoism, and Shinto' (1972: 145). Schumacher, Snyder, and Toynbee were especially influential early proponents of the idea that Western religious beliefs were environmentally pernicious, but those originating in Asian, indigenous, and pagan cultures offered an environmentally friendly alternative.

The same year as Toynbee's article was published there was a 'Rights of Nature' Conference in Southern California, which represented the emergence of environmental ethics as a philosophical discipline (Taylor 2005b). In Europe the same year, Norwegian philosopher Arne Naess gave a lecture in which he coined the term 'deep ecology'; it was published the following year (1973). Naess combined a critique of Western dualism and anthropocentrism with a preference for animistic spiritualities and some streams of Vedic philosophy, which he thought had natural affinities with the notion that nature should be understood to have intrinsic value (Jacobsen 2000, 2005; Taylor 2005b). Naess's perspective inspired deep ecology and influenced a host of radical environmentalists.[25] Other environmental philosophers (often influenced by the precursors to White discussed previously) provided further impetus to the growing trend critical of Western religion and philosophy and to assuming or arguing that non-Western religions were superior.[26] Also contributing over time were environmental anthropologists and ethnobiologists who were finding that indigenous societies often have unique, religion-embedded 'Traditional Ecological Knowledge', which promotes environmentally sustainable societies.[27]

25. See, for example, LaChapelle 1978; Devall 1980; Sessions 1981, 1995; Naess 1982, 1984, 1989; Abram 1985, 1988, 1996, 2005, 2010; Devall and Sessions 1985; Bender 2003.

26. See, for example, Shepard and McKinley 1969; Shepard 1973, 1982, 1998; Callicott 1985, 1987, 1989; Callicott and Ames 1989; Callicott and Nelson 2004.

27. See, for example, Harris 1965, 1966; Rappaport 1967, 1979; Reichel-Dolmatoff 1971, 1976, 1996; Steward 1977; Lansing 1991; Berkes 1999; Posey 1999.

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A trend in thinking thus can be identified as gaining strength and nearing consensus during the 1970s, to wit: religious worldviews decisively shape environmental behaviors; Western worldviews have promoted through their religious ideas and dualistic assumptions indifference if not also hostility toward nature; and non-Western ones—especially Asian and indigenous traditions, and sometimes ancient and contemporary pagan or animistic ones—were said to offer holistic notions of interdependence and/or relational ethics of reciprocity. Given what White said in 1967 about the unlikelihood that Westerners would embrace religions such as Buddhism (let alone pagan animism), he must have been surprised at how rapidly such views, embraced and amplified by countercultural currents including the Beats, would soon become a common point of view within the environmental milieu, both in the United States and beyond.[28] Paol Pederson (and later Arne Kalland) would aptly label this sort of emerging consensus the 'religious environmentalist paradigm' (Pedersen 1995; Kalland 2005).

Although this paradigm gained widespread acceptance within this milieu, there were other responses to White and those who argued similarly. The initial ones were from Christians. One group of these could be labeled *indifferent* or even sometimes *hostile*. For these Christians, who are usually theologically conservative, environmental concerns are at best a distraction from proper religious priorities and at worst, spiritually dangerous idolatry in which people succumb to worshiping the creation rather than the creator. As historian Glacken put it, in biblical religion and subsequent theology, 'Men have no excuse for not knowing…God [or]…for idolatry', which typically involves worship of the creature rather than the Creator (1967: 161; Taylor 2010b: 176-79, 202-4).[29]

Another group of thinkers could be labeled *apologetic*. For them, Christianity is environmentally friendly if it is properly understood; Francis Shaffer was the first theologically conservative theologian to advance such an argument, and while he acknowledged that many if not most Christians had yet to understand their environmental responsibilities, he also warned them that if they did not, they would lose adherents to spiritually dangerous, pantheistic, and Eastern religions (Schaeffer 1970). Another response could be called *confessional/reconstructive*. Such thinkers have acknowledged that there are themes in scripture and tradition that hinder environmental concern and action,

28. By the environmental milieu I mean the 'contexts in which environmentally concerned officials, scientists, activists, and other citizens connect with and reciprocally influence one another' (Taylor 2010b: 13-14).

