

READING BEYOND ROOTS: THE THEOLOGICAL AND WEBERIAN ASPECTS
OF LYNN WHITE'S SCHOLARSHIP

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ABSTRACT

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Although best known for his perceived critiques of Christianity in his 1967 article, “The Historical Roots of Our Ecologic Crisis,” this dissertation draws upon Lynn Townsend White, jr.’s lesser-known texts and unpublished archival materials to reassess White’s work. I argue that depictions of White that rely solely on reductionistic readings of “Historical Roots” obscure the theoretically rich and nuanced theoretical and methodological underpinnings of his work. The goal of this dissertation, then, is to expand upon the intellectual legacy of White and to develop a deeper understanding of his ideas by exploring his larger body of work, examining his use of Max Weber’s social theory, and by highlighting his religious life and theological ideas, most notably his articulation of a “spiritual democracy of all God’s creatures.”

Since White’s work is a primary shaper of much of the scholarship in the field of religion and ecology, I argue that scholars must not just look to White’s critiques, but also to the

solutions he gives. This provides scholars a broader range of resources and ideas from which to draw as they explore the core issue of religion's efficacy in addressing the environmental crisis. These include, but are not limited to, White's constructive theological concepts and his Weberian (or ideo-centric materialist) understanding of the relationship between changes in religious ideas and values and environmental attitudes and behavior. As a project of rehabilitation, this research provides a richer, more accurate portrayal of White's intellectual and theological legacy and also attempts to address lacunae and misunderstandings present in the scholarship of those who have responded to, agreed with, and criticized White. In doing so, this dissertation is an invitation to scholars to utilize these findings to rethink the way in which White's work is used in discussing the relationship between religious ideas, values, and environmental attitudes and action. This dissertation is the first monograph length assessment of the life and work of White.

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1 – Introduction: The “Lynn White Thesis”

Few publications on the subject of religion and ecology can generate the same magnitude of emotional response as that engendered by Lynn Townsend White jr.’s¹ infamous 1967 article, “The Historical Roots of Our Ecologic Crisis” (hereafter referred to as “Historical Roots”). A source of continuous debate and controversy, the core argument in “Historical Roots,” which has been dubbed the “Lynn White thesis,”² essentially states that “Christianity bears a huge burden of guilt”³ for the ecological crisis. In order to arrive at this conclusion, White proposed that Western attitudes towards science and technology, which he viewed as the chief source of the current ecological crisis, stemmed from social and ethical shifts that occurred in the Middle Ages.⁴ These

¹ White preferred that his name be spelled with a lower-case “j” in “jr.” In honor of his wishes, I will

² I place the phrase “Lynn White thesis” in quotes to indicate that there is no singular agreement upon what exactly the “Lynn White thesis” is. It has become common practice to refer to one or several aspects of White’s argument in “Historical Roots” as the “Lynn White thesis,” for example, using it to refer to his argument about biblical dominion or his suggestion that religion is both part of the problem and the solution to the environmental crisis. However, I resist using the term because it obscures both the complexity of White’s multi-layered argument and also the continuously evolving nature of White’s thought on the subject of religion and ecology. Thus, where others might refer to the “Lynn White thesis,” I instead use terms that hint at the plurality or changing nature of White’s work (e.g. “White’s arguments in ‘Historical Roots,’” “White’s hypotheses,” or “White’s ideas”).

³ Lynn Townsend White, jr., “The Historical Roots of Our Ecologic Crisis,” *Science* 155, no. 3767 (March 10, 1967): 1206.

⁴ White, “Historical Roots,” 1207.

shifts, he contended, could be traced to underlying ideas and values endorsed by mainstream forms of Latinized, Medieval Christianity such as the scriptural command to have “dominion” over the earth, the Christian belief in linear time and historical progress,⁵ and the belief that humanity shares (at least in part) God’s transcendence over nature. “Christianity, in absolute contrast to ancient paganism [i.e. pre-Christian European religions that viewed non-human nature as alive and imbued with spirits] and Asia’s religions,” he wrote, “not only established a dualism of man and nature but also insisted that it is God’s will that man exploit nature for his proper ends.”⁶ He concluded “Historical Roots” by saying that one cannot just look to technology and science to fix the ecological crisis; rather, one must examine and work to change the “root” cause of the problem, namely the core religious ideas and values which make environmentally destructive behavior morally acceptable. If he is correct in this assessment, then it is necessary to “find a new religion, or rethink our old one [i.e. Western, Latinized Christianity].”⁷

This summary of White’s argument is purposefully simplistic. In this dissertation I argue that depictions of White such as this one obscure the theoretically rich and nuanced theoretical and methodological underpinnings of his work. The goal of this dissertation, then, is to expand upon the intellectual legacy of White and to develop a deeper understanding of his ideas by exploring his larger body of work, examining his

⁵ Ibid., 1205.

⁶ Ibid., 1207.

⁷ Ibid., 1206. White distinguished between Latin, Medieval Christianity and other Greek forms of Christianity. The former, he argued, allowed for the particular ecologically destructive attitudes towards nature that drive the current environmental crisis while Greek forms of Christianity did not do so to the same degree.

use of Max Weber's social theory, and by highlighting his religious life and theological ideas.

The unflagging presence of "Historical Roots," whether praised for its perspicacity or hastily disavowed for its perceived impudence, is an unmistakable landmark dominating the intellectual horizon for those who study the relationship between religion and the environment. It is at once iconic and iconoclastic. "The claims made for the impact of White's thought are sometimes startling," observes Elspeth Whitney, a historian and leading analyst of White's work on religion and ecology.⁸ Originally given as a speech in 1966 and then printed in the American Academy for the Advancement of Science's academic journal *Science*, one of the most widely read peer-reviewed scientific journals in the world, White's "Historical Roots" is frequently touted as "the single most cited article in the entire history of that periodical."⁹

Although a well-respected historian and an expert on medieval technology, White's foray into religious and ecological issues has been repeated, ramified, and renounced in a wide array of academic disciplines: he is cited frequently by environmental ethicists, ecotheologians cannot seem to escape the irresistible allure of his ideas, and his conclusions have become so ingrained in environmental studies that it has been called a part of popular "environmental 'folklore'"¹⁰ and has even been dubbed "a

⁸ Elspeth Whitney, "Christianity and Changing Concepts of Nature: An Historical Perspective," in *Religion and the New Ecology: Environmental Responsibility in a World of Flux*, ed. David M. Lodge and Christopher Hamlin (Notre Dame, IN: University of Notre Dame Press, 2006): 32.

⁹ Leslie Elmer Sponsel, *Spiritual Ecology: A Quiet Revolution* (Santa Barbara: Praeger, 2012): 75.

¹⁰ Elspeth Whitney, "Lynn White, Ecotheology, and History," *Environmental Ethics* 15, no. 2 (Spring, 1993): 158.

virtual cliché.”¹¹ White’s critique of religion “has been endlessly reproduced”¹² and discussed in publications like the *Sierra Club Bulletin*, *Christian Century*, *Time* magazine and the *New York Times*,¹³ and it was even reprinted in part in the *Boy Scout Handbook*.¹⁴ White’s impact on the study of religion and the environment has been equally significant. In the five decades since its original publication, hundreds of books and articles, most of them by ecotheologians and historians, have been written as a direct response to it.¹⁵ However “startling” these claims might be, to borrow Whitney’s phrase, it is difficult to overstate the impact of White’s scholarship on popular culture and environmental studies.

For most scholars in the field of religion and ecology, there is a commonly held sense that the discipline is still wrestling with the same questions and doubts voiced by White’s first respondents: Is religion really to blame for the environmental crisis? If so, how and to what extent? Do the world’s religions have the intellectual and spiritual

¹¹ Bert S. Hall and Ranald Mackenzie Macleod, “Technology, Ecology and Religion: Thoughts on the Views of Lynn White,” in *Design and Production in Medieval and Early Modern Europe: Essays in Honor of Bradford Blaine*, ed. Bradford Blaine and Nancy Van Deusen, (Ottawa, Canada: Institute of Mediaeval Music, 1998): 154.

¹² Daniel C. Maguire, “Population, Religion, and Ecology,” in *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb (New York: Oxford University Press, 2006): 316–17.

¹³ White’s article has been discussed in the *New York Times* and also in the *Oracle*, a popular, countercultural newspaper. David Spring and Eileen Spring, eds. *Ecology and Religion in History* (New York: Harper and Row, 1974): 3. See also, Lewis W. Moncrief, “The Cultural Basis for Our Environmental Crisis,” *Science* 170, no. 3957 (October 30, 1970): 509; and Sponsel, *Spiritual Ecology*, 78.

¹⁴ Whitney, “Lynn White,” 157–58. There are claims that White’s article has been reprinted, in part or in full, in the *New York Times* and *Time* magazine. My own research has yet to uncover any actual reprinting of White’s work in those sources, which calls some of these claims into question. However, there are references to the debate stirred up by White in these publications. Roderick Frazier Nash, for example, writes “*Christian Century* devoted its entire October 7, 1970 issue to ‘The Environmental Crisis.’ *Time* magazine covered the Lynn White controversy on February 2, 1970, while *The New York Times* featured an essay on ‘The Link between Faith and Ecology’ in its January 4 issue.” Roderick F. Nash, *The Rights of Nature: A History of Environmental Ethics* (Madison, WI: University of Wisconsin Press, 1989): 108–09.

¹⁵ Whitney, for example, writes “Gowan and Schumaker (1980) list 185 publications relevant to White’s ‘Roots,’ including 36 under the rubric, ‘The Judeo-Christian Tradition Defended.’ I have counted over 240 articles citing ‘Roots’ since its publication in 1967.” Whitney, “Changing Concepts,” 48, n. 1. See also, Willis Jenkins, “After Lynn White: Religious Ethics and Environmental Problems,” *Journal of Religious Ethics* 37, no. 2 (2009): 285–86; and Whitney, “Lynn White,” 158.

resources, the creative capacity, and the forward thinking volition needed for change?

And, perhaps more importantly, will rethinking the religious “roots” of our ecological worldviews lead to better practices and dispel the looming specter of environmental collapse?

Whether scholars wish to highlight the depth of disagreement White’s work invokes, the perennial discussions of its further utility as a source for innovation in the study of religion and ecology, or the necessity of interdisciplinarity that it seems to imply, the argument contained in “Historical Roots” is an attractive and highly useful touchstone for scholars who want to situate their own work in the midst of the lively and dynamic field of study known collectively as “religion and ecology.” Yet, despite the fact that the “Historical Roots” article is arguably the most widely read and heatedly discussed text in the canon of writing belonging to the field of religion and ecology, it is a text that is more often referenced than studied in depth. While it would be inaccurate to suggest that effective, sustained attention has not been dedicated to discussing White’s argument in “Historical Roots,” there is also a sense that what White ‘really meant’ has yet eluded the grasp of scholars. As Whitney points out:

Surprisingly, however, little attention has been paid to an analysis of the assumptions and the world view underlying White’s work or to the implications of his approach for the environmental movement. The controversy generated by White’s critique of Christianity, while sometimes heated, has in fact occurred along a rather narrow spectrum of debate which has done little to challenge the basic structure of White’s argument. On the one hand, White’s most vocal critics, the Ecotheologians, have paradoxically been the group that most shared White’s fundamental belief that religion is the moving force in history. Moreover, because both White’s critiques and his supporters have tended to reinterpret his thesis in the light of their own interests and preconceptions, some confusion has arisen about the exact terms of the

argument. On the other hand, despite the interdisciplinary character of environmental studies, this discussion has largely failed to integrate material and approaches across different fields.¹⁶

I agree with Whitney's analysis here and her additional assertion that "[g]iven the extent of White's influence, it seems worthwhile to reexamine his thesis, and the responses to it, within the larger context of White's overall interpretative and methodological framework."¹⁷ While Whitney does this briefly, I extend this rethinking of White to cover a broad range of his thought, especially his work on religion and ecology that has been previously overlooked in other attempts to understand White. Scholars have been far more interested in attacking and defending various interpretations of the "Lynn White thesis" while ignoring, for better or for worse, the subtleties and larger project out of which the "Historical Roots" article grew and how that project continued to mature.

The goal of this dissertation is to rehabilitate scholarly understandings of Lynn White. As a project of rehabilitation, the aims of this project are both specific and open-ended. On the surface, the chief desired outcome of this research is to provide a richer, more accurate portrayal of White's intellectual and theological legacy. But, at a deeper level, this dissertation also attempts to address lacunae and misunderstandings present in the scholarship of those who have responded to, agreed with, and criticized White. In doing so, this dissertation also endeavors to be an invitation to scholars to utilize these findings to rethink the way in which White's work is used in discussing the relationship between religion and environmental attitudes and action.

¹⁶ Whitney, "Lynn White," 151–52.

¹⁷ Ibid., 152.

The field of religion and ecology has profited greatly from the attempts of ecotheologians and other scholars to engage with White. However, I contend that the majority of scholars reduce his argument to a mere caricature of itself by downplaying the *constructive* aspects of his argument and by reading “Historical Roots” outside of the larger intellectual framework in which it was created. In doing so, they create a “straw man” which they can then knock down. In response to this, I wish to propose a different approach for understanding White and his scholarship. Since White’s work is a primary shaper of much of the scholarship in the field of religion and ecology, then looking not just to White’s critiques, but also to White’s solutions gives scholars a broader range of resources and ideas from which to draw as they explore the core issue of religion’s efficacy in addressing the environmental crisis. To enhance current understandings of White, I offer three general proposals:

First, “Historical Roots” should not be read as a standalone piece of scholarship. As a means of uncovering a deeper and more nuanced understanding of White’s position, I examine the historical development of White’s thought as it unfolded over time. Rather than viewing his infamous argument in “Historical Roots” as *sui generis*, I will consider it in relation to, and as extending from, White’s larger body of historical scholarship and the broader religious and humanitarian work in which White was engaged.

Second, White’s arguments in “Historical Roots” have most commonly come to be understood as an effort to *critique* religion rather than as the *constructive*, prophetic work that White intended it to be. Although “Historical Roots” is sometimes portrayed as a secular piece of scholarship and White himself has occasionally been portrayed as anti-

religious, I highlight White's own Christian faith and theological work and explore the ways in which White drew upon his faith as he developed his own "personal theology of ecology."¹⁸

And third, I demonstrate that White's argument is significantly more nuanced than most readings of his work allow, especially in regards to his understanding of the reciprocal relationship between material factors and religious ideas. Since White stresses the importance of religious ideas and values on social change, his work is frequently compared to that of sociological luminary, Max Weber (1864–1920) who made a similar argument about the relationship between Christianity and the emergence of modern, investment capitalism.¹⁹ Building upon this insight, I show that not only is White's work similar to Weber's as others have observed, but that White drew upon his work frequently and that Weber's thought occupies a critical juncture in the formation of White's argument in "Historical Roots." I highlight this connection between the two thinkers by reading White's texts alongside, and tracing his use of, the work of Weber.

Like all scholarship located in the field of religion and ecology, this dissertation will be interdisciplinary in nature by drawing upon a wide array of academic disciplines in order to analyze and assess White's scholarship. Although my analysis is primarily sociological, I mirror the complexity and interdisciplinarity of White's scholarship in that I also draw on insights from ecotheology and history in order to develop a fuller, multi-dimensional understanding of White's scholarship. An additional component of my

¹⁸ Lynn Townsend White, jr., "Continuing the Conversation" in *Western Man and Environmental Ethics: Attitudes Toward Nature and Technology*, ed. Ian G. Barbour (Reading, MA: Addison-Wesley Publishing Company, 1973): 55.

¹⁹ Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. Talcott Parsons (Mineola, NY: Dover Publications, 2003 [1905/1958]).

methodology in this dissertation lies in conducting archival research. Twenty-seven boxes of Lynn White's academic notes, unpublished works, course materials, as well as professional and personal correspondence were bequeathed to the *Special Collections* of the *Charles E. Young Research Library* at the University of California of Los Angeles. The *Special Collections* also houses more than fourteen hours of audio interviews with White where he discusses his childhood, his involvement in church life, and his life as a college president and an academic as well as several other unique items such as a sermon delivered by White as a child. An additional thirty-four boxes of materials are archived at Mills College where Lynn White served as president for many years. This collection, although it pre-dates White's interest in ecology by more than a decade, contains a large selection of White's personal correspondence as well as notes and drafts of numerous speeches on the subject of religion and social change. The archival research represented here, it should be noted, is but a partial survey of the voluminous materials housed at Mills and UCLA. The focus of my archival research was on White's work that explicitly dealt with religion and the environment as well as his personal correspondence. Since White published and spoke frequently outside of academic settings, I also draw upon audio recordings of his speeches and interviews and I reference magazine articles written by White. In addition, I supplement my research with interviews and correspondence with White's son, Lynn Townsend White III, and with his friend, former student, and fellow historian of medieval technology, Bert S. Hall. To date, this dissertation is not only the first research project to take this wealth of resources into account, but it is also the first book-length examination of White's life and work.

Roots and Shoots – The History of Responses to White

It is, of course, impossible to trace here the hundreds, if not thousands of ways White has been interpreted, read, critiqued, or endorsed. Neither is it possible to trace every major disciplinary avenue from which White has been discussed as their sheer diversity and constant accumulation would make such a task nearly impossible. Instead, I recount here the views of a few scholars, religious leaders, and critics who touch upon key aspects of the argument at hand including, but not limited to statements regarding White's analysis of the relationship between ideas and how members of a society behave.

Starting with Rachel Carson's publication of *Silent Spring* in 1962,²⁰ the environmental movement accelerated rapidly with concern over pollution and the use of pesticides and other chemicals. Other environmental classics emerged in that same time period, such as the publication of Garrett Hardin's 1968 "The Tragedy of the Commons"²¹ and Paul Ehrlich's 1968 book, *The Population Bomb*,²² both of which emphasized the economic impulses and the critical role of human population size behind environmental degradation. The environmental thought of that time period, represented in these three texts, tended to focus on the material side of environmental problems such as the impact of pollution on human health and the competition for resources which drives environmentally harmful behavior. Discussions of values and ideas, particularly religious ones, were largely absent in early environmental discourse.

²⁰ Rachel Carson, *Silent Spring* (Cambridge, MA: Riverside Press, 1962).

²¹ Garrett Hardin, "The Tragedy of the Commons," *Science* 162, no. 3859 (December 13, 1968): 1243–48.

²² Paul R. Ehrlich, *The Population Bomb* (New York: Ballantine Books, 1968).

Then, in 1967, with the publication of “Historical Roots,” Lynn White’s ideas burst upon the intellectual landscape of the environmental movement with thundering force. There, White stated that humanity has caused widespread habitat destruction, pollution, and other forms of ecological devastation through the unchecked use of science and technology. The destructive and exploitative use of technology and science by the Western world, White argued, is largely due to a number of changes in religious ideas and values that took place during the Middle Ages. “What we do about ecology,” wrote White, “depends on our ideas of the man-nature relationship.”²³ Though he understood humanity to be living in a “post-Christian age,” White nevertheless declared that “[w]e continue today to live, as we have lived for about 1700 years, very largely in a context of Christian axioms.”²⁴ White believed that religious ideas and values are transformed, or rationalized over time into secular patterns of thought and behavior that bear little resemblance to the religious “roots” from which they grew.

In the words of White, “[s]ince the roots of our trouble are so largely religious, the remedy must also be essentially religious, whether we call it that or not.”²⁵ Thus, awareness that the ecological problem is rooted in ideas and values, rather than in economic practices or solely as a result of material practices, intones White, is the first step in changing human actions towards the world. Western society must either replace Christianity with a religion that requires a different attitude towards the world, or, alternatively, it must draw forth a more ecologically friendly theology by reinterpreting Christianity. As an example, he suggested that Christianity should consider a worldview

²³ White, “Historical Roots,” 1206.

²⁴ Ibid., 1205.

²⁵ Ibid., 1207.

similar to the one espoused by St. Francis of Assisi.²⁶ The consequences of not altering the roots of the ecological problem are grim:

[T]he present increasing disruption of the global environment is the product of a dynamic technology and science which were originating in the Western medieval world against which Saint Francis was rebelling in so original a way. Their growth cannot be understood historically apart from distinctive attitudes toward nature which are deeply grounded in Christian dogma. The fact that most people do not think of these attitudes as Christian is irrelevant. No new set of basic values has been accepted in our society to displace those of Christianity. Hence 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.²⁷

In White's view, Western society has three options before it: succumb to a worsening ecological crisis, discard Christianity and its consequent worldview, or explore new avenues of relationship to the world through a reinterpreted set of religious ideas and values. Although many in the environmental community might espouse the second option, not surprisingly, the last option has been vigorously taken up by a substantial part of today's Christian community. White, it should be noted, was not the only scholar to make such an observation; there were many competing arguments that paralleled White's. Thirteen years earlier, for instance, Buddhist thinker Daisetz T. Suzuki also laid the blame for the destruction of nature at the feet of Christianity, contrasting Christian theology with Buddhist thought.²⁸ And others writing at the same time as White, such as geographer Clarence Glacken, also argued that environmentally harmful behaviors were

²⁶ Ibid.

²⁷ Ibid.

²⁸ Suzuki gave a lecture called "The Role of Nature in Zen Buddhism" in 1953 during a conference devoted to exploring the relationship between "Man and Earth" (*Mesch und Erde*). See, Daisetz Teitaro Suzuki, "The Role of Nature in Zen Buddhism," in *Zen Buddhism: Selected Writings of D.T. Suzuki*, ed. William Barrett (New York: Doubleday Anchor Books, 1956).

rooted in Western ideas about nature but that they could be traced back to ancient cultures, biblical interpretations, and Christian theology pre-dating the Medieval Period.²⁹

Although one of several similar studies, nevertheless White's work remains significant in environmental discourse because it captured the popular imagination with its divisive critiques of Christianity and, more importantly, it filled a looming void in environmental literature by accentuating the importance of the underlying values and ideas that influenced environmental behavior. Philosopher and environmental studies scholar David R. Keller observes that "Historical Roots" "demonstrated that ecological degradation is a problem of ideology as well as industrialization and argued that issues of environmental crisis are not the sole purview just of natural science but also of the humanities."³⁰ Immediately following its publication, "Historical Roots" quickly became a staple in environmental discussions. As Joseph Edward de Steiguer explains, in *The Age of Environmentalism*, White's theory "about the causes of, and the solutions to, our ecological problems [became] an indispensable part of environmental wisdom."³¹ "Historical Roots," because of the important role it played in bringing ideas and values to the forefront of environmental discussions, is now "widely regarded as a classic in ecological literature."³² "Historical Roots," along with other environmental classics such as *Silent Spring* and *The Population Bomb* are now widely credited as being the "literary

²⁹ Clarence J. Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California Press, 1967).

³⁰ David R. Keller, "Introduction: What is Environmental Ethics," in *Environmental Ethics: The Big Questions*, ed. David R. Keller (Malden, MA: Blackwell Publishing Ltd., 2010): 7.

³¹ Joseph Edward De Steiguer, *The Age of Environmentalism* (New York: McGraw-Hill, 1997): preface.

³² Anne M. Clifford, "Feminist Perspectives on Science: Implications for an Ecological Theology of Creation," in *Readings in Ecology and Feminist Theology*, ed. Mary Heather MacKinnon and Moni McIntyre (Kansas City: Sheed & Ward, 1995): 347). See also, Ugo Dessì, "'Greening Dharma': Contemporary Japanese Buddhism and Ecology," *Journal for the Study of Religion, Nature and Culture* 7, no. 3 (2013): 335.

events [...] that helped define the philosophical basis of the Ecological Revolution of the 1960s.”³³

White’s impact on the emergence of the environmental movement in the 1960s and 1970s is important not only for its insistence that humanity rethink its axioms, but also for inviting discussions of religion and the humanities into environmental conversations. Brought into the limelight by White’s forceful criticisms of Christianity, churches, religious leaders, and religious practitioners found a voice in global environmental discourse.³⁴ Shortly thereafter, religion became a divisive subject in environmental activism and discussion and, much to the dismay of many Christians, it became common for radical environmental groups to position themselves in stark opposition to the mainstream Christian tradition. As Bron Taylor, a leading figure in the field of religion and nature, explains:

The impact of Earth First! would have been far less significant without a stunning revolution in environmental philosophy that burst forth in the 1970s. A good part of this was triggered by Lynn White’s 1967 argument blaming monotheistic religion for the modern war against the earth. Deep ecologists readily accepted the central premises of White’s critique, and though White did not counsel it, many rejected Christianity, concluding that it was too deeply anthropocentric to be salvaged.³⁵

“Historical Roots,” then, had a tremendous impact on the framing of environmental thought in the 1960s and 1970s in ways that simultaneously brought ideas and values to the forefront of environmental discourse while also fueling debate and controversy over the role of religion in the environmental crisis.

³³ George Sessions, “Ecocentrism and the Anthropocentric Detour,” in *Deep Ecology for the Twenty-First Century*, ed. George Sessions (Boston: Shambhala/Random House, 1995): 170.

³⁴ Dessì, ““Greening Dharma,”” 335.

³⁵ Bron Taylor, “The Tributaries of Radical Environmentalism,” *Journal for the Study of Radicalism* 2, no. 1 (2008): 42.

For the better part of the last five decades of scholarship, the main thrust of academic responses to “Historical Roots” have been preoccupied with correcting many of the “mistakes” of White’s argument. Particularly, scholars focused on White’s supposed “misreading” of the Genesis text as advocating dominion, White’s use of historical resources and the accuracy of his historical data, and whether or not religion plays as strong a causal role in affecting ecological change as White claimed. While these responses have been useful in correcting misunderstandings of White’s thought, and while a great deal of constructive scholarship has been born of these labors, these responses do little to expose the deeper influence of White’s thought on environmental studies. In the following pages, I describe White’s influence on the formation and development of four fields of study: ecotheology, environmental ethics, religion and ecology, and environmental history.

Branching Out: The Formation of Environmental Ethics, the Emergence of Deep Ecology, and the Study of Environmental History

White’s insistence that ideas and values are important to environmental thought was a watershed moment in several fields of study. Justifiably or not, many scholars identify “Historical Roots” as one of the epicenters of environmental ethics. “In my opinion,” writes J. Baird Callicott, an environmental philosopher who is credited with teaching the first university level course in environmental ethics in 1971, “the seminal paper in environmental ethics is ‘The Historical Roots of Our Ecologic Crisis.’”³⁶

³⁶ J. Baird Callicott, *Beyond the Land Ethic: More Essays in Environmental Philosophy* (Albany, NY: State University of New York Press, 1999): 40. Nine years later, he reasserted this claim, stating “In my opinion, the seminal document that spawned the academic exploration of environmental ethics—and dialectically,

Mapping such a far-ranging field at this point is, of course, a difficult and contested endeavor. However, many prominent environmental ethicists have called attention to the central location of “Historical Roots” in the early development of environmental ethics. Callicott, for instance, suggests that “Historical Roots” “set the agenda for future environmental ethicists.”³⁷ He explains:

[White’s] fundamental assumption, that what we do collectively depends on what we collectively think; and the corollary to this, that to change what we collectively do depends on changing what we collectively think, led us to the conclusion that if we are to change what we do to the environment, we must begin by changing what we think about the environment.³⁸

For Callicott, White’s attempt to bring discussions of ideas and values to the forefront of environmental thought was a clarion call for ethicists. “Historical Roots,” like a compass orienting scholars concerned about environmental degradation, established the agenda for environmental philosophy and motivated the first expressions of environmental ethics in the late 1960s and early 1970s.³⁹ To this day, submits Whitney, “Historical Roots” “remains a focal point for discussion.” White’s article, she maintains,

the greening of religion, as I latterly explain—was ‘The Historical Roots of Our Ecological [sic] Crisis,’ by Lynn White, Jr., published in *Science* in 1967.” J. Baird Callicott, “Natural History as Natural Religion,” in *The Encyclopedia of Religion and Nature*, vol. 2, ed. Bron Taylor and Jeffry Kaplan (New York: Continuum, 2008): 1164. In the “Introduction” to the *Encyclopedia of Environmental Ethics and Philosophy*, Callicott also observed that “White thus implicitly—and, we daresay, unwittingly—set the agenda for a future environmental philosophy. The first item on the agenda is to criticize the evidently erroneous ideas that we have inherited from our past intellectual tradition about these matters.” J. Baird Callicott and Robert Frodeman, “Introduction,” in *Encyclopedia of Environmental Ethics and Philosophy*, vol. 1, ed. J. Baird Callicott and Robert Frodeman (Detroit: Macmillan Reference, 2009): xxiii.

³⁷ J. Baird Callicott, “Environmental Ethics: An Overview,” *The Forum on Religion and Ecology at Yale*, 2000, <http://fore.yale.edu/disciplines/ethics/> (accessed January 24, 2016).

³⁸ Ibid.

³⁹ Callicott, “Beyond the Land Ethic,” 15. Environmental philosopher Michael P. Nelson shares this assessment of White’s influence on the emerging field of environmental ethics. Michael P. Nelson, “Lynn White, Jr.,” in *Fifty Key Thinkers on the Environment*, ed. Joy A. Palmer (New York: Routledge, 2001): 204.

is a staple in “textbooks on environmental ethics” and “Historical Roots” “is routinely included in collections of writings on environmental issues.”⁴⁰

Despite these claims, White’s influence on the field, and through it, the introduction of religion into environmental ethics, is a contested issue. Willis Jenkins, a theologian and environmental ethicist, states that “[e]ven when disputed in fact, White’s claim that Christian belief generated the modern ecological crisis has been methodologically influential for how theorists think ethics matters for environmental problems.”⁴¹ Several fields of study including ecotheology, environmental ethics, and the field of religion and ecology, Jenkins continues, grew out of White’s core assumptions including, but not limited to environmental ethics.⁴² Thus, an underlying assumption that “[p]roblems like climate change [...] are symptoms of a crisis in worldview, and must be addressed at that metaethical level” stems from White’s argument and drives much of the scholarship in these fields.

In addition, “Historical Roots” has inspired a number of scholarly responses that have in turn reshaped the landscape of environmental philosophy. Following White’s lead, environmental philosophers have also worked to assess the impact of ideas and values on environmental issues. As Whitney observes, White’s article has been identified as “one of the founding texts of the Deep Ecology movement.”⁴³ Inspired by White, Norwegian philosopher Arne Naess

⁴⁰ Whitney, “Changing Concepts,” 32.

⁴¹ Willis Jenkins, *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity* (Washington, DC: Georgetown University Press, 2013): 79.

⁴² Ibid. Jenkins also notes that White “remarkably shaped the way that religious ethics understands environmental problems.” Jenkins, “After Lynn White,” 283.

⁴³ Whitney, “Changing Concepts,” 32. Environmentalist George Sessions, who first articulated the deep ecology platform along with environmental philosopher Arne Naess, lists “Historical Roots”

introduced the philosophical position of “deep ecology” in 1973. This work marks a seismic shift in environmental philosophy as scholars began discussing the ideas and values underlying environmental ethics as an important counterpart to the assessment of material causes and effects of environmental behavior.

For some, the shaping force of White’s scholarship on the early development of environmental philosophy determined, for better or for worse, the early focus on issues of value. Environmental ethicist Bryan Norton, for instance, contends that White’s influence steered environmental philosophy in a counterproductive direction:

In my view, the discipline of environmental philosophy was in fact misshaped by a confluence of small accidents, beginning in 1967 with the provocative comment by the historian Lynn White Jr., that our environmental crisis results from the “anthropocentric” nature of Christianity. [...] Then, when professional philosophers began asking, in the early 1970s, what philosophers could contribute to environmental thought and action they [...] interpreted White as having associated Christianity with a particular substantive theory about moral value. [...] As a result, most philosophical discussion of environmental issues has centered on the question of whether natural objects other than humans have intrinsic or inherent value.⁴⁴

For many scholars writing on the subject of environmental philosophy, reading “Historical Roots” was a revelatory experience that opened up their eyes to the necessity to reflect upon religion. Case in point, ecological philosopher Max Oelschlaeger recalls his reaction to White’s article and speaks of his first exposure to it as a “conversion

as one of the “classic ecocentric / Deep Ecological essays of the 1960s.” Sessions, “Ecocentrism,” 101. See also, Joseph R. Des Jardins, *Environmental Ethics: An Introduction to Environmental Philosophy* (Belmont, CA: Wadsworth Thomson Learning, 2001): 214; and Jordan Paper, “Chinese Religion, ‘Daoism,’ and Deep Ecology,” in *Deep Ecology and World Religions: New Essays on Sacred Grounds*, ed. David Landis Barnhill and Roger S. Gottlieb (Albany, NY: State University of New York Press, 2001): 110–11.

⁴⁴ Bryan G. Norton, *Searching for Sustainability: Interdisciplinary Essays in the Philosophy of Conservation Biology* (New York: Cambridge University Press, 2003): 9.

experience” in which he lost faith in the power of science and secular

environmentalism to adequately address the ecological crisis:

I lost faith by bits and pieces, especially through the demystification of two ecological problems—climate heating and extinction of species—and by discovering the roots of my prejudice against religion. That bias grew out of my reading of Lynn White’s famous essay blaming Judeo-Christianity for the environmental crisis. In some ways this book [*Caring for Creation*] can be read as accounting for my change of mind or ‘conversion experience.’⁴⁵

While Oelschlaeger would go on to renounce his agreement with that aspect of White’s argument in *Caring for Creation*, religion and environmental ideas in general did continue to be the focal point for other environmental philosophers struggling to come to terms with the dual role of religion as both a potential source of, and a potential solution to, environmental problems.

Lynn White’s role in the creation of the field of environmental history is an additional, less frequently noted, contribution that draws attention to the broad influence of his work. Environmental historian, Carolyn Merchant maps out the emergence of the field of study and cites “Historical Roots,” and other classic studies such as Donald Worster’s 1977 book, *Nature’s Economy: A History of Ecological Ideas*⁴⁶ as important wellsprings of historical analysis of human relations to the environment. These texts, amongst others, she writes, “helped to spawn the field of environmental history.”⁴⁷

⁴⁵ Max Oelschlaeger, *Caring for Creation: An Ecumenical Approach to the Environmental Crisis* (New Haven: Yale University Press, 1994): 2.

⁴⁶ Donald Worster, *Nature’s Economy: A History of Ecological Ideas* (New York: Cambridge University Press, 1994).

⁴⁷ Carolyn Merchant, *Reinventing Eden: The Fate of Nature in Western Culture* (New York: Routledge, 2003): 5. See also, Patricia Townsend, “White, Lynn, Jr. (1907–87) Historian of Medieval Technology,” in *Encyclopedia of World Environmental History*, ed. Shepard Krech III, J.R. McNeill, and Carolyn Merchant (New York: Routledge, 2004): 1329.