29. For example, see the warning attributed to the Apostle Paul in Romans 1.25.

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but contend that there are also ideas that support environmentally friendly behaviors, and they labored to reform their tradition in creative ways, fusing the positive themes with contemporary environmental understandings. Those taking such an approach have been both theologically conservative as well as very liberal and sometimes, even politically radical (see, e.g., Cobb 1965, 1972; Ruether 1975; Santmire 1985; Wilkinson 1981; McFague 1987). An unusual response was from theologian James Nash, whose analysis of scripture led him to the conclusion that there was no biblical warrant for biodiversity conservation and therefore, Christians would have to develop such on other grounds (1991, 2009).[30] All this said, those urging their fellow Christians toward environmental action began to gain a hearing in the early 1960s from the World Council of Churches, and over time there have been occasional bursts of pronouncements from Christian denominations and leaders, and a number of initiatives and organizations have been founded that promote environmental conservation and sustainability (Johnston 2013).

Intellectual practitioners of contemporary paganism, which had been, depending on one's historiography, undergoing either revitalization or reinvention, also joined in the religion and ecology ferment (Hutton 2000), especially during the 1970s. On the same day in 1979, for example, the feminist witch Starhawk and Margot Adler, a wiccan priestess who would become a prominent public radio journalist in the United States, published books portraying the pagan movements they had been a part of as nature religions that perceive the sacred as here and now on Earth. Adler's turn to paganism had, not incidentally, been influenced by her reading of Toynbee's article, which had been widely circulated within the American counterculture during the 1970s (Adler 1997: 325-32). More important for Adler and many others was Toynbee's claim that 'nature-worship' was 'the original religion of all mankind' and that pantheism offered a remedy to the current destructive inertia (Toynbee 1972: 144). Adler, Starhawk, and a growing chorus argued that pagan religions could and should be revived because they offered an alternative worldview in which the earth is considered sacred and worthy of reverent care. Although starting from a small base, paganism has been growing in the West's fertile, countercultural soil (Berger, Leach, and Shaffer 2003; Taylor 1995, 2001a, 2001b, 2002).

By the mid-1980s, inspired by a shared belief that religious worldviews shaped environment-related behaviors, environmentally concerned actors—both religious and environmentalist—began to think practically

30. For overviews of Christian responses, see J. Nash (2005) and Hessel and Ruether (2000).

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about how religious people might be mobilized in the environmental cause. An early example occurred in 1986 when Prince Philip of the British Royal family, along with the World Wildlife Fund (later renamed the World Wide Fund for Nature), with which he had been involved, sponsored a meeting on religion and the environment at Assisi, Italy. The site was chosen because of St Francis's reputed special (and unusual) love for all creatures, which White had mentioned in his article. Leaders from five of the world's largest religious traditions participated (Judaism, Christianity, Islam, Hinduism, and Buddhism). The Alliance for Religion and Conservation (ARC) was established as one outcome of this meeting (initially under another name) with the mission of promoting environmental concern and action by religionists and collaboration between them and conservationists, as well as powerful institutions, such as the World Bank (Jensen 1999, 2005). The ARC's efforts continued into the twenty-first century, with at least some modest accomplishments (Johnston 2013), including a second summit of world religions, again hosted by Prince Philip, at Windsor Castle in 2009.

White's article, and often the growing ferment about it, helped to precipitate soul searching among at least some scholars of religious traditions and participants in them, akin to what initially and most robustly took place among Christians in the years after White's article was published. One of the most significant of these was by the Muslim intellectual Seyyed Hossein Nasr, whose first foray into this arena was only a year after White's article was published, and who urged people to return to 'authentic religion' and reject a desacralizing, secular worldview as central to a way forward. For Nasr, of course, Islam was the best and most perceptive of the religions that, for the most part, he sympathetically analyzed (Nasr 1991 [1968], 1996). Others Muslim thinkers would soon follow (Markham and Özdemir 2005; Özdemir 2013), as well as the activist Islamic Foundation for Ecology and Environmental Sciences, which was officially established in 1994 by Fazlun Khalid, who got his start working with the ARC (Johnston 2013). Jewish religious thinkers and lay people also began in the early 1980s to interpret notions such as *tikkun olam* ('repair of the world') and justice 'in an attempt to protect humans and other species from environmental degradation, and they established a number of organizations in this effort' (Tirosh-Samuelson 2001: 100).