While the term “environmental history” was first used by historian Roderick Frazier Nash in an address at the *Organization of American Historians* in 1969, a term which was popularized in 1972, White was also advocating for the historical study of human relationships to the environment during this same time period. In a letter written on May 20th, 1970 to Paul L. Ward, then Executive Secretary of the American Historical Association, White drafted a “Program for Innovative History.”⁴⁸ In that document, he recommended that funding and conference space be given to scholars interested in exploring new ideas, including the study of the “history of the man-nature, or ecologic, relationship, and of changing ideas about it.” In such an exploration, scholars would be encouraged to ask: “To what extent have men damaged their environment through inadvertence and to what extent deliberately? What has been the attitude toward animals in various cultures, how has it changed, and what do those changes mean?”⁴⁹ While texts predating this proposal, such as Nash’s 1967 book, *Wilderness and the American Mind*⁵⁰ are often cited as early works in environmental history, White’s exhortation that historians be given the resources to study environmental issues nonetheless shows White to have played a small, but not often recognized, role in attempting to bring about this new field of study. However, as I discuss in the following section, White’s most

⁴⁸ White wrote: “At the council meeting on 4 April I agreed to try to elaborate in a letter to you a few ideas which might be developed into an AHA program for encouraging historical research in neglected areas that have promise of insights into present concerns.” Letter, Lynn Townsend White, jr. to Paul L. Ward, Executive Secretary of the American Historical Association, May 20, 1970, 1, Coll. 1541, Box 9, Folder 2, Research Letters, 1959–70, The Lynn Townsend White Papers, 1937–85, Department of Special Collections, Charles E. Young Research Library, University of California Los Angeles, Los Angeles, 1.

⁴⁹ Ibid, 2. Draft proposal for a *Program for Innovative History* by the American Historical Association, by Lynn Townsend White, jr..

⁵⁰ Roderick Frazier Nash, *Wilderness and the American Mind* (New Haven: Yale University Press, 1982).

significant contribution to environmental thought, at least as far as this dissertation is concerned, lies in his contribution to the study of religion and the environment.

New Seeds: Ecotheological Responses to “Historical Roots”

The most sustained, direct, and intense responses to White are theological in nature. After the initial publication of his essay, and its introduction to a wider theological audience through being reprinted in Ian Barbour’s 1973 edited volume, *Western Man and Environmental Ethics*⁵¹ and Francis Schaeffer’s 1970 book, *Pollution and the Death of Man*,⁵² the debate over “Historical Roots” became a cornerstone for much of the ecotheology that has developed over the past five decades. Many, whether rightly or wrongly, have credited “Historical Roots” as a major origin point from which the field of ecotheology sprung. Whitney, in one of her many trenchant assessments of White’s legacy, contends that “Historical Roots” “has been credited with being instrumental in creating the field of ecotheology.”⁵³ Sociologist of religion Laurel Kearns also notes the role played by White’s thought in stimulating ecotheological scholarship. “As tired as many today are of hearing White’s thesis,” she writes, “its role in stimulating a flood of historical, philosophical, theological writing and religious activism on the subject of Christianity and ecology cannot be underestimated.”⁵⁴

White’s introduction of theology into the environmental debate, and the influence of his thought on many of the first attempts by theologians to “green” theology, marks

⁵¹ Ian G. Barbour, ed. *Western Man and Environmental Ethics: Attitudes Toward Nature and Technology* (Reading, MA: Addison-Wesley Publishing Company, 1973).

⁵² Francis A. Schaeffer, *Pollution and the Death of Man: The Christian View of Ecology*, (Wheaton, IL: Tyndale House Publishers, 1970).

⁵³ Whitney, “Changing Concepts,” 32.

⁵⁴ Laurel Kearns, “The Context of Eco-Theology,” in *The Blackwell Companion to Modern Theology*, ed. Gareth Jones (Malden, MA: Wiley-Blackwell, 2004): 468.

White's "Historical Roots" as an important touchstone for theological discussions of ecology. "Rightly or wrongly," writes biblical scholar, John W. Rogerson, "Historical Roots" "has been taken as the starting point for a modern debate that has held Christianity in general and the biblical creation narratives in particular to be responsible for the current ecological crisis."⁵⁵ As this quote seems to imply, the veracity of such claims are sometimes not as important as the fact that they exist. It is common to acknowledge, for example, that "Historical Roots" is frequently recognized as "one of the principal motivators for the 'greening of religions'"⁵⁶ and that, for better or for worse, "Historical Roots" is the most cited piece of scholarship in the study of ecotheology.⁵⁷ To be sure, it is important to note that White was not the first, or the only, author to link Christianity to environmental degradation. More than a decade before White published "Historical Roots," for instance, Lutheran theologian Joseph Sittler penned "A Theology for Earth"⁵⁸ in 1954 as well as his influential sermon, "The Care of the Earth"⁵⁹ in 1962. Indeed, much of Sittler's influential work on theology and ecology, as well as his suggestion that Christians look to the example of St. Francis, predates that of White. Although hugely influential, in other words, it is important to note that White's thought

⁵⁵ John W. Rogerson, "The Creation Stories: Their Ecological Potential and Problems," in *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*, ed. David G. Horrell et al. (New York: T&T Clark International, 2010): 21.

⁵⁶ Lucas F. Johnston, *Religion and Sustainability: Social Movements and the Politics of the Environment* (Bristol, CT: Equinox Publishing, 2013): 76. Similarly, Sessions observes that, it has become "fashionable" "to say that Lynn White's paper resulted in the 'greening of religion'" and he also recognizes that "Historical Roots" was one of the "major influences" on the formation of the field of ecotheology in the 1960s and 1970s. Sessions, "Ecocentrism," 156.

⁵⁷ New Testament scholar David G. Horrell observes "White's essay remains probably the most cited contribution to ecotheological debate." David G. Horrell, "Introduction," in *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*, ed. David G. Horrell et al. (New York: T&T Clark International, 2010): 2.

⁵⁸ Joseph Sittler, "A Theology for Earth," *Christian Scholar* 37 (September 1954): 367–74.

⁵⁹ Joseph Sittler, *The Care of the Earth, and Other University Sermons* (Philadelphia: Fortress Press, 1964).

should not be regarded as the first or the only thinker to link Christian theology and ecology.

White's influence on the scholarly discussion of the relationship between religion and the environment, as Jenkins points out, has less to do with the veracity of White's claims than it has to do with the energetic and oftentimes heated nature of the debate that ensued.⁶⁰ In fact, when "Historical Roots" was first published in 1967 it was met with an immediate, visceral outcry of emotionally charged responses.⁶¹ Writing six years later in "Continuing the Conversation" White commented on the charged responses that he received. "I was denounced as a junior Anti-Christ, probably in the Kremlin's pay, bent on destroying the true faith."⁶² Elsewhere, White described the "accusations and threats" that he received on "little scraps of brown paper" in the mail. "I got little notes scribbled on pieces of grocery bags torn off, these were of course unsigned, accusing me of betraying god, of misinterpreting the scriptures, of being an atheist, all this kind of thing."⁶³ Hall recalls that White was surprised by this "tide of protest." "[H]e once ironically remarked to me," writes Hall, that in light of these heated responses from his fellow Christians that he "'should have blamed the scientists.'"⁶⁴

In the years following the publication of "Historical Roots," theologians rushed to respond to White. These took on a number of forms ranging from apologetic responses to

⁶⁰ In Jenkins' words, "White's thesis acquired its hegemonic legacy not because it was so generally accepted, of course, but because it was so generally debated." Jenkins, "After Lynn White," 284.

⁶¹ Hall and Macleod recall that "White faced a growing chorus of hostile responses from academics, and, for the first time in his life, hate mail." Hall and Macleod, "Technology, Ecology and Religion," 154.

⁶² White, "Continuing the Conversation," 60.

⁶³ Lynn Townsend White, jr., et al., "Ecology and Religion," *Minding the Earth* 6, audio recording, host Joe Meeker (Berkeley, CA: Strong Center. New Dimension Foundation, 1982 [1980]).

⁶⁴ Bert S. Hall, "Éloge: Lynn White, Jr., 29 April 1907–30 March 1987," *Isis* 79, no. 3 (September 1988): 480.

White's criticisms of Christianity, to exploration of potentially promising ecological themes in Christianity, to expressions of support and encouragement of White's assertion that religion can, and should, have a say in ecological matters. Whitney explains:

Although many eco-theologians argued vociferously against White, they could use his thesis to reinforce the view that environmentalism was at bottom a religious and ethical movement. Like White, they believed that religious values were the most effective antidote to environmental degradation and, like White, who had suggested that St. Francis be made the patron saint of ecologists, they believed that Christianity was a sufficient repository of environmentally sensitive attitudes.⁶⁵

In fact, many first attempts by ecotheologians to articulate a "green" theology were developed in response to White's ideas.

Francis Schaeffer's pioneering evangelical text, *Pollution and the Death of Man*, which was published in 1970, represents one of the earliest defenses of Christianity against White's critique of religion. Like many who made similar arguments, Schaeffer was transfixed by White's argument and thought that it was critical for Christians to think ecologically. Deeming it "a brilliant article,"⁶⁶ Schaeffer stated that he thought White was "completely right" when White argued that people "*do* what they *think*" and that rethinking ideas and values was critical to environmental progress.⁶⁷ Schaeffer was so impressed by White's text, that he included a reprint of "Historical Roots" in his book, a trend that would be imitated by dozens of authors. Having attracted a considerable deal of

⁶⁵ Elspeth Whitney, "White, Lynn (1907-1987) – Thesis of," in *The Encyclopedia of Religion and Nature*, vol. 2, ed. Bron Taylor (New York: Continuum, 2008): 1736.

⁶⁶ Schaeffer, *Pollution and the Death of Man*, 12.

⁶⁷ *Ibid.*, 13.

attention, Schaeffer's book "provided much of the theological foundation for what later became known as evangelical environmentalism, or creation care."⁶⁸

Although too numerous to list here, the outpouring of theological responses to White in the years that followed set the stage for further theological reflection. Theologians such as John Passmore and Paul Santmire reflected on White's charges and presented a case for Christian stewardship of the environment in their respective books, *Man's Responsibility for Nature* and *The Travail of Nature*.⁶⁹ John Cobb, another pioneering figure in the early "greening" of theology, describes the summer of 1969, the year in which he read "Historical Roots" as a "major turning point in [his] professional life and in [his] sense of Christian vocation." This reading of White inspired him to pen his 1971 classic, *Is it Too Late? A Theology of Ecology*, which was one of the first book-length analyses of religion's role in the environmental crisis. "Historical Roots," he later reflected, "enabled me to see that redirecting the human community away from disaster was closely connected to my personal and professional vocation as a theologian."⁷⁰

White remained largely distant from these conversations, declining to respond to the myriad critiques and questions aimed at his work. Meanwhile, theologians, academics, and church leaders took it upon themselves to energetically take up the call of ecotheology. Amongst the early calls to action and coordinated religious and academic responses was the "Man and Nature" working group. Appointed by the archbishop of

⁶⁸ Johnston, *Religion and Sustainability*, 110.

⁶⁹ John Arthur Passmore, *Man's Responsibility for Nature: Ecological Problems and Western Traditions* (New York: Scribner, 1974); and H. Paul Santmire, *The Travail of Nature: The Ambiguous Ecological Promise of Christian Theology* (Philadelphia: Fortress Press, 1985).

⁷⁰ John B. Cobb, Jr., *Sustainability: Economics, Ecology, and Justice* (Maryknoll, NY: Orbis Books, 1992): 1–2.

Canterbury in 1971, a group of scientists and Anglican theologians were asked to study the relationship between humanity, Christianity, and the environment. They undertook this task using a number of guideposts, among them, White's "Historical Roots" article.⁷¹ Operating under a similar directive in 1977, a group of scholars and Evangelical Christian leaders that included Cal DeWitt and Loren Wilkinson, who both went on to play significant roles in greening evangelicalism, gathered at the Calvin College's Center for Christian Scholarship to study "Christian Stewardship and Natural Resources."⁷² The results of these proceedings built upon the work of White, Schaeffer, and others, and were published under the title *Earthkeeping: Christian Stewardship of Natural Resources*. "It is our thesis," they wrote, "that White is, with few important exceptions, correct in his analysis of the effect of Christianity on views of nature."⁷³ These few examples are but a handful of the numerous coordinated responses to White's article by scholars and theologians that were organized in the 1970s, 1980s, and beyond.⁷⁴

⁷¹ Hugh Montefiore, "Man and Nature: The Working Group," in *Man and Nature*, ed. Hugh Montefiore (London: Collins, 1975): x.

⁷² For more information on the findings of this meeting and on those involved, see, Laurel Kearns, "Green Evangelicals," in *The New Evangelical Social Engagement*, ed. Brian Steensland and Philip Goff (New York: Oxford University Press, 2014): 160.

⁷³ Loren Wilkinson, ed., *Earthkeeping: Christian Stewardship of Natural Resources* (Grand Rapids: William B. Eerdmans Publishing, 1980): 104.

⁷⁴ The formation of the Alliance of Religions and Conservation (ARC) and its creation of The Assisi Declarations are one such example. The Assisi Declarations: Messages on Humanity and Nature from Buddhism, Christianity, Hinduism, Islam, and Judaism, Alliance of Religions and Conservation, Basilica Di S. Francesco Assisi, Italy, 25th Anniversary of the World Wildlife Federation, 29 September 1986, <http://www.arcworld.org/downloads/THE%20ASSISI%20DECLARATIONS.pdf> (accessed June 2, 2015). The response from churches has been equally voluminous. Pope John Paul II, perhaps following White's lead, named Francis of Assisi the "Heavenly Patron Saint of Ecologists" in 1979. And, in his 2015 encyclical, titled *Laudato Si'*, Pope Francis echoed White (and others) by rejecting ecologically destructive attitudes of dominion and recommending the teachings of St. Francis of Assisi as a primary source of ecological wisdom. Pope Francis, *Laudato Si'* of the Holy Father Francis on Care for Our Common Home, encyclical letter (Rome: Vatican Press, 24 May 2015).

Before the publication of “Historical Roots,” environmental discussions were not a common part of the day-to-day conversations taking place in Christian churches; nor were they for a long time afterwards. But today, discussions of “stewardship” have become embedded in Christian consciousness. As Callicott explains:

Sunday school children learning about God’s creation and our responsibility to care for it and pass it on intact to future generations may never hear Lynn White Jr.’s name [...] but what they are being taught—and as a result of that teaching how in future they may try to be good stewards of God’s creation—owes a lot to Lynn White Jr. and those whom he challenged to reconceive Judeo-Christian-Muslim attitudes and values toward nature.⁷⁵

What these examples and this massive outpouring of ecotheological responses to White reveal is that most of those who encounter “Historical Roots” tend to agree with its core ideas and underlying premises. The idea that environmental issues are both related to religious ideas and values, and the concomitant conclusion that the environmental crisis is a moral and religious issue, is something that most of those who have read White tend to agree upon. By bringing this discussion of religious ideas and values into environmental thought, White drew not only the attention of scholars and religious practitioners to ecotheological concerns, but ultimately, through the myriad of responses to his work, he sparked the public imagination as well.

Deeper Roots: White and the Emergence of the Field of Religion and Ecology

White’s work, by and large, has come to occupy a central, organizing role for those writing under the umbrella of religion and ecology in diverse ways. Mary Evelyn Tucker and John Grim, two leading proponents of the study of religion and ecology and

⁷⁵ Callicott, *Beyond the Land Ethic*, 41–42.

the co-founders and co-directors of the Forum on Religion and Ecology at Yale, have noted White's influence on a number of occasions. In the opening pages of their "Series Forward" to the Harvard series on Religion and Ecology, a landmark set of texts in the field, they identify White's insistence that scholars pay attention to ideas and values as a central framing concern for the study of religion and ecology:

Religions thus generate worldviews and ethics which underlie fundamental attitudes and values of different cultures and societies. As the historian Lynn White observed, 'What people do about their ecology depends on what they think about themselves in relation to things around them. Human ecology is deeply conditioned by beliefs about our nature and destiny—that is, by religion.'⁷⁶

Also, in their 2001 introduction to the special issue of the journal *Daedalus* dedicated to religion and ecology, they note "religions have an important role to play in projecting persuasive visions of a more sustainable future. This is especially true because our attitudes towards nature have been consciously and unconsciously conditioned by our religious worldviews." They trace the origin of this observation back to White. "White's article," they write, "signaled the beginning of contemporary reflection on how environmental attitudes are shaped by religious worldviews."⁷⁷

Other leading figures in the field, such as religious studies scholar David Haberman, also mark White's text as an important intellectual starting point for scholarship on religion and ecology. White, he writes, "is often credited with founding

⁷⁶ Mary Evelyn Tucker and John Grim, "Series Forward," in *Christianity and Ecology: Seeking Well-Being of Earth and Humans*, ed. Dieter T. Hessel and Rosemary Radford Ruether (Cambridge, MA: Harvard University Press, 2000): xvi.