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The Emergence of 'Religion and Ecology' as an Academic Field and New, Ecumenical, Religious Movement

These fledgling efforts intensified in the 1990s. As alarm about global warming was added to a host of other increasingly obvious environmental problems, the ferment over 'religion and ecology' intensified, as a new generation of scholars and scholar-religionists—who generally shared White's view that the world's predominant Western religions had been a barrier to pro-environmental behavior and that solutions must be found in a reformed or new religious worldview—turned their attention to the religious dimensions of the environmental crisis. The literature exploded from this time frame, and here I can review only watershed efforts.

One of these efforts was a 'Spirit and Nature' conference held at Vermont's Middlebury College in 1990. The driving force behind this conference was Steven Rockefeller, then a Middlebury Religious Studies professor, who was also a practicing Buddhist from one of America's wealthiest and most politically prominent families. The conference featured the Dali Llama and a number of prominent religious leaders and scholars who had previously focused attention on religious responsibilities toward nature. A similarly titled American Public Television documentary produced by the well-known journalist Bill Moyers (1991) soon followed; it was in turn followed by a book of essays written by conference presenters (Rockefeller and Elder 1992). All these productions promoted the idea of nature protection as a fundamental religious duty. In 1990, David Barnhill (then a Professor of Buddhism and Environmental Studies at Guilford College) and Eugene Bianchi (a Professor of Christian Theology and specialist in Roman Catholicism at Emory University) successfully proposed to the American Academy of Religion the formation of a sub-group focused on the study of 'religion and ecology'; the group has been meeting ever since its initial session in 1991. With occasional exceptions that prove the rule, the approach has been characterized by 'engaged scholarship', namely, efforts to provide sympathetic analysis, critique, and reform in order to nudge the studied traditions toward environmentally friendly understandings and practices.

This has also been the predominant approach of those orchestrating and participating in ten 'Religions of the World and Ecology' conferences, which were hosted by The Center for the Study of World Religions at Harvard University. The gatherings took place between 1996 and 1998 and led to the publication of nine books in English (and a tenth book on Shinto, which was published only in Japanese) focusing on what the editors considered to be the 'world religions', including one on its

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exceptionally diverse indigenous traditions.[31] The conferences were orchestrated and the publication series edited by religion professors Mary Evelyn Tucker and John Grim, who have tirelessly labored to promote a greening of the world religions, often by fusing them with scientific narratives of cosmological and biological evolution. While the conferences and publications were well underway, in 1998, Tucker and Grim also founded the Forum on Religion and Ecology to complement and extend this approach and mission.

As Tucker and Grim put it in a special issue of *Daedalus* (the Journal of the American Academy of Arts and Sciences) titled 'Religion and Ecology: Can the Climate Change?' (and referring in part to their own initiatives), they explained that there are 'three methodological approaches that appear in the emerging study of religion and ecology: retrieval, reevaluation, and reconstruction' (2001: 16). The first seeks through 'historical and textual studies [to] uncover [environmentally friendly] resources within the tradition' (2001: 17). The second essentially examines whether some themes hinder environmental concern and action and must be, through the third approach, adapted 'to current circumstances in new and creative ways', which may involve modifying 'traditional ideas and practices to suit modern modes of expression' (2001: 17).

In all of their efforts, the influence of Pierre Teilhard de Chardin and his protégé—their mentor, the Passionist Catholic priest, Thomas Berry—is apparent: Tucker and Grim have played leadership roles in the Teilhard Association and they have edited and promoted many of Berry's writings.[32] With the physicist Brian Swimme, they were also deeply involved in the production of a documentary and book promoting the 'Universe Story', suggesting that awe and wonder at the unfolding universe and delight in its beauty and diversity is a form of spirituality that all can embrace, and that this kind of experience naturally redounds in reverence for nature and deep respect for the sources of existence, however understood (Swimme and Berry 1992; Swimme and Tucker 2011; Johnston 2010; Kennard and Northcutt 2011). The tone of their work has been positive and optimistic. While they have acknowledged that the world's religions have not typically made

31. See, for example, Tucker and Williams 1997; Tucker and Berthrong 1998; Chapple 2000, 2002; Hessel and Ruether 2000; Girardot, Miller, and Liu 2001; Grim 2001; Tirosh-Samuelson 2002; Foltz, Denny, and Baharuddin 2003.

32. The Tielhard Society was founded in 1964. Thomas Berry was its president during the 1970s. Grim assumed the Presidency in the early 1990s and continued well into the twenty-first century. In an interview with me (31 January 2003 in Bucknell, Pennsylvania), Tucker called the Society the 'Seedbed for Thomas Berry'.