⁷⁷ Mary Evelyn Tucker and John A. Grim, "Introduction: The Emerging Alliance of World Religions and Ecology," *Daedalus: Journal of the American Academy of Arts and Sciences* 130, no. 4 (Fall 2001): 4.

the emerging field of Religion and Ecology.”⁷⁸ As James D. Proctor and Evan Berry note in “Social Science on Religion and Nature,” their entry in *The Encyclopedia of Religion and Nature*, White’s text “effectively set the terms of debate over religion and environmental concern for the last three and a half decades.”⁷⁹ And, similarly, Whitney observes that “Historical Roots” has “dominated discussions of the historical roots of modern Western conceptions of nature, technology, and the environment over the past forty years.”⁸⁰ Indeed, the centrality of White’s thought is not just reflected in scholarship, but in the way in which religion and ecology as an academic discipline is taught. Of the 41 syllabi on the *Green Seminary Initiative* website, for example, nine of them assign White’s “Historical Roots.” This general acknowledgment of White’s influence as well as the widespread use of his article as a pedagogical tool reflects, I argue, not only the centrality of White to the creation of field of study, but also the enduring influence of White’s ideas in present scholarship.

Scholars have long recognized White’s role in providing a core intellectual concept to the field of religion and ecology: the assertion that religious ideas matter when it comes to ecology. For the purposes of this dissertation, I will refer to this aspect of White’s argument in “Historical Roots” as an “ideo-centric” position. An ideo-centric position, in this context, is the assertion that environmental attitudes and actions are profoundly conditioned by religious ideas and values. “What people do about their

⁷⁸ David Haberman, *People Trees: Worship of Trees in Northern India* (New York: Oxford University Press, 2013): 8.

⁷⁹ James D. Proctor and Evan Berry, “Social Science on Religion and Nature,” in *The Encyclopedia of Religion and Nature*, vol. 2, ed. Bron Taylor (New York: Continuum, 2008): 1571.

⁸⁰ Whitney, “Changing Concepts,” 27.

ecology,” wrote White, “depends on what they think about themselves in relation to things around them.”⁸¹

My attempt to frame White as an “ideo-centrist” is not an entirely new proposition. While others sometimes refer to White as an “idealist,” I use the term “ideo-centrist.” I do so in order to avoid the charged nature of the term “idealist.” Although not explicit within the term itself, by labeling White as an ideo-centrist, I also stress the importance of recognizing that White was discussing not only the cognitive aspects of ideas, but also the values and spiritual beliefs that oftentimes accompany religious ideas. Ideo-centrism, as I use the term in this dissertation, is therefore meant to convey the sense that White highlighted the importance of religious ideas, as well as religious values, as important shapers of social change. This is not to say that White ignored or downplayed material forces in shaping social change, but rather, as I discuss in chapter 4, the term “ideo-centrist” is used to describe White’s emphasis on the importance of religious ideas and values that, to a lesser extent, allowed for materialist understandings of social change as well. The interplay between materialist and ideo-centric thought, in fact, is an overlooked aspect of White’s thought. This Weberian quality of White’s thought, and Weber’s influence on White, must be made more central to how White is understood.

Despite my caution in using the word “idealist” to describe White’s thought, the categorizing of White in this way by others is nonetheless illustrative of how he understood the role of religion in social change. Sociologist Manussos Marangudakis, for

⁸¹ White, “Historical Roots,” 1205.

example, situates White as his prime example of the “idealist trend”⁸² in environmental thought. There, he refers to the assertion that “religion is a prime determinant of human action” as White’s “idealist assumption.”⁸³ And, when I asked Hall about how White understood the role of religion in social change, he also called attention to White’s focus on ideas. “Lynn’s view of these things was ‘idealistic,’” he mused, “at least in the Germanic sense where everything is either materialistic or idealistic—*Materialismus* or *Idealismus*. He’s an idealist [...] I think that is central to trying to grasp something about Lynn White.”⁸⁴

Indeed, this contrasting of “ideo-centric” and “materialistic” understandings of history is critical for my engagement with White in this dissertation, particularly in chapter 4 where I situate White between these two poles. Anthropologist Leslie Sponsel frames these competing views as they relate to White as follows:

In his now-classic article White adopts a mentalist or idealist position: ‘What people do about their ecology depends on what they think about themselves in relation to things around them. Human ecology is deeply conditioned by beliefs about our nature and destiny.’ In other words, what people think about nature and their relationship to it has a significant influence on their behavior, and that, in turn, has practical consequences for the natural environment. This contrasts with a materialist position that would place the emphasis instead on the environmental impacts of population, technology, and economy.⁸⁵

White’s ideo-centric position, I posit, has given the field of religion and ecology much of its intellectual stimulus. Yet, as will be seen in the chapter on Weber’s influence on White, it is a chastened ideo-centrism that I label as “ideo-centric materialism”; White

⁸² Manussos Marangudakis, “The Medieval Roots of Our Ecological Crisis,” *Environmental Ethics* 23 (Fall 2001): 243.

⁸³ *Ibid.*, 244.

⁸⁴ Bert S. Hall, interview by Matthew T. Riley, June 28, 2014.

⁸⁵ Sponsel, *Spiritual Ecology*, 76 (emphasis mine).

acknowledges the role of changes in material condition and material artifacts alongside changes in religious ideas and values as shapers and motivators of social change.

Throughout this dissertation, I maintain that the majority of scholarship in the field of religion and ecology operates under the simple assumption, borrowed from White, that by changing how an individual thinks about the environment, changes in values and behavior are sure to follow. I am not alone in this assessment. For example, in their book, *Inherited Land: The Changing Grounds of Religion and Ecology*, Whitney A. Bauman, Richard R. Bohannon, and Kevin J. O'Brien observed that

[m]any essays [in their book] have made reference to Lynn White's famous argument that environmental degradation is ultimately rooted in the *ideas* of Christianity. While most (if not all) of the scholars who work in Religion and Ecology are ultimately concerned about the ways people *act* toward each other and the non-human world, a great deal of our academic work has striven to investigate and change the way people *think* about the world and the relationship of human beings to it.⁸⁶

Other prominent scholars who have shaped the field of religion and ecology, such as Taylor, Jenkins, and anthropologist Arne Kalland have also commented on this trend towards ideo-centrism. Taylor, for example, speaks of the "idealist assumption" shared by White and others who insist that "religion could be both a cause and a solution to environmental decline" in his "Introduction" to the *Encyclopedia of Religion and Nature*.⁸⁷ Jenkins cites White's assertion that environmental attitudes and behaviors are conditioned by religious ideas in his book, *The Future of Ethics*. There, he observes that scholars in fields as diverse as religion and ecology, Christian ecotheology, and

⁸⁶ Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O'Brien, "Conclusion: The Territory Ahead," in *Inherited Land: The Changing Grounds of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O'Brien (Eugene OR: Wipf and Stock Publishers, 2011): 252.

⁸⁷ Bron Taylor, "Introduction," in *The Encyclopedia of Religion and Nature*, vol. 1, ed. Bron Taylor (New York: Continuum, 2008): xx.

environmental ethics have followed White by pursuing the notion that “[p]roblems like climate change [...] are symptoms of a crisis in worldview, and must be addressed at that metaethical level.”⁸⁸ To give but one additional example, Kalland made a similar observation when he noted that “Since the publication of White’s paper it has become fashionable to read ecological insight into religious dogmas and practices. [...] Religious ideas and values have come to play prominent roles in environmental discourse.”⁸⁹

Despite my emphasis on the presence of ideo-centric tendencies in White’s work and in the broader field of religion and ecology, it should be noted that this ideo-centric trend is a point of tension and debate. Taylor, writing as a figurehead of the field of study known as religion and nature, is suspicious of the explanatory power of scholarship that begins from an ideo-centrist perspective. Ruminating on the “idealistic (namely idea-focused) premise” of the field of religion and ecology and commenting on the character of the entries in his *Encyclopedia*, he writes:

Tucker and Grim in their series forward insisted, quoting Lynn White that ‘Human ecology is deeply conditioned... by religion’ (in Tucker and Grim 1997: xvi). But this claim unfortunately assumed that which needs to be a central *conundrum* and subject of a scholarly inquiry into the relationships between religion and nature. It would have proved a better starting point for the religion and ecology series to turn this premise into a question: ‘Is environmental action conditioned by religious attitudes about nature?’ Then, if an affirmative action were to follow, we could then push deeper, ‘If environmental behavior is so conditioned, how does this work within the immensely complex ecological and political systems in which we are all embedded?’ Certainly many of the entries in this encyclopedia question the idealistic premise of this series and the majority of the inherited ‘religion and ecology’ field. Some of these suggest, on the contrary, that it is environments which decisively shape religions, not vice versa, and that

⁸⁸ Jenkins, *The Future of Ethics*, 79.

⁸⁹ Arne Kalland, “The Religious Environmentalist Paradigm,” in *The Encyclopedia of Religion and Nature*, vol. 2, ed. Bron Taylor (New York: Continuum, 2008): 1367.

over the long run, the only religions that will endure will be those proving 'adaptive' within their earthly habitats.⁹⁰

In his book, *The Future of Ethics*, Jenkins also expresses a degree of discomfort with the notion that changes in religious ideas or religious cosmologies will yield sufficient results to adequately address environmental issues such as climate change. Instead, he argues counter to White by focusing on the "moral creativity in religious reform projects" and suggests that pragmatic, on-the-ground efforts of religious communities might prove to be a better starting point for reassessing religion's relationship to environmental issues.

In much the same vein, the essays contained in Bauman, Bohannon, and O'Brien's edited volume address a similar concern regarding the field of religion and ecology's ideo-centric premise imparted by White. "Lynn White and some who followed him may have overemphasized the importance of thought," they write.⁹¹ Instead, they suggest that it may be that "the field of Religion and Ecology should pay careful attention to the lived experience and practical behaviors of religious people and avoid any implication that worldviews and beliefs alone make up a religion or a religious life."⁹² What each of these examples reveals is both an acknowledgment of the centrality of White's ideo-centric contribution to the field of study as well as a felt unease with its ability to offer a pragmatic mode of understanding the relationship between religion and the environmental crisis. As I argue in the Conclusion of this dissertation, rethinking White leads to a balancing of these two positions.

⁹⁰ Bron Taylor, "Critical Perspectives on 'Religions of the World and Ecology,'" in *The Encyclopedia of Religion and Nature*, vol. 2, ed. Bron Taylor (New York: Continuum, 2008): 1375-1376.

⁹¹ Bauman et al., "Conclusion," 253.

⁹² Ibid., 252.

Responses from the World Religions

The degree to which White's ideas have been employed not just by scholars interested in Christian ecotheology but also by scholars writing on a wide-array of religious traditions and from a broad set of disciplines is a testament to the widespread appeal and the utility of his ideo-centric position. It did not take a leap in imagination for scholars who study other religious traditions to find ways to link White's arguments to their own research. Many scholars of Judaism, for instance, have found White's critique of scriptural notions of dominion to be a useful starting point for discussions of Judaism and ecology. Richard Foltz, a religious studies scholar who was instrumental in early discussions of Judaism and ecology, notes that "[i]n the wake of Lynn White Jr.'s critique of more than thirty years ago, many Jews have sought to provide ecological and particularly Jewish readings of scriptural tradition."⁹³ As scholar of Modern Judaism Hava Tirosh-Samuelson points out, these responses to White often paralleled the responses of Christian ecotheologians that emerged out of the debates following "Historical Roots." "Christian thinkers have arisen to defend Christianity against this challenge, thereby articulating a Christian-based environmental ethics. The Jewish response to White's charges emerged at the same time."⁹⁴ Indeed, with an overlapping set of scriptures, it is common for scholars of Judaism and ecology to note White's

⁹³ Richard C. Foltz, ed., *Worldviews, Religion and The Environment: A Global Anthology* (Belmont, CA: Wadsworth Thomson, 2003): 77-78.

⁹⁴ Hava Tirosh-Samuelson, "Nature in the Sources of Judaism," *Daedalus: Journal of the American Academy of Arts and Sciences* 130, no. 4 (Fall 2001): 99.

influence—for better or for worse—in shaping scholarly approaches to discussions of Jewish environmentalism.⁹⁵

The study of Islam and ecology has also articulated responses to “Historical Roots” and has, at times, found it to be generative of thoughtful discussions regarding “green” scripture and values that can be retrieved from the Muslim tradition. “Islamic environmental ethics as articulated by contemporary writers tends more to be rooted in more practical terms,” writes Foltz. This is “often by way of response to Lynn White’s well-known critique of Western Christianity.”⁹⁶ Scholars of Islam and ecology have also found similar inspiration in the work of philosopher Seyyed Nasr. In a series of lectures given in the same year as White’s “Historical Roots” talk at the AAAS meeting and published in 1968, Nasr made a similar critique of the “domination of nature” found in Islamic thought.⁹⁷ Both White and Nasr’s critiques of dominion, it should be noted, can also be said to predate the publication of “Historical Roots” in 1967 as both were discussing similar ideas in their earlier works.

But the utilization of White’s scholarship is not limited to scholars interested in Western religions like Judaism and Islam. Those who study the world religions of South

⁹⁵ See, for example, David Ehrenfeld and Joan G. Ehrenfeld, “Some Thoughts on Nature and Judaism,” in *Judaism and Environmental Ethics: A Reader*, ed. Martin D. Yaffe (New York: Lexington Books, 2001): 284–85; Tikva Frymer-Kensky, “Ecology in a Biblical Perspective,” in *Worldviews, Religion and The Environment: A Global Anthology*, ed. Richard C. Foltz (Belmont, CA: Wadsworth Thomson, 2003): 290; Ismar Schorsch, “Learning to Live with Less: A Jewish Perspective,” in *Spirit and Nature: Why the Environment Is a Religious Issue: An Interfaith Dialogue*, ed. Steven C. Rockefeller and John C. Elder (Boston: Beacon Press, 1992): 27; and Martin D. Yaffe, “Introduction,” in *Judaism and Environmental Ethics: A Reader*, ed. Martin D. Yaffe (New York: Lexington Books, 2001): 6–11.

⁹⁶ Richard C. Foltz, “Islam,” in *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb (New York: Oxford University Press, 2006): 208. For an additional example of how scholars of Islam and ecology have responded to White, see Iqtidar H. Zaidi, “On the Ethics of Man’s Interaction with the Environment: An Islamic Approach,” in *Religion and Environmental Crisis*, ed. Eugene C. Hargrove (Athens, GA: The University of Georgia Press, 1986).

⁹⁷ Seyyed Hossein Nasr, *The Encounter of Man and Nature: The Spiritual Crisis of Modern Man* (London: Allen and Unwin, 1968): 18.

Asia have responded to White as well. “Before long,” writes Taylor, “the soul searching White’s thesis helped to precipitate within occidental religions began to be taken up by devotees and scholars of religion originating in Asia.”⁹⁸ Hinduism scholar, Eliza Kent, for instance, describes the discourse in India that arose in response to White’s 1967 text: “the line of inquiry initiated by White has yielded a body of important scholarship analyzing the conceptualizations of nature generated by the diverse religious communities of the Indian subcontinent.”⁹⁹ Haberman, who has written extensively about Hinduism and the rivers of India, draws frequently upon White to discuss the way that scholars can approach Hinduism’s multi-faceted relationship to the natural world.¹⁰⁰

Scholars of East Asian religions have also looked to “Historical Roots” for inspiration. The co-editor of the book *Confucianism and Ecology: The Interrelation of Heaven, Earth, and Humans*, John Berthong, to give but one example, argues that White has had significant influence on the study of Confucianism and Daoism and ecology.¹⁰¹ Another fitting example is that of Buddhist scholar Ugo Dessì, who uses White’s article to talk about the relationship between Japanese Buddhism and ecology in his article “‘Greening Dharma’: Contemporary Japanese Buddhism and Ecology.”¹⁰²

One of the more notable ways in which White has impacted the study of religion and ecology has been the way in which scholars have set out to empirically test his conclusions regarding the relationship between religious ideas and environmental

⁹⁸ Taylor, “Introduction,” xv.

⁹⁹ Eliza Kent, “A Road Runs Through It: Changing Meanings in a Sacred Grove in Tiruvannamalai, Tamil Nadu,” *Journal for the Study of Religion, Nature and Culture* 4, no. 2 (2010): 213–14.

¹⁰⁰ See, for example, David Haberman, *River of Love in an Age of Pollution: The Yamuna River of Northern India* (Berkeley, CA: University of California Press, 2006): 17; and Haberman, *People Trees*, 7.

¹⁰¹ John Berthong, “Motifs for a New Confucian Ecological Vision,” in *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb (New York: Oxford University Press, 2006): 248–49.