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environmental protection a high priority, they have nevertheless asserted that religions have begun to enter a new, ecologically aware and concerned age (Tucker 2003, 2014; Grim and Tucker 2014). Their hopeful vision and view that the world's religions generally share positive nature-related values was clearly expressed in *Daedalus*:

> The project of exploring world religions and ecology may lead toward convergence on several overarching principles. As many of the essays illustrate, the common values that most of the world religions hold in relation to the natural world might be summarized as reverence, respect, restraint, redistribution, and responsibility. While there are clearly variations of interpretation within and between religions regarding these five principles, it may be said that religions are moving toward an expanded understanding of their cosmological orientations and ethical obligations. Although these principles have been previously understood primarily with regard to relations toward other humans, the challenge now is to extend them to the natural world. As this shift occurs—and there are signs it is already happening—religions can advocate reverence for the earth and its profound cosmological processes, respect for the Earth's myriad species, and extension of ethics to include all life forms, restraint in the use of natural resources combined with support for effective alternative technologies, equitable redistribution of wealth, and the acknowledgment of human responsibility in regard to the community of life and the ecosystems that support life (Tucker and Grim 2001: 19).

Tucker concluded in another work, 'The capacity of the world's religions to provide moral direction and inspiration for a resilient community of life is significant. Indeed it may prove indispensable' (2014: 20). Other scholars have also championed the potential and progress of religious environmentalism (Gottlieb 2007; Posas 2007; Watling 2009; Sponsel 2012, 2014).

Tucker and Grim and other high-profile religion scholars, including Rockefeller, played important roles in an 'Earth Charter' initiative, a multi-year collaborative process involving leaders of a number of religious traditions that sought to develop an interfaith statement of religious environmental ethics in which promoting equity among people and the preservation of biological diversity would be considered a sacred duty. The strategy was to gain United Nations endorsement and then use the Charter as leverage to cajole (if not also shame) nations, businesses, and civil society to pursue environmentally sustainable and socially just societies (Rockefeller 2005, 2008; Taylor 2010b: 178, 90-95, 205).[33]

33. Tucker credited Rockefeller's Buddhist practice for making him exceptionally sympathetic to others and therefore successful at building consensus during the Earth Charter process (Taylor interview with Tucker and Grim, Bucknell, Pennsylvania, 31 January 2003).

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A central premise of all the efforts unfolding under the 'religion and ecology' umbrella coheres with White's conviction that environmental practices are 'deeply conditioned by beliefs about our nature and destiny—that is, by religion', as Tucker and Grim put it in the preface to their religion and ecology book series (Tucker and Grim 1997: xvi). They tellingly added: 'Especially in technologically sophisticated urban societies we have become removed from the recognition of our dependence on nature. We no longer know who we are as earthlings; we no longer see the earth as sacred' (Tucker and Grim 1997: xvii).[34] This statement resembles Toynbee's and is premised on a view that the world's peoples and their religions in the past, at least generally speaking, felt more connected to nature and considered it sacred and worth protecting on religious grounds—and more so than modern people. White's statement about the important role religion plays in shaping environmental behaviors is also assumed to be true by the overwhelming majority of those who have been drawn to or consider themselves to be ethically engaged scholars of religion and ecology.[35]

From an etic (outsider/analytic) perspective, the religion and ecology movement can be viewed as a religious revitalization movement as well as a new, ecumenical, religious movement.[36] It is a revitalization movement in that it seeks to return religious people to valuable, if supposedly

34. This language resembles that produced under the auspices of the United Nation's 'Environmental Sabbath', which with the founding of the Interfaith Partnership for the Environment in 1986, sought to promote environmental awareness and action among the world's religious traditions (Johnston 2013: 185).

35. This assertion is based on my own long observations while involved with or attending sessions of the American Academy of Religion's religion of ecology group since its inception in the early 1990s, namely, that scholars involved often assumed facts not in evidence and seemed as much to be involved in new religious production as in analysis of the natural dimension of religion. Such observation led to my subsequent efforts to promote a more critical approach to the study of religion and nature, which included editing the *Encyclopedia of Religion and Nature* (2005a) and founding the International Society for the Study of Religion, Nature and Culture (ISSRNC) and its affiliated *Journal for the Study of Religion, Nature and Culture* (publishing since 2007).

36. Tucker's words demonstrate that this is not only an etic perception but her own view of the 'religion and ecology' movement she has done so much to shape: 'There is a sense of renewed hope regarding the emerging alliance of religion and ecology. That is because it is both a field and a force—a field growing within academe that is trying to break down its silo disciplines and enter into conversations of shared concerns for a sustainable future. It is also a force of empowerment on the ground and in religious institutions for leaders and laity alike. These two draw from and enhance one another—the field of religious ecology and the force of religious environmentalism' (Tucker 2014: 20).

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forgotten roots, in this case the ones that enjoin reverent care for nature and all living things. It is a *new* religious movement, and an ecumenical one at that, because it seeks to uncover and blend environment-related insights believed to be longstanding and latent in the world's religious patrimony, while grafting on scientific understandings as well. As reflected in the Earth Charter initiative, which entwines religions, science, and the environmental cause, the religion and ecology movement could even be seen as promoting a new, religio-scientific civil earth religion or planetary civilization (Deudney 1995, 1998; Deudney and Mendenhall 2016; Taylor 2010a; 2010b: 180-99).

The 'Greening of Religion Hypothesis'

Apart from their efforts to promote religious environmentalism, those involved in the religion and ecology movement have been advancing fact claims, including: religious ideas are important drivers of environment-impacting behaviors; the world's religions have ideas that can spur environmentally friendly behavior and increasingly are doing so; and, green religions are critically important in the quest for environmentally sustainable societies. I have called this cluster of claims 'The Greening of Religion Hypothesis' (Taylor 2011). These claims should be taken seriously because people involved in social movements can be keen observers of them, including with regard to their tributaries, transformations, and societal influences. Yet, these sorts of claims should not be accepted as accurate without attention and analysis of all relevant and available evidence. It is better, therefore, to draw on such perceptions and claims for hypothesis generation, which can then be subject to further scrutiny.

The overview and analysis I have provided shows how difficult it is to assess whether, where, when, and to what extent any 'greening of religion' is underway or might yet take place, and who might be involved in such efforts. To grapple toward such an understanding, we must assess whether the religious environmentalist paradigm and the corresponding 'religion and ecology' movement are seeing social reality accurately by asking questions, such as:

- Are religious ideas really as influential in shaping environmental behaviors as claimed, or are they unimportant or minor ones?[37]

37. Some scholars challenge the view that ideas drive social change movements (Meyer and Rohlinger 2012). Lynn White acknowledged that 'No sensible person could maintain that all ecologic damage is, or has been, rooted in religious attitudes' but still insisted that 'in the end one returns to value structures' (White 1973: 57-58).

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- Have most religious traditions typically considered nature to be sacred and worthy of reverent care (thus providing a foundation for the envisioned, green, revitalization)?
- Are there dimensions to these traditions that promote indifference or hostility toward non-human organisms or environmental systems more than environmentally salutary behaviors?
- Through what methods, if any, can we tease out the religion variable from a host of other ones to reveal religion's eco-political influence?
- To the extent that religious individuals and groups are advancing environmentally concerned identities, is this because of something native to the particular tradition or rather, is it a strategic response to a market demand, consciously or not?
- Or is it a gambit for relevance, prestige, or power, in response to and in the midst of the rise of secularism?
- And what are the prospects for the new religious or religion-resembling worldviews (both in terms of their growth and political influence), which cohere with or are rooted directly in science while expressing and promoting reverence for life and corresponding lifeways and social changes; and to what extent and under what circumstances are or might these new spiritual forms be grafted onto longstanding religious traditions?
- Finally, because contemporary scholarship has emphasized the analytic and even political dangers of treating religious peoples and traditions as monolithic, is the effort to understand the religion variable in the human-environmental prospect so fraught that the effort itself is quixotic?

The quest to understand the role of religion in environment behaviors is daunting—all the more so when considering also those individuals and groups who have quasi- or implicitly religious experiences, perceptions, and practices. A careful review of extant historical and social scientific studies can illuminate these questions, if partially and imperfectly. It is possible, moreover, to springboard from these studies to new and more methodologically sophisticated approaches, which could track developments over time. Part Two of this study provides the most comprehensive review of studies yet published that illuminate these questions and set the stage for future research into the complicated relationships between what we construe as 'religion' and 'nature'.

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