¹⁰² Dessì, “‘Greening Dharma,’” 335.

attitudes and behaviors. Within the social sciences, White's argument has given birth to countless studies scrutinizing the linkages between religious ideas and environmental attitudes and action. These attempts to empirically link religious ideas and worldviews include studies as far-ranging as examinations of the connection between denominational affiliation, adherence to dominion or stewardship ideologies, and levels of religious involvement to environmental behaviors and actions as they relate to environmental attitudes, actions, and the creation of "greener" institutions.¹⁰³

Proctor and Berry, in "Social Science on Religion and Nature," assess the ways in which "Historical Roots" has been scrutinized in empirical studies. "White's argument, and the counterarguments of White's opponents, are empirical claims concerning social and cultural reality," they observe. As such, White's hypotheses "could in theory be tested by means of rigorous, often quantitative, social science methods. [...] Perhaps science can help us decide whether White's thesis is correct."¹⁰⁴ Unfortunately, scholars remain divided on whether or not the sociological evidence supports White's hypotheses or not. On the one hand, sociologists such as Kearns find cause to argue that "to many observers, White's verdict seemed to be empirically confirmed" and that, at least by the

¹⁰³ Attempts to empirically test White's thesis are numerous and have yielded mixed findings on whether or not religious ideas and values significantly influence environmental attitudes and behaviors. See, for example, Paul A. Djupe and Patrick Kieran Hunt, "Beyond the Lynn White Thesis: Congregational Effects on Environmental Concern," *Journal for the Scientific Study of Religion* 48, no. 4 (2009): 670–86; Douglas Lee Eckberg and T. Jean Blocker, "Varieties of Religious Involvement and Environmental Concerns: Testing the Lynn White Thesis," *Journal for the Scientific Study of Religion* 28, no. 4 (1989): 509–17; James L. Guth, et al., "Faith and the Environment: Religious Beliefs and Attitudes on Environmental Policy," *American Journal of Political Science* 39, no. 2 (May 1995): 364–82; Ronald G. Shaiko, "Religion, Politics, and Environmental Concern: A Powerful Mix of Passions," *Social Science Quarterly* 68, no. 2 (1987): 244–62; and Michelle Wolkomir, et al., "Substantive Religious Belief and Environmentalism," *Social Science Quarterly* 78, no. 1 (1997): 96–108.

¹⁰⁴ Proctor and Berry, "Social Science," 1571.

early 1990s, the sociological literature “seems to agree, arguing that the more ‘Christian’ or biblically oriented one is, the less one is concerned about the environment.”¹⁰⁵

On the other hand, however, additional studies have suggested the opposite to be true. In reviewing the literature, Proctor and Berry have argued that while many studies have found White’s arguments to hold true when studied sociologically, that oftentimes those studies have been “substantially weak” in that they do not take into account important variables that could also influence environmental attitudes such as gender, social class, race, education, and age. “What is unarguable,” they write, “is that not one single social science study has provided powerful and unqualified vindication of the Lynn White thesis.”¹⁰⁶ At the core of this uncertainty, they suggest, is that “White’s thesis is conceptually simplistic” and that any studies that attempt to explore such complicated social phenomena, are bound to be limited by the perceived narrow spectrum of focus found in “Historical Roots” (i.e. “the stark opposites of dominion over nature versus unity with nature”).¹⁰⁷

In addition to the broad reach of White in inspiring a variety of studies on religion and ecology, scholars and religious leaders have also drawn upon his ideas as a source of inspiration in the organizing of conferences, the creation of institutions, and in the formation of academic journals and forums. Taylor, for instance cites “Historical Roots” as a key shaper of the journal *Ecotheology* which was later replaced by *The Journal for*

¹⁰⁵ Laurel Kearns, “Saving the Creation: Christian Environmentalism in the United States,” *Sociology of Religion* 57, no. 1 (1996): 55.

¹⁰⁶ Proctor and Berry, “Social Science,” 1572–73.

¹⁰⁷ Ibid.

the Study of Religion, Nature, and Culture, one of the more respected peer-reviewed journals dedicated to the exploration of religion and ecology/nature:

Ecotheology was especially well focused on the now longstanding debate about the role of theistic religion in nature-human relationships [...]. Indeed, it is almost impossible to imagine the emergence either of *Ecotheology*, or its reframed apparition as the *JSRNC*, were it not for the now-famous critique by Lynn White, who argued that Christianity played a decisive role in precipitating the worldwide degradation of ecosystems.¹⁰⁸

Another fitting example of the shaping power that “Historical Roots” has had on current perceptions of the connections between religions and ecological issues can be seen in the work of the *Yale Forum on Religion and Ecology*. Formed by Mary Evelyn Tucker and John Grim out of a series of conferences between 1996 and 1998 at *Harvard’s Center for the Study of World Religions*, this forum acts as the central organizing hub for the study of “Religion and Ecology.” As Jenkins points out, “Tucker and Grim offer pairings of quotes from White and [Thomas] Berry as they frame their invitation and objectives.”¹⁰⁹ In the words of Tucker and Grim, as they locate the work that took place at the *Harvard Center for the Study of World Religions* in relationship to White’s framing ideas, “[i]t is only in recent years, however, that this topic has been more fully explored, especially in the ten conferences on world religions and ecology held at the Center for the Study of World Religions at Harvard Divinity School from 1996–98.”¹¹⁰

¹⁰⁸ Bron Taylor, “Exploring Religion, Nature and Culture—Introducing the Journal for the Study of Religion, Nature and Culture,” *Journal for the Study of Religion, Nature, and Culture* 1, no. 1 (2007): 8.

¹⁰⁹ Jenkins, “After Lynn White,” 286, fn. 4.

¹¹⁰ Tucker and Grim, “Emerging Alliance,” 4.

Politically speaking, the responses of religions to “Historical Roots” have extended as far as the 1992 United Nations Conference on Environment and Development, the subsequent Kyoto conference, and the creation of the Earth Charter. In the United States, the former Vice President of the National Association of Evangelicals, Richard Cizik, lobbied Congress to improve environmental laws and policies created from an Evangelical stance of Creation Care.¹¹¹ This movement for Creation Care, in which Cal DeWitt, as noted earlier, played a major role, stems from theological reactions to White, including Francis Schaefer’s early response.

This widespread response to the ecological crisis and to White’s work has also come from churches. Denominational statements, protests and activism by the laity, the lobbying of Congress, the founding of religious special purpose non-profits, and a broad spectrum of other responses have emerged out of the growing concern for environmental issues by religious groups. In recent decades, most, if not all, major Christian denominations have released statements voicing their ecological concern. For example, in 1994 evangelicals published the “Evangelical Declaration on the Care of Creation,”¹¹² in 2008, 40 Southern Baptist Leaders signed “A Southern Baptist Declaration on the

¹¹¹ Laurel Kearns, “Noah’s Ark Goes to Washington: A Profile of Evangelical Environmentalism,” *Social Compass* 44 (September 1997): 349-366. It should also be noted that the “Creation Care” stance of Evangelicals is a more recent development which was preceded by a “stewardship” position. Kearns, “Green Evangelicals.”

¹¹² Evangelical Environmental Network, “Evangelical Declaration on the Care of Creation,” <http://creationcare.org/creation-care-resources/evangelical-declaration-on-the-care-of-creation/> (accessed July 9, 2015).

Environment and Climate Change,”¹¹³ and in 2008 the United Methodist Church issued a statement on “Environmental Stewardship.”¹¹⁴

Interfaith statements from the world’s religious traditions have also been issued. An early example comes from the 1986 meeting of the World Wildlife Fund (later renamed The World Wide Fund for Nature) in Assisi that ended with the Assisi Declarations. This is part of the “religious environmentalist paradigm,” as anthropologist Poul Pedersen calls it, which has been developed in response to Lynn White’s work.¹¹⁵ Though by no means the only source of this intense involvement and concern, White’s arguments in “Historical Roots” have been central, driving forces in the development of numerous responses from the Christian community. Christian activism and concern for the environment continues to grow and expand.

White’s work is rightly regarded as one fountainhead from which a rich field of scholarship and profligate intellectual transformation has sprung forth. In identifying White’s work as one fountainhead amongst many, it is not my intent to suggest that his work overshadow the outpouring of sincere religious responses that have emerged. White’s role in stimulating and focusing thought on religion and the environment is significant, but it is also important to be cognizant that it is but one of many outlets through which scholars have watered the “roots” of good scholarship in this field.

¹¹³ Southern Baptist Environment and Climate Initiative, “A Southern Baptist Declaration on the Environment and Climate Change,” <http://www.baptistcreationcare.org/node/1> (accessed July 9, 2015).

¹¹⁴ General Board of Church and Society of the United Methodist Church, “Environmental Stewardship,” (#1026 2008 BOR), General Council, 2008, <http://umc-gbcs.org/resolutions/environmental-stewardship-1026-2008-bor> (accessed July 9, 2015).

¹¹⁵ Poul Pedersen, “Nature, Religion, and Cultural Identity: The Religious Environmentalist Paradigm,” in *Asian Perceptions of Nature: A Critical Approach*, ed. Ole Bruun Ole and Arne Kalland (Surrey: Curzon Press, 1995).

By framing their own work in relationship to White's assertion that religion is both a shaper of environmentally destructive attitudes and actions and part of the solution to the environmental crisis, scholars and religious practitioners can reasonably expect that their peers will have a shared recognition of the disciplinary stakes, boundaries, and directions that contextualizes such an argument. Thus White's work acts as both a useful stepping-stone for examining the importance of religious ideas and values while simultaneously signaling a common vocabulary and set of methodological assumptions to their readers.

Rethinking White – Critiques, Questions, and The Scope of this Dissertation

Despite the wide recognition of White's article as a seminal text in the creation of the field of religion and ecology and in the continuing investigation into the relationship between the human and the environment, scholars, particularly ecotheologians, are often dismissive and reductionistic in their attempts to accurately portray and respond to White's thought. In this dissertation, I explore additional sources of information and new ways of thinking about White in an attempt to remedy these lacunae. This dissertation, then, is not focused on assessing the ways in which scholars have utilized White's thought, but rather on better understanding both White's arguments as well as White as a scholar.

The reactions to White can be effectively categorized into two occasionally overlapping camps: those who utilize a reductionist, highly selective reading of White's work in order to critique it or as a springboard for their own constructive work, and those

who have attempted a fuller, more careful analysis of his publications and the context in which he was writing. Thus, on the one hand, by delving more deeply into White's thought, this dissertation attempts to present a portrait of White's own ecotheological position. On the other hand, this dissertation aims at answering the question: How does developing a fuller understanding of White and his arguments lead to a richer set of tools and ideas for rethinking the study of religion and ecology? The goal is not to suggest that any particular reading of White is correct or to discredit any thinking that has emerged from those who have utilized White's thought, but rather to rethink White and his work for the purposes of stimulating further study and reflection.

While I argue that rethinking White remains necessary, and an immensely useful task, I am not the first to argue that a reexamination of White and the arguments that he laid out in "Historical Roots" is a worthwhile endeavor. Whitney's suggestion that scholars need to rethink White's hypotheses and expand upon the existing knowledge base from which scholars can draw, therefore, bears repeating. "Given the extent of White's influence," writes Whitney, "it seems worthwhile to reexamine his thesis, and the responses to it, within the larger context of White's overall interpretative and methodological framework."¹¹⁶

Others, such as Jenkins and philosopher and theologian Robin Attfield, have expressed similar conclusions regarding the need for reassessment. "[A]fter forty years," of misunderstandings and vigorous debate centered upon "Historical Roots," posits

¹¹⁶ Whitney, "Lynn White," 151–52.

Attfield, “a reassessment is needed.”¹¹⁷ Due to the interdisciplinary quality of White’s work, which straddles both theology and history, Attfield argues, “nothing less than an interdisciplinary review [of White’s work] is needed.”¹¹⁸ Moreover, Attfield proposes that any discussion of White’s thought, and any debate that emerges out of such a discussion is “bound to fail if it [does] not seek to be interdisciplinary”¹¹⁹ just as White’s own writings are interdisciplinary.¹²⁰ Similarly Jenkins, in his article “After Lynn White: Religious Ethics and Environmental Problems,” proposes that the scholarship in the field of religion and ecology would benefit from a closer examination of “White’s legacy” and the premise that religious ideas and values are key shapers of history.¹²¹ Jenkins argues that if this premise is to be reconsidered, then this would have repercussions for how the objectives and methodologies present within the field of religion and ecology are understood. “Moreover,” writes Jenkins, “the debate involves its own reconsiderations of White’s legacy.”¹²² Elsewhere, in a review article co-authored with Christopher Key Chapple, a specialist in Indic and Comparative Theology, Jenkins describes the ongoing effort to rethink White. “So influential has been White’s critique,” write Jenkins and Chapple, “that scholars in all three fields [i.e. ecotheology, environmental ethics, and religion and ecology] have begun to reassess its legacy in shaping inquiry.”¹²³ Building upon these insights, and others, this dissertation is the first in-depth exploration of the life

¹¹⁷ Robin Attfield, “Social History, Religion, and Technology: An Interdisciplinary Investigation into Lynn White’s ‘Roots,’” *Environmental Ethics* 31, no. 1 (Spring 2009): 32.

¹¹⁸ Ibid.

¹¹⁹ Ibid., 33.

¹²⁰ Ibid., 43.

¹²¹ Jenkins, “After Lynn White,” 288–89.

¹²² Ibid., 290–91.

¹²³ Willis Jenkins and Christopher Key Chapple, “Religion and Environment,” *Annual Review of Environment and Resources* 36 (2011): 454.

and work of White that asks what themes and additional insights can emerge when his scholarship is rethought and considered in the broader context of his life and work.

However, in reassessing White's work, it is significant to note that White considered "Historical Roots" to be incomplete. Originally written as a short speech that was given to the American Association for the Advancement of Science (AAAS) on the day after Christmas in 1966, White expressed regret that his argument, as it was published in *Science* and as it was presented before the AAAS, did not allow him adequate space and time to adequately explain his thought process. "The time limitation was strict," he stated in a letter written in 1984, "and on a topic like that much had to be omitted."¹²⁴ Additionally, in an interview, when asked where he got his inspiration for "Historical Roots," White characterized his argument as underdeveloped and inadequately researched. In his words, "I just sat down and wrote that speech out of my head (there being no other source available)."¹²⁵ This tendency to publish his thoughts, even as he was in the midst of developing them, was not uncommon for White. Hall, for instance, describes White's 1967 article as one of many "evolving ideas" that he built on over time.¹²⁶

¹²⁴ Lynn Townsend White, jr., personal letter to Mary Aline Duitsman, 24 July 1984, cited in Mary Aline Duitsman, "Ecology and Theology: Christian Responses to Lynn White Jr.," (master's thesis, California State University, Northridge, May 1987): 15. In another letter, written in 1979, White explains that his "1966 paper for the AAAS was limited to 50 minutes, I consented to write ten pages for Barbour (pp. 55-64) entitled 'Continuing the Conversation.'" Lynn Townsend White, jr. to Dr. Jacques Grinewald, 5 December 1979, Coll. 1541, Box 14, Folder 3, Research Projects, 1978-1985, The Lynn Townsend White Papers, 1937-1985, Department of Special Collections, Charles E. Young Research Library, University of California Los Angeles, Los Angeles.

¹²⁵ White et al., "Ecology and Religion."

¹²⁶ Hall, "Éloge," 480.

Reading Beyond Roots: White's Scholarship and Methodology in Question

These complicating factors, in addition to the claim that rethinking White and his work could contribute to a reassessment of the field of religion and ecology, lead me to explore White's thought in the following ways in this dissertation: First, I argue that "*Historical Roots*" is best understood as an extension of White's earlier historical scholarship and methodology. "Historical Roots" is too often read in isolation reflecting a general lack of awareness of White's methodology and larger body of work. The narrow focus of most responses to White is, at least in part, because, as Nash observes, "[m]ost critics of Lynn White did not read beyond his 1967 condemnation."¹²⁷ Indeed, "Historical Roots" is often read as it was White's first and final word on the relationship between religion and the environment. This could not be further from the truth. Indeed, as I discuss in chapter 3 of this dissertation, in the last several decades of his life White wrote and spoke often on the subject of religion and ecology in ways that expanded upon his original argument and created a fuller, more cohesive explanation of what he understood to be both the sources of, and the solution to, the environmental crisis.

Even "Historical Roots" itself, despite being a central and highly cited work of scholarship, is not carefully assessed or read. In the words of Professor of geographer and

¹²⁷ Nash, *The Rights of Nature*, 95. In-depth readings of White's work on religion and ecology are few and far between. On occasion, authors will cite White's follow-up article, "Continuing the Conversation," but this is not a common practice. See, for example, Haberman, *People Trees*; Hall and Macleod, "Technology, Ecology and Religion"; David N. Livingstone, "The Historical Roots of Our Ecological Crisis: A Reassessment," *Fides et Historia* 26 (1994): 38–55; Nash, *The Rights of Nature*; Roderick Frazier Nash, "The Greening of Religion," in *This Sacred Earth: Religion, Nature, Environment*, 1st ed., ed. Roger S. Gottlieb (New York: Routledge, 1996); George Sessions, ed. *Deep Ecology for the Twenty-First Century* (Boston: Shambhala, 1995); Roger L. Shinn, "Science and Ethical Decision: Some New Issues," in *Earth Might Be Fair: Reflections on Ethics, Religion, and Ecology*, ed. Ian G. Barbour (Englewood Cliffs: Prentice-Hall, 1972); Claude Y. Stewart, Jr., *Nature in Grace: A Study in the Theology of Nature* (PhD dissertation, Macon, GA: Mercer University Press, 1983); Millard Schumaker, "Delimiting the Debate," in *Subduing the Earth: An Exchange of Views*, ed. Donald E. Gowan and Millard Schumaker (Kingston, ON: The United Church of Canada, 1980); and Spring and Spring, eds., *Ecology and Religion*.

historian, David N. Livingstone, “White’s paper is more often summarized than studied, more often referenced than read.”¹²⁸ In fact, “Historical Roots” has often been faulted for its sheer brevity, with some scholars such as political scientist J. Patrick Dobel describing “Historical Roots” as a “short, undocumented and simplistic article” that “borders on the ludicrous” for its brevity and attempt to untangle such a complicated issue.¹²⁹ The brevity of “Historical Roots,” and the supposed dearth of information and supporting evidence in White’s argument, has caused some scholars to dismiss it entirely. Philosopher Martin Schönfeld, for instance, disparages White’s argument, claiming that White’s attempt to make such an expansive argument in just five short pages “smacks of hubris” and that he paints a mere “cartoon of the historical record.” “Historical Roots,” he concludes, “is anathema to serious scholarship” and he argues that it could be said that “White’s sweeping generalizations do not live up to the scholarly rigor of historiography.”¹³⁰ Such dismissive approaches, I argue, are less indicative of White’s failure to develop his argument, than of the failure of scholars to read further and to heed the assertions of others, such as Hall and Nash, that “Historical Roots” can only adequately be understood in the context of White’s broader historical and theological argument.

¹²⁸ Livingstone, “Historical Roots,” 38.

¹²⁹ J. Patrick Dobel, “Stewards of the Earth’s Resources: A Christian Response to Ecology,” *The Christian Century* 94 (October 12, 1977): 906–07.

¹³⁰ Martin Schönfeld, “The Future of Faith: Climate Change and the Fate of Religions,” in *Religion in Environmental and Climate Change: Suffering, Values, Lifestyles*, ed. Dieter Gerten and Sigurd Bergmann (New York: Continuum, 2012): 155. Schönfeld is not the only scholar who finds the underdeveloped nature of “Historical Roots” problematic. Environmental scientist Kyle S. Van Houtan and ecologist Stuart L. Pimm, for instance, also write dismissively of White and refer to his thesis as a “simplistic abstraction.” Kyle S. Van Houtan and Stuart L. Pimm, “The Various Christian Ethics of Species Conservation,” in *Religion and the New Ecology: Environmental Responsibility in a World of Flux*, ed. David M. Lodge and Christopher Hamlin (Notre Dame, IN: University of Notre Dame Press, 2006): 132.

In addition, there are other warning signs indicating that “Historical Roots” is often read and cited with less care than it deserves. For example, in an ongoing analysis in which I have identified 216 books, articles, and book chapters that cite “The Historical Roots of Our Ecologic Crisis” (See Appendix 1), 115 of those authors misspell the title of his article or mis-cite it altogether. To give but a few examples, it has been called “The Historical Roots of Our Ecological Crisis,” “The Roots of Our Ecological Crisis,”¹³¹ “The Historic Roots of Our Ecological Crisis,”¹³² “The Historical Roots of the Environmental Crisis,”¹³³ and even “The Historical Origins of the Ecological Crisis.”¹³⁴ This count would be less remarkable were it not for the fact that out of those 115 publications which mis-cite or misspell the title of “Historical Roots,” 41 of those authors identify their publication as a direct response to White. Of the remaining 101 publications that utilize White’s argument in “Historical Roots,” 42 position themselves as a direct response to White’s work. While these numbers do not tell us anything significant in and of themselves about the way in which “Historical Roots” has been understood, I do argue that it does raise a red flag which alerts scholars that more care needs to be given in how White is read and utilized by scholars in the field.¹³⁵

Many of the misunderstandings—or at least the seemingly irreconcilable differences in interpretations—of White’s arguments in “Historical Roots” can

¹³¹ Robin Attfield, *Environmental Philosophy: Principles and Prospects* (Aldershot, UK: Avebury, 1994): 21.

¹³² Susan Power Bratton, “Ecology and Religion,” in *The Oxford Handbook of Religion and Science*, ed. Philip Clayton and Zachary Simpson (New York: Oxford University Press, 2006): 225.

¹³³ Cobb, *Sustainability*, 1.

¹³⁴ H. Paul Santmire and John B. Cobb, Jr., “The World of Nature According to the Protestant Tradition,” in *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb (New York: Oxford University Press, 2006): 132.

¹³⁵ For more information, see Appendix 1.

undoubtedly be attributed to the interdisciplinary nature of White's scholarship and, to an equal degree, to the diversity of disciplines and scholars who have felt the need to respond. When one stakes claims in so many territories, border disputes are bound to occur. As Whitney observes, "[b]y breaching disciplinary boundaries, White made his thesis a focal point for debate among environmental historians, scholars of religion and environmental ethics, and the general public."¹³⁶ While this interdisciplinarity can at times be overwhelming, it is important to bear in mind that no single disciplinary approach can lay claim to a full understanding of White. "Historical Roots" is a text that has found such a broad appeal precisely because of its interdisciplinarity, not in spite of it.

The tendency to not read beyond "Historical Roots," I argue, paints a distorted image of White's thought in that it not only fails to take into account the nearly four decades of scholarship in which White developed his methodology, but it also ignores nearly a dozen other instances in which White wrote or spoke about the relationship between religion and the environment. Chapter 2 of this dissertation, therefore, is an attempt to remedy this general tendency to view "Historical Roots" as a standalone piece. There, I examine White's larger body of work, especially his historical research, in an effort to provide a broader understanding of White's historical methodology and body of work.

"Historical Roots," I argue, is the expression of a lifelong intellectual project that is both shaped by White's scholarship which preceded it and which can be read as an early step in the evolution of a complex pattern of thought. "Historical Roots," in other words, is neither White's first nor his last word on the subject of religion and the

¹³⁶ Whitney, "Changing Concepts," 31–32.

environment. To ignore this is to entertain only a limited understanding of White and his work. As religious studies scholar Millard Schumaker explains, arguments fall short when they fault “Historical Roots” for its brevity and its underdeveloped body of evidence. “[T]he truth is that White does deliver the goods,” he writes, “the documentation which is lacking in ‘The Historical Roots of our Ecological [sic] Crisis’ is to be found in abundance throughout the monumental series of books and papers which constitute the results of his impressive scholarly career as *the* historian of medieval technology.”¹³⁷ Before White’s arguments about religion and ecology can be examined, I argue, it is first necessary to rethink how White is understood as a scholar and how he developed his ideas over time.

White and Theology: Critic of Religion or Constructive Ecotheologian?

Reading beyond “Historical Roots” brings additional writings and reflections on religion and ecology to light that are relatively under-represented in the existing ecotheological discussion of White’s thought. Therefore, in light of White’s additional theological reflection, I offer a second hypothesis: *White was a constructive theological figure who drew upon his theological training and his own personal Christian worldview to articulate a nuanced, theologically informed ecotheological position.* Framing White as a mere critic of religion, or only as a historian, and deemphasizing his constructive ethical and theological claims can no longer be viewed as a tenable characterization of his life and work. Despite the complexity and breadth of White’s argument, the

¹³⁷ Schumaker, “Delimiting,” 8.

ecothological scholarship that has emerged has fixated almost exclusively on White's environmental critiques of Christianity, and not on his creative theological proposals.

In this focus on White's critiques, his argument is often viewed as an "attack" on religion. The ways in which White's article have been described in negative terms reveals the general attitude towards it. Theologian Rosemary Radford Ruether called it "an unequivocal condemnation,"¹³⁸ historian Jeremy Cohen and theologian Sallie McFague both categorized it as an "indictment" of Scripture and the Christian tradition,¹³⁹ and others labeled it as an "attack,"¹⁴⁰ as "dogmatic"¹⁴¹ in nature, and it has even been deemed "dangerous" and "illusory."¹⁴² As such, this perceived assault on the Christian tradition has led many scholars to respond defensively, focusing on apologetics rather than on constructive engagement with White's theological propositions. As Whitney explains, "the perception that White's ideas constituted an 'attack' on Christianity" resulted in a felt "need" to defend Christianity "before additional damage was done to the value of conventional religious beliefs."¹⁴³ This general aura of defensiveness to the notion that Christianity is culpable for the environmental crisis, notes Jenkins, "has occasioned

¹³⁸ Rosemary Radford Ruether, "Religious Ecofeminism: Healing the Ecological Crisis," in *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb (New York: Oxford University Press, 2006): 363.

¹³⁹ Jeremy Cohen, *Be Fertile and Increase, Fill the Earth and Master It: The Ancient and Medieval Career of a Biblical Text* (Ithaca, NY: Cornell University Press, 1989): 2; and Sallie McFague, "An Ecological Christology: Does Christianity Have It?," in *Worldviews, Religion and The Environment: A Global Anthology*, ed. Richard C. Foltz (Belmont, CA: Wadsworth Thomson, 2003): 334.

¹⁴⁰ Steven C. Rockefeller and John C. Elder, eds., *Spirit and Nature: Why the Environment Is a Religious Issue: An Interfaith Dialogue* (Boston: Beacon Press, 1992): 4; Holmes Rolston III, "Environmental Ethics and Religion/Science," in *The Oxford Handbook of Religion and Science*, ed. Philip Clayton and Zachary Simpson (New York: Oxford University Press, 2006): 924; and Holmes Rolston III, *A New Environmental Ethics: The Next Millennium for Life on Earth* (New York: Routledge, 2012): 14.

¹⁴¹ Arthur R. Peacocke, "On 'The Historical Roots of Our Ecological [sic] Crisis,'" in *Man and Nature*, ed. Hugh Montefiore (London: Collins, 1975): 155.

¹⁴² Attfield, "Social History," 48.

¹⁴³ Whitney, "White, Lynn," 1735.

vigorous responses from Christian theology, from defensive denial to revisionary agreement.”¹⁴⁴

The colossus that is “White the critic,” I argue, has overshadowed “White the constructive, theologically-minded thinker.” This must change. In chapter 3, therefore, I continue to highlight White’s larger body of work by drawing attention to White’s writings on religion and ecology, particularly those where White gave voice to his own constructive theological position. An alternative understanding, I suggest, is to interpret White’s critiques of religion, such as his argument that Christianity is to blame for the ecological crisis, as provocative presuppositions designed to set up considered, constructive claims about how Christianity can, or even should, be more ecologically friendly. Thus, rather than foregone conclusions in and of themselves, White’s critiques should be read as an argumentative first step towards a positive theological argument for the reinterpretation, rather than the dismissal, of the Christian tradition.

To accomplish this, I examine White’s writings on religion and ecology alongside evidence supporting White’s own theological training and intentions. White, I demonstrate, was not only trained in the study of theology, but he also framed his own scholarship in Christian terms and argued that Christianity can, and should, be a positive

¹⁴⁴ Jenkins and Chapple, “Religion and Environment,” 454. Others have voiced similar concerns. Theologian Ernst Conradie, for instance, writes, “[u]ntil recently, most contributions to ecological theology from within the field of biblical studies were shaped by two related factors. First, they were aimed at defending Christianity against the accusations of Lynn White (1967) and other secular critics that Christianity is irredeemably anthropocentric and bears ‘a huge burden of guilt’ for the ecological crisis. Secondly, they tried to retrieve some ecological wisdom from the biblical texts.” Ernst M. Conradie, “What on Earth is an Ecological Hermeneutics? Some Broad Parameters,” in *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*, ed. David G. Horrell et al. (New York: T&T Clark International, 2010): 295. Theologian Celia Deane-Drummond also notes: “Christian approaches to ecology and environmental concern are often on the defensive, responding to the charge that Christianity itself has exacerbated the ecological crisis by fostering the notion of human dominion of the earth (White 1967).” Celia Deane-Drummond, “Theology, Ecology, and Values,” in *The Oxford Handbook of Religion and Science*, ed. Philip Clayton and Zachary Simpson (New York: Oxford University Press, 2006): 897.

contributor to social justice issues. Scholars have, at times, classified White as a secular critic of religion and have attempted to claim that his supposed lack of theological training is problematic. McFague, for instance, claims that White “revealed an ignorance of theological history” when he criticized the role of Christianity in the environmental crisis.¹⁴⁵ In chapter 3, therefore, I argue that even though White was unabashedly Christian, a fact which he even stated forthrightly in “Historical Roots,” this important aspect of his scholarly work has been largely ignored by White’s critics.

More importantly, the fact that some scholars are inclined to ignore White’s faith in their readings of his work has led to a tendency to obscure White’s intentions and constructive claims. As anthropologist and environmental thinker Patricia K. Townsend observes:

Those who appropriate White to argue for the abandonment of Christianity have failed to read on and see that he was instead suggesting that there are other strands in Christianity, represented by Eastern Orthodoxy and by St. Francis of Assisi, that have a less human-oriented view of nature. White was a lifelong Presbyterian, son of a Presbyterian minister, and earned a master's degree at Union Theological Seminary in New York before he did further graduate work in history at Harvard. He was not really suggesting that Christians become Zen Buddhists or secularists. Instead, he was on the leading edge of a significant group of ecotheologians and environmental ethicists who began writing in the 1970s and of a great expansion of religiously based environmental organizations in the 1990s.¹⁴⁶

The tendency to ignore White’s constructive theological position, I argue, is regrettable in that it obscures White’s repeated and adamant assertion that humans are part of a “spiritual democracy of all God’s creatures.”¹⁴⁷ This theological position anticipates

¹⁴⁵ McFague, “Ecological Christology,” 334.

¹⁴⁶ Townsend, “White, Lynn,” 1329.

¹⁴⁷ For further detail, see chapter 3 of this dissertation.

developments in both the fields of religion and ecology and religion and animals by several decades and reveals him—surprisingly, given his disciplinary location—to be a constructive Christian thinker.

White and Weber: Ideo-Centrism and White's use of Sociological Theory

In addition to exploring White's broader historical scholarship and drawing attention to White's own religious life and theological position, I also attempt to discuss the underlying theory and methodology that informs White's understanding of the relationship between religious ideas and changes in environmental attitudes and behaviors. My third overarching argument, therefore, is to demonstrate that *White drew upon the sociological work of Weber to create an ideo-centric understanding of religion and social change that was multi-directional, multi-causal, and theoretically nuanced*. This position builds upon observations made by others that White's work resembles that of Weber in their shared observation that religious ideas can, under particular circumstance, operate as prime shapers of social change, worldviews, and values.

In chapter 4 of this dissertation, therefore, I look closely both at the instances where White engaged explicitly with Weber's social theory and at his claim that he only arrived at his famous conclusions "after [he] had read Max Weber."¹⁴⁸ In light of this self-proclaimed intellectual indebtedness to Weber, I trace a number of Weberian themes present in White's publications, such as his interest in the notion that religious ideas become obscured over time through the process of *rationalization*,¹⁴⁹ his preoccupation

¹⁴⁸ White, "Continuing the Conversation," 55.

¹⁴⁹ As Kearns points out, White highlighted the blending of, and interplay between, religious ideas and secular worldviews. "White recognized the centrality of religion in shaping our worldview and ethos," she

with the Weberian concept of *secularization*,¹⁵⁰ and his insistence that changes in religious ideas lead to *unforeseen and unintended consequences*. I will also endeavor to demonstrate that White, like Weber, understood the relationship between religious ideas and attitudes and actions, and material conditions, to be multicausal and bi-directional.

This argument calls into question the “single cause,” unidirectional ideo-centric reading of White that is in common use.¹⁵¹ While many have noted the ways in which White’s ideo-centric premise is similar to the social theory of Weber,¹⁵² the connection between these two thinkers has never been fully explored. Chapter 4, therefore, is an attempt to explore the connection between White and Weber more fully and to dispel misunderstandings of how White understood religion to influence changes in ecological attitudes and behaviors.

The Task Ahead – The Continuing Conversation

Five decades after the publication of “Historical Roots,” it is important to remember not just the scope of White’s influence on the study of religion and ecology but also the depth and breadth of his own scholarly contributions. If the field of religion and

explains. “As Clifford Geertz points out, religion can fuse together ethos and worldview so that they ‘are mere reflexes of one another.’” Kearns, “Saving the Creation,” 64-65. I argue that this transformation of religious ideas into secular worldviews resembles the process of rationalization as described by Max Weber.

¹⁵⁰ White did not write “Historical Roots” in a scholarly vacuum. Indeed, he wrote “Historical Roots” in a period in which secularization theory was in its heyday. See, for example, the work of de Steiguer who discusses White in the context of secularization theory. De Steiguer, *The Age of Environmentalism*, 73-74. While his iconoclasm does not seem out of sort when considered in that context, one can also think of White’s argument regarding the secularization of science and technology as an essential part of the process of rationalization as described by Weber.

¹⁵¹ See, for example, Livingstone, “Historical Roots,” 41; Peter C. Perdue, “Technological Determinism in Agrarian Societies” in *Does Technology Drive History?: The Dilemma of Technological Determinism*, ed. Merritt Smith and Leo Marx (Cambridge, MA: The MIT Press, 1998); and Whitney, “Lynn White.”

¹⁵² See, for example, Ahmed Afzaal, “Disenchantment and the Environmental Crisis: Lynn White Jr., Max Weber, and Muhammed Iqbal,” *Worldviews* 16 (2012): 239–62; and Taylor, “Introduction,” xv.

ecology, and its many subfields, grew out of the “roots” planted by White in 1967, then the budding offshoots that have grown out of it must be tended. Yet, this dissertation is not dedicated to assessing those growths. Instead, this is a project of rehabilitation, an attempt to understand and to nourish the already fertile soil and rich intellectual seeds planted by White almost fifty years ago. Just as the science of ecology tells us that diversity is essential to functioning ecosystems, so too should the richness and diversity of White’s own scholarship be of value to those who continue to draw upon his work.

This dissertation then, in attempting to rethink and rehabilitate White’s legacy, is an invitation into continued conversation with White and his work. In the end, it may be that White’s own prophetic, ecotheological voice and rich historical and sociological methodology will be overshadowed by the critical questions that he proposed. Good questions, after all, are fertile ground in which new ideas can take root and thrive. The fact remains that White’s scholarship remains as relevant today as it did to those who first responded to him in the late 1960s. With rising interest in animals and religion, and with environmental ethics and Christian ecotheology still grappling with questions about the autonomy of creatures, the intrinsic value of nature, and the hope of ecological flourishing through biblically inspired relationships and cosmological frameworks, an expanded understanding of White can only enhance these exploratory dialogues.

Even if those interested in ecotheology will ultimately be dissatisfied with White’s theological conclusions or the methods that he employed, perhaps by developing a deeper understanding of how White arrived at his conclusions, scholars can continue to refine and deepen their understanding of White’s questions and theoretical frameworks

which have so fruitfully inspired the study of religion and ecology. As the first book-length exploration of White's work, this dissertation is both an attempt to water the intellectual seeds planted by White and to tend the soil from which scholars of religion and ecology can nurture new ways for understanding the relationship between religion and ecology. But, if such a dialogue between White's ideas and ongoing scholarship in religion and ecology is to occur, White's voice must be allowed its full expression. Scholars of religion and ecology must, to borrow a phrase from White, continue the conversation that he invited us into five decades ago.

2 – Lynn White’s Scholarship: A Historical Overview

“Historical Roots” did not emerge in a vacuum. White did not sit down one morning at his desk in 1966, as one might imagine, and suddenly find himself filled with original and sudden new ideas. White was a skilled and creative thinker, yes. But his genius for scholarship and his skill at exploring new and controversial scholarly ground grew out of his knack for synthesis and his careful, continual quest for understanding the relationship between religion, history, and contemporary culture. Viewed independently of White’s larger body of work, one might comment on the radical novelty of his attempt to link religious ideas with ecological devastation. But, closer scrutiny reveals the emergence of “Historical Roots” as a composite of decades of careful scholarship and conversation. The genius of White’s originality was synthesis, and “Historical Roots” is the accumulation of decades of slow growth and knotty entanglement.

This is not to say that there are not ideas left unexplored or facets of White’s thought on ecology that have not yet been brought to light. On the contrary, for more than four decades, scholars have produced a steady and seemingly inexhaustible series of new analyses and interpretations of “Historical Roots.” In scholars’ attempts to reveal the art beneath the rough-hewn marble of White’s thought, they have yet but scratched the surface. While White’s hypotheses in “Historical Roots” have been discussed *ad nauseam*, as noted in chapter 1, the unmistakable majority of scholarship that references White’s work on religion and ecology barely acknowledges the breadth and depth of his ecological thought. For the most part, scholars treat “Historical Roots” as a standalone

piece that is isolated from the intellectual and social milieu from which it sprang.

Ignoring this larger context, and the dense background of scholarship that precedes and supports it, enables misinterpretations of White's work. In short, "Historical Roots" was not composed in isolation; it is an extension of a larger, more complex pattern of thought and it must be considered as such.

Those who have attempted to develop a broader understanding of White's work have been few and far between. Roderick Nash's 1989 analysis of White's work on religion and ecology stands as one of the most inclusive analyses of White's oeuvre.¹⁵³ There also exists an outstanding Master's thesis written in 1993 by Judith Machen that assiduously walks through White's historical work. Indeed, as Machen points out, "other than the éloges written by Bert S. Hall at the time of White's death, no discussion of the broader context of White's scholarship has been published, nor has the tracing of the chronological growth of his ideas been attempted."¹⁵⁴ The essay penned by Hall and his graduate student, Ranald Mackenzie Macleod (1998), in particular, frames White's thought surrounding "Historical Roots" better than almost any. "The purpose of [their] essay," they explain, "is to place White's views on religion and ecology in the context of his later (post-1962) work, and to suggest that the argument White provoked risks losing some of White's most important insights."¹⁵⁵ To date, it can be said, most of White's work remains under-represented in scholarly analyses of "Historical Roots" and most analyses attempt to understand it outside of its broader context.

¹⁵³ Nash, *The Rights of Nature*.

¹⁵⁴ Judith Machen, *Cultural Values and the Vitality of the West: the Mind of Lynn White* (master's thesis, Norman, OK: The University of Oklahoma Graduate College, 1993): 5.

¹⁵⁵ Hall and Macleod, "Technology, Ecology and Religion," 149.

Rather than viewing White's 1967 article as a stand-alone text, I argue that "Historical Roots" weaves together threads from a wide-array of White's scholarship. It is a tapestry of ideas woven from well-worn and skillfully tested threads. It is no accident that White is able to so effortlessly and seamlessly blend together so many disparate parts of his argument in "Historical Roots." The scope of his argument is breathtaking: In just five pages White dissects English agricultural history; he touches lightly upon themes of democracy and humanism; he invokes the technological history of the rotary grindstone, the mill, the stirrup, and the heavy plow with ease; and he discusses theology, the history of religion, and even subtly touches upon Weberian social theory with the cool hand of a practiced master. In this chapter, I argue that his apparent mastery of these subjects is no accident; his knowledge of these areas is the result of decades of thought.

In what follows, I will steer through the development of White as an intellectual and call attention to his education, to the development of his scholarship and religious life, and to key landmarks present in "Historical Roots" which demonstrate the linkage between those ideas and his past scholarship. These include, but are not limited to, White's indomitable efforts to develop new methodologies for interpreting non-textual historical evidence; his groundbreaking scholarship on medieval technology such as the heavy plow and the rotary grindstone, his unwavering interest in Christian theology and the role of religion as a driving force in history, his evolving and ever-present interest in issues related to individual and societal welfare, and his collaboration and friendship with ecological luminaries such as Aldous Huxley. Together, these independent strands comprise a larger interwoven whole that took shape over decades of toil and refinement.

“Historical Roots” emerged from this weaving of methods and ideas, as did many other rich tapestries of his thought, which are not discussed here. My task in this chapter is to bring light to bear on the development of White’s ecological thought so that scholars can better study the intricacy of White’s ideas in “Historical Roots.”

First, failing to broaden the scholarly understanding of White’s work leads respondents to misinterpret his conclusions and methodologies. Hall and Macleod point this out as well:

Debate about the “Lynn White Thesis” has often taken place in contexts that give little attention to the lifetime of work that bore fruit in his observation. This has often led to criticisms that either miss the mark completely, or seem designed to twist the argument (not surprisingly) toward the critic’s field of expertise.¹⁵⁶

Although there is much to be gained by using White’s work as a launching point for exploration in the field of religion and ecology, even if his thought is not fully understood, there are also insights to be lost, nuances to be overlooked, and threads of thought left entirely unraveled.

Second, assembling a broader comprehension of the evolution of White’s thought opens up a fascinating array of his related interests that, although seemingly disparate from White’s environmental writings, can be revelatory in understanding how White viewed the intersection of religion and ecology. Historians, for instance, will most likely know him for his studies of religion and the rise of medieval technology while scholars of religion will be familiar with his “Historical Roots” article with little overlapping knowledge between the two perspectives on White. In relation to this compartmentalization of White, Machen observes that a monolithic view of White, one

¹⁵⁶ Ibid., 154–55.

which focuses on just one aspect of his thought, isolates “us from a rich body of White’s research that covers an unusual range of interests and is ultimately addressed at understanding not just technology but the human condition.”¹⁵⁷

This chapter, therefore, attempts to trace White’s intellectual development and to frame his scholarship as a growing, evolutionary whole. As an intellectual biography, even if a truncated one, its purpose is to set the stage for the chapters on Max Weber’s influence on White and White’s ecotheological outlook that follow. In this chapter, rather than echoing the summaries of Hall, Machen, and others, I attempt to supplement them by focusing less on his most well-known historical publications, and more on the development of his thought in a broad sense. Here, I describe White’s life as a college student, I discuss his development as a young historian, and I examine his professional role both as President of Mill’s College and as professor of history at the University of California Los Angeles (UCLA). As I trace White’s professional development, I also examine his scholarship leading up to and influencing “Historical Roots.” Through this, I attempt to map out how his thought both on religion and ecology and also medieval history grew after the publication of “Historical Roots.”

Historian of Medieval Technology—Influence and Scope

While White is best characterized as an interdisciplinary thinker whose scope and methods crossed innumerable boundaries, he is first and foremost a historian of medieval

¹⁵⁷ Machen, *Cultural Values*, 3.

technology.¹⁵⁸ Hall and Macleod describe him as “above all else, a medievalist, trained as an institutional and cultural historian.”¹⁵⁹ However precisely one might categorize White, White himself was hesitant to define himself in narrow terms. Machen explains:

First and foremost, White considered himself a generalist within the field of medieval history. Despite his reputation in medieval technology specifically and his active roles in the Society for the History of Technology and the History of Science Society, he did not confine himself principally as a historian either of science or technology. ‘I am a medieval historian,’ he insisted firmly at the height of his career. But he recognized, of course, and ultimately admitted, that in pursuing his interests in medieval history he had become an expert on European medieval technology. Perhaps his reluctance to define himself in narrow terms stemmed partly from what Bert Hall has termed White’s dislike of parochialism in scholarship; White saw the world in terms of the large view and ‘regarded narrowness of vision as utterly incompatible with the life of the mind.’¹⁶⁰

As a historian, White’s willingness to take intellectual risks and his penchant for methodological creativity, what the Los Angeles Division of the Academic Senate referred to as his “widely ecumenical outlook,”¹⁶¹ placed him squarely at the cutting edge of his field. According to Elspeth Whitney, White

was the first American historian seriously to examine the role of technological invention in the Middle Ages. Although best known in the larger world for his ideas on the causes of the contemporary environmental problems, within the scholarly community he was regarded first and foremost as a pioneer in the field of medieval technology.¹⁶²

¹⁵⁸ “I am not [an] expert in the history of modern science,” White wrote, “but rather in European medieval technology.” White and Spence. “Science and Civilisation [sic],” 179.

¹⁵⁹ Hall and Macleod, “Technology, Ecology and Religion,” 150.

¹⁶⁰ Machen, *Cultural Values*, 9–10.

¹⁶¹ Los Angeles Division of the Academic Senate, “Faculty Research Lecturer: 1973: Lynn T. White,” Appendix 1, 16 May 1972, iv, Coll. 1541, Box 9, Folder 2, Research Letters, 1969–70, The Lynn Townsend White Papers, 1937–85, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.

¹⁶² Whitney, “White, Lynn,” 1735.

Although occasionally controversial, White's boundary pushing—both methodologically and disciplinarily—would eventually propel him to the forefront of the field of the history of medieval technology. “Among his peers,” writes de Steiguer, “Lynn White was a respected scholar of the history of science and technology.”¹⁶³ Hall and Macleod classify White as “a controversial and important intellectual figure, one whose ideas have always figured prominently in debates about the shape of medieval history.”¹⁶⁴ In their estimation, he “was probably the most widely-read and influential medieval historian in the post-World War II American scene.”¹⁶⁵ Hall, in Lynn White's elegy, proclaimed that White “can with justice be regarded as the founder of all serious modern study in the field [of the history of medieval technology].”¹⁶⁶

Awards, Honors, and Professional Service

Over the course of his long and celebrated career, White was steadfastly involved in a wide array of professional historical organizations that he would go on to lead. He was president of the American Historical Association (1973),¹⁶⁷ he served as President (1960–62) of the Society for the History of Technology, he was Vice-President (1967–70) and President (1972–73) of the Medieval Academy of America, he was made Vice-President (1967–69) and President (1971–72) of the History of Science Society, and he was President (1960–62) of the Society for the History of Technology, an organization

¹⁶³ De Steiguer, *The Age of Environmentalism*, 72.

¹⁶⁴ Hall and Macleod, “Technology, Ecology and Religion,” 149.

¹⁶⁵ *Ibid.*

¹⁶⁶ Hall, “Éloge,” 478.

¹⁶⁷ Lynn Townsend White, jr., interview by Rick C. Harmon, *Technology, History, Democracy; Oral History Transcript*, Oral History Program, The Regents of the University of California (Los Angeles: University of California, 1989): 181.

which he had helped to create.¹⁶⁸ White was also a member of the National Council for Religion in Higher Education¹⁶⁹ and he served as the founding editor (1970–80) of the journal *Viator*, which was published by the Center for Medieval and Renaissance Studies at UCLA. With a few exceptions, it is worth noting, all of these honors were bestowed upon White between 1967 and 1973, the period surrounding the publication of “Historical Roots” and its subsequent notoriety.

In addition to his professional commitment to advancing his field of study, and the recognition of his stature and leadership by various professional societies later in his career, White was bestowed with a wide array of honors. The Society for History of Technology awarded him the Leonardo da Vinci Medal (1964) for his classic book, *Medieval Religion and Social Change*, and the Dexter Prize (1970) for *Machina ex Deo*, a collection of his most popular essays.¹⁷⁰ In recognition of the impact “Historical Roots” had on the field of ecology, the Ecological Society of America gave him the Mercer Award (1969). The History of Science Society recognized *Medieval Technology and Social Change* as the best book contributing to the history of science with its Pfizer Award in 1962. White held a Guggenheim Fellowship (1958–59) and he was deemed a “Commendatore nell’Ordine al Merito della Repubblica Italiana” (1970). In addition to these many honors, White also received three honorary doctorates and the Society of the History of Technology created “The Lynn White, Jr., Society” in 1992 in order to honor

¹⁶⁸ Ibid., 179.

¹⁶⁹ White, Oral History Transcript, x.

¹⁷⁰ For further commentary on these awards, see, Bert S. Hall, “Lynn White’s *Medieval Technology and Social Change* After Thirty Years,” in *Technological Change: Methods and Themes in the History of Technology*, ed. Robert Fox (Amsterdam, NL: Harwood Academic Publishers, 1996): 86.

White and to gather scholars interested in the history of technology. For a detailed listing of his degrees, membership, and other awards and honors, please see Appendix 1.

Early Life—Birth, Family, and Early Influences

White was born on April 29, 1907 in San Francisco, a town named after the same Saint whom White would later famously recommend as the “patron saint for ecologists.”¹⁷¹ His parents were Mary Tarrant White and Reverend Lynn Townsend White, Sr.. White was close to his parents and maintained steady correspondence with them for much of his adult life. In private correspondence, his family would often refer to him by the affectionate sobriquet, “Townie.” With his mother, White would often discuss matters related to his studies, finances and lodging, world events, his friendships and social life, and, more often than not, matters of family and health. Although quite close to his mother, White seemed to have a particularly close relationship with his father.

White’s father, Lynn White, Sr., would have a significant and longstanding influence not only on White’s intellectual life, but on his spiritual development as well. A well-known and active California minister in Marin County, White Sr. studied theology at Columbia and Union Theological Seminary in New York.¹⁷² A dedicated minister, he held several positions throughout his long career, most notably as the pastor of the First Presbyterian Church in San Rafael where he lived from 1908 to 1920 and also as the minister of the Community Church in Mill Valley.

¹⁷¹ White, “Historical Roots,” 1207.

¹⁷² White, *Oral History Transcript*, 4–5, 14.

White Sr. was deeply intellectual in his approach to religion, a trait that he passed on to his son. He strove to guide the spiritual life of his congregants but also to understand the psychological and sociological roots of many social ills. As such, he studied psychology and mental illness to assist him in his pastoral work.¹⁷³ He also read widely in theology, ethics, and history, a passion that is evidenced in his many letters to White, jr. discussing recent texts and contemporary thinkers.¹⁷⁴ Amongst other world events, White's father, who served in World War I and who staunchly defended the science of evolution from the pulpit during the Scopes trial, influenced White, jr.'s conflicted views on war and violence and they also shared a general pro-science stance in their faith lives.¹⁷⁵

From his father, White inherited a great deal of compassion and a desire to address social justice issues. He also learned to be active in world events and to use his intellectual and spiritual insights to improve not just his own life and the lives of those around him, but all of humanity. In an extensive, multi-part interview conducted by Rick Harmon in which White reflected on his life and work, White described his father as “a bit of an optimist about human nature,” an observation that led him to quip that he “once told [his] father he really should have been a Methodist. He was quite insulted. [laughter].”¹⁷⁶ White would share in this optimism to a degree, but tempered through a Calvinistic pessimism. In other words, while his father believed in the inherent goodness

¹⁷³ Ibid., 14.

¹⁷⁴ See, for example, the hundreds of letters to his father and mother housed in the archives at Mills College.

¹⁷⁵ See, for example, White, *Oral History Transcript*, 5–11.

¹⁷⁶ Ibid., 20.

of humanity and their ability to change the course of history for the better, they also shared a margin of doubt—White, jr. decidedly more so than his father, White, Sr.

White Sr.'s relationship to the industrialist Robert Dollar, a Californian lumber and shipping magnate, reveals the balance that White Sr. struck on his view of human nature. When asked of White Sr.'s advocacy for labor reform and of his concern for the exploitation of farm and factory workers in California in the early part of the 20th century, White recalled that his father "recognized that in all human affairs, there is an element of corruption. I mean, this is the essence of Calvinism. We're not particularly optimists about human nature. On the other hand, we think there is a chance, and indeed, a good chance [for labor reform]."¹⁷⁷ White Sr. found himself opposed by Robert Dollar in the debate over labor reform; however, he so impressed the industrialist that Dollar endowed the Margaret S. Dollar Chair of Christian Social Ethics at the San Francisco Theological Seminary (SFTS).¹⁷⁸ At Dollar's request, White Sr. was given the chair, a distinction that made him the first Presbyterian professor of Christian Social Ethics in the United States.¹⁷⁹ While they were unaware of it at the time, his father's relationship with Robert Dollar would have a profound impact on White, jr.'s later life. Dollar arranged passage for White, jr. on the "Floating University" in 1926, a year-long cruise around the world.¹⁸⁰ The "Floating University" took 500 students and 50 faculty members on a trip to more than 50 ports around the globe in an attempt to encourage students to think globally in

¹⁷⁷ Ibid., 4.

¹⁷⁸ Ibid., 2.

¹⁷⁹ Ibid., 60. Following a 1919 sermon called "The Christian Attitude Toward the Organized Labor Movement in America," White, Sr. and Dollar engaged in several discussions on the labor movement. While they were unable to come to an agreement, White, Sr. and Dollar became friends and Dollar later funded the chair at SFTS. Lynn Townsend White, III, email message to Matthew T. Riley, February 4, 2014.

¹⁸⁰ Lynn Townsend White, III, email message to the author, February 4, 2014.

their studies. It was on this trip that White would deepen his interest in Buddhism. It also led White to Ceylon where he would come to his first insight into the relationship between religion and ecology while observing road construction workers (I elaborate on this story in the following chapter).

White's University Years—The Study of Religion and the Creation of a Young Historian

Similar to many students beginning their university studies, White was unsure which direction his studies would take him. “[I]t’s very hard to know what first definite objective one has and how you go from one thing to another,” he remarked when asked about his undergraduate studies.¹⁸¹ At the suggestion of his parents, White entered Stanford in the summer of 1924 at the age of 17.¹⁸² Initially, White wished to study Chinese culture and history. At a very young age, he was fascinated by his Chinese neighbors and classmates.¹⁸³ While growing up in San Rafael, a Chinese schoolboy lived with White and his family.¹⁸⁴ White recalls that he “used to get along with him” and that many of his earliest playmates and babysitters were Chinese. It led, he mused, to some of his interest in Chinese history and culture as an undergraduate.¹⁸⁵

His interest in China, and non-Western history in general, was further piqued by the texts that he read while a student at Stanford. He recollected that his textbooks in high school had a “great Anglo-Saxon fixation” and that apparently “nothing else counted”

¹⁸¹ White, Oral History Transcript, 13.

¹⁸² Ibid., 12–13.

¹⁸³ Ibid., 15.

¹⁸⁴ Ibid., 16.

¹⁸⁵ Ibid., 17.

when it came to history. Bemused by this parochialism in his studies, White gravitated towards H. G. Wells' *The Outline of History: Being a Plain History of Life and Mankind*. White found Wells' broad historical scope—one which included not only non-Western culture, but also prehistoric times—to be particularly influential on his budding intellectual life.¹⁸⁶ After reading *The Outline of History*, he “hoped to become a Chinese archaeologist when [he] entered Stanford in 1924.”¹⁸⁷ Unfortunately, this was not to be. “[A]t that time Chinese studies were inadequate at Stanford,” White recalled, “and the obstacles to my getting into China seemed insuperable; so I changed to the study of Europe’s middle ages.”¹⁸⁸ White’s interest in China would not end there. White would eventually return to studying the historical relationship between China and medieval Europe that would become a mainstay in his later historical studies.¹⁸⁹

While at Stanford, White met historian Edward Maislin Hulme, author of *The Middle Ages* (1929), and his interest in medieval history blossomed.¹⁹⁰ Although Hulme influenced him greatly, he and Hulme differed on the importance of religion in history and Hulme actively discouraged him from his interest in religion. White felt that texts such as Saint Thomas Aquinas’ *Summa Theologica*, were too important to ignore when

¹⁸⁶ Ibid., 15.

¹⁸⁷ Lynn Townsend White, jr. to People’s Republic of China, “Biography and Statement of Purposes,” n.d., Coll. 1541, Box 11, Folder 12, VITA—Lynn White, JR, The Lynn Townsend White Papers, 1937–85, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles. White III also noted that his father “wanted to be an archaeologist” but that circumstances prevented it. Lynn Townsend White, III, email message to the author, February 11, 2015.

¹⁸⁸ White to People’s Republic, “Biography and Statement.”

¹⁸⁹ At least once in his later life, White and his wife Maude attempted to travel to The People’s Republic of China. Unfortunately, they would be unable to do so. White’s son, Lynn Townsend White, III, would later share his interest in China. White, III is currently Professor Emeritus of Politics and International Affairs at Princeton University and is the author of multiple books on politics in China.

¹⁹⁰ White, *Oral History Transcript*, 18–19. See also, Edward Maislin Hulme, *The Middle Ages* (New York: H. Holt and Company, 1929).

studying history. To omit them from an analysis of historical events would be, he believed, a significant omission of historical data.¹⁹¹

Upon graduating from Stanford with a BA in 1928, White entered Union Theological Seminary that fall. White's goal at Union was to develop a fuller understanding of systematic theology to supplement his future work as a historian. There, he studied systematic theology and would earn a joint MA degree from Columbia and Union in Comparative Religions in 1929.¹⁹² His general impression was that the historians of his time were dismissive of religion:

I decided that a lot of people who had written—especially in the generation of the thirty years before my graduation—did not understand the intellectual or mental or even the emotional processes of the people that they were talking about because they knew no systematic theology. And my father, while he knew theology in a technical sense—couldn't graduate from Union Seminary without it—his interests were ethical rather than theological. So I did not get any systematic theology from him. Not that he was a disorganized thinker at the time—quite the contrary when it came to ethics and sociology and that sort of thing. But I decided that before I went on, I wanted to get a thorough knowledge of Christian systematic theology.¹⁹³

It was his belief, in other words, that religion was a powerful driving force of history and that paying careful attention to religious ideas, and a training in theology, could provide deeper insights into the historical record. I discuss White's theological studies, as well as deeply formative time spent with Reinhold Niebuhr, in greater detail in chapter 3.

Although White went to Union to specifically study systematic theology, he also used his time there to immerse himself in non-Christian religions. His advisor at Union

¹⁹¹ White, *Oral History Transcript*, 19–21.

¹⁹² Hall, "Éloge," 478; Lynn Townsend White, jr., "History and Horseshoe Nails," in *The Historian's Workshop*, ed. L. P. Curtis, Jr. (New York: Alfred A. Knopf, 1970); and White, *Oral History Transcript*, 24–26.

¹⁹³ White, *Oral History Transcript*, 24.

was historian of religion Robert E. Hume. Hume, who had been a missionary to India, shared with White his knowledge of Hinduism and Buddhism and made White and his other students read a book about religions of the East, a requirement that White was not averse to.¹⁹⁴ As I argue in this chapter and those that follow, White's interest in non-Christian religions shaped and informed not only his ecological and religious thought, but also his study of technology and history. Thus, for White, readers of his work should be aware that White approached religion both broadly and specifically. On the one hand, White sometimes spoke of religion as a shaping force in history, as a carrier and transmitter of values and ideas. He spoke of religion, in this sense, in less specific terms, often citing examples from Hinduism, Buddhism, or indigenous traditions. On the other hand, White was intently focused on Latinized, Western forms of Christianity, the religious matrix in which he himself participated and which he saw as central in shaping Western European attitudes towards science, technology, and nature. Thus, White uses the term "religion" at times to broadly indicate religion as a shaper of history and sometimes specifically to describe particular situations and concepts.

White's interest in Christianity and non-Christian religions led him, eventually, to take interest in Manichaeism while at Union. Manichaeism, which emerged in Persia in the third century, was largely stamped out as a heresy in Western Europe. It then experienced a small revival during the Middle Ages in both opposition to, and in conversation with, medieval Christianity. Describing his studies at Union, White remarked:

¹⁹⁴ Ibid., 27.

The requirement was that to take an M.A., you had to study Christianity systematically. Well, I had come there for systematic theology. And [I] took some other courses, church history, because I had never had any systematic work in that. But also one had to have non-Christian religion to study. So I presented myself to the professor in charge and said that my non-Christian religion would be medieval Manichaeism.¹⁹⁵

White continued to study medieval Manichaeism with William Jackson at Columbia (the master's degree was jointly offered by Union and Columbia) and would eventually submit his masters thesis, "The Origin and Development of Medieval Manichaeism to the Accession of Innocent III," in 1929.¹⁹⁶ Although Manichaeism would not feature prominently in his later scholarship, it does mark White's lifelong interest in the "recessive genes" in Christianity, a pursuit that would eventually lead him to his famous championing of St. Francis in "Historical Roots."¹⁹⁷

In the fall of 1929 following his graduation, White entered Harvard under the tutelage of Charles Homer Haskins, a scholar who was well known at that time for his scholarship on medieval science.¹⁹⁸ Uniquely positioned as both a student of history and a student of religion, White was supported in his study of religion as a shaping force in history by financial help from the "Society for Religion in Higher Education."¹⁹⁹ Several important events in 1932 and 1933 would lead White, almost by chance, to draw these intersecting disciplines together in his dissertation research in ways that would characterize the next fifty years of his scholarship.

¹⁹⁵ Ibid., 25.

¹⁹⁶ Ibid., 26.

¹⁹⁷ For more information on this, please see chapter 3 of this dissertation.

¹⁹⁸ Thomas F. Glick, "White, Lynn, Jr. 1907–1987," in *Encyclopedia of Historians and Historical Writing*, ed. Kelly Boyd (Chicago: Fitzroy Dearborn, 1999): 1295; and Hall and Macleod, "Technology, Ecology and Religion," 150.

¹⁹⁹ White, Oral History Transcript, 61.

In September of 1932, White travelled to Italy to conduct research on Latin monastic life in Northern Sicily. He eventually published this research in his dissertation. However, after just six months of archival research, White's studies would take an unexpected turn. On February 27th, 1933, a month after Adolf Hitler was sworn into office, the Reichstag burned. The political upheaval and air of unease that rippled through Europe unsettled White. It was then that he decided that if he wished to pursue his academic interests that he would need to study something that did not require research in war-torn Europe.²⁰⁰ He wrote letters to his friends and colleagues looking for jobs, and his closest friend at the time, E. Harris Harbison, was able to secure him a job as a preceptor at Princeton.²⁰¹ Feeling that his research was sufficient to complete his dissertation, White cut his research in Italy short and returned to the United States in April of 1933.²⁰²

White completed his dissertation, an examination of fifty-one Latin monasteries, and graduated with his PhD from Harvard in 1934. The dissertation itself, entitled *Latin Monasticism in Norman Sicily*, was written under the guidance of George LaPiana after Haskins suffered a debilitating stroke. The publication of his dissertation represents an important milestone in White's academic career, both in terms of his emergence as a historian, but also as a first endeavor into White's professional study of religion. Hall and Macleod state that it "signals White's life-long interest in religious institutions and his tendency to see religious feelings as a primary motive to action. Culture, for White, is grounded in religion, and religion serves as the bearer of cultural values."²⁰³ The same

²⁰⁰ Hall, "Lynn White's *Medieval Technology*, 88.

²⁰¹ White, *Oral History Transcript*, 41–44.

²⁰² Ibid., 40–44.

²⁰³ Hall and Macleod, "Technology, Ecology and Religion," 150.

impulse that drove White's first major publication in 1938, in other words, persisted some 30 years later in "Historical Roots."

The Princeton Years—Expanding Horizons and New Methodologies

Thanks to his friend Harbison, whom he referred to affectionately as "Jinx," White would begin teaching at Princeton prior to his graduation from Harvard. He remained there, teaching in the department of history, from 1933 to 1937. During his first days at Princeton, White found himself, like many new teachers, assigned to teach a course that he knew nothing about—a course on anthropology and geography. To prepare himself, he read Alfred L. Kroeber's classic textbook on anthropology, *Anthropology: Race, Language, Culture, Psychology, Prehistory* in the fall of 1933.²⁰⁴ Reading Kroeber's *Anthropology* was a revelatory experience for White. "[M]y hair stood straight up on end," he would later recall. Kroeber's creative use of unorthodox historical resources would forever change how White thought about studying history:

Kroeber was using texts wherever there were texts to use [...] But he used garbage dumps, not just archaeology in the ordinary sense of let's dig up a great big temple [...] and he talked about artifacts and tools and their importance. All of this was a revelation. And I realized that I was a medieval historian trained to read documents, but not trained to wonder about the nonverbal expressions of medieval society. [...] And this is how I found technology.²⁰⁵

Hall calls this important event, in conjunction with White's decision to no longer study in Europe, a moment when White experienced a "reinvention of himself." So powerful was this transformation in his twenties, that Hall referred to it as "a kind of religious

²⁰⁴ Ibid., 46.

²⁰⁵ White, *Oral History Transcript*, 47.

conversion, one that gave him the courage to be unconventional.”²⁰⁶ Kroeber’s *Anthropology* awoke White to new methodologies in studying history. He viewed the 1930s as a time when he and other historians began to be more global in their thought and also when they began to use the techniques of historical investigation pioneered in other disciplines.²⁰⁷

One of the many “unconventional” methodologies that White would later be known for were his attempts to understand what he called “the silent majority” of men and women that did not leave behind written records. Just as White was troubled by historians’ lack of appreciation for religious ideas as moving forces in history, Kroeber revealed to White another yawning gap in the field, namely the reliance upon written historical records as the sole source of historical data. How, White wondered, might scholars reinterpret and reconstruct societies in wholly creative ways with few, or even with no, written texts? This would open White’s eyes to the importance of other cultural indicators: art, archaeological evidence, music, and more.

Kroeber also piqued White’s interest in tools and technology. Whereas his initial interest was in medieval religion and history broadly considered, his interest after reading Kroeber would take a technological turn. Items like ploughs, stirrups, and windmills would become staple points of reference in White’s later scholarship. Kroeber, in effect, awoke White not only to the importance of non-textual historical sources but also to an

²⁰⁶ Hall, “Lynn White’s *Medieval Technology*,” 91.

²⁰⁷ White, “History and Horseshoe Nails,” 52.

interest in tools. These revelations left an indelible stamp on White and his scholarship.

“I have not,” proclaimed White, “been the same since.”²⁰⁸

The mid-1930s was a period of enlightenment and change for White, a time when White—inspired by Kroeber—became interested in the technology and material culture of the medieval period. White read voraciously during that period and it was at that time that White first studied a number of classics in the history of medieval science and technology, most notably the work of Franz Maria Felhaus, Marc Bloch, and Richard Lefebvres des Noëttes.²⁰⁹ Through them, White became interested in a number of subjects and developed a number of historical perspectives from which “Historical Roots” would grow.

“By serendipity,” White mused, “I soon found Commandant Richard Lefebvre des Noëttes’ amazing monograph on the history of the use of horsepower.”²¹⁰ This is significant in that des Noëttes kindled in White an interest in the importance of technology and animal power in history.²¹¹ White pieced together this interest with other insights to rethink the ways in which changes in technology, particularly changes that allowed humans to more efficiently replace human-power with animal-power, shaped European culture and worldviews. This led science and technology to become accessible to more people in Western Europe, not just one segment of society, which White referred to as a democratizing process. These changes accompanied a profound restructuring of human-nature relations in the medieval period through intense urbanization, the

²⁰⁸ Ibid., 50. See also, Hall, “Lynn White’s *Medieval Technology*,” 89.

²⁰⁹ Glick, “White, Lynn,” 1295; and Hall and Macleod, “Technology, Ecology and Religion,” 150.

²¹⁰ White, “History and Horseshoe Nails,” 50.

²¹¹ Lynn Townsend White, jr., “Technology and Invention in the Middle Ages,” in *Medieval Religion and Technology: Collected Essays* (Berkeley: University of California Press, 1978): 18–19.

introduction of new farming technology, and restructuring of land ownership and use related to both political shifts and to the pooling of resources by farmers in order to utilize heavier ploughs. This confluence of interests White deftly wove into many of his future studies,²¹² not least among them his “Historical Roots” article.

At this time, White was inspired “’above all’”²¹³ by the work of Marc Bloch, particularly his *Les Caractères Originaux de l'Histoire Rurale Française*.²¹⁴ “It was also largely Bloch who led me into the mechanical and industrial technology of the Western Middle Ages through his basic study of the diffusion of the watermill,” White informed his readers in “History and Horseshoe Nails.”²¹⁵ By studying the watermill, White arrived at the conclusion that “[t]he leadership of the West, both in technology and in science, is far older than the so-called Scientific Revolution of the 17th century or the so-called Industrial Revolution of the 18th century.”²¹⁶ White came to view the watermill, much like the other technology that allowed Western Europeans to harness animal power in the Middle Ages, as a labor-saving device that was adopted not just for its economic usefulness, but also because of a religiously inspired respect for the inherent worth of every human being. I discuss this “democratization” of labor via technology and changing religious ideas further in chapter 4.

Although White makes a seemingly passing reference to Bloch in “Historical Roots,” his influence on White’s ecological thought runs much deeper. White notes:

²¹² White, “History and Horseshoe Nails,” 51.

²¹³ Hall, “Éloge,” 478.

²¹⁴ White, “History and Horseshoe Nails,” 54. See also, Marc Bloch, *Les Caractères Originaux de l'Histoire Rurale Française* (Cambridge, MA: Harvard University Press, 1931).

²¹⁵ White, “History and Horseshoe Nails,” 54.

²¹⁶ White, “Historical Roots,” 1204.

Observation that the French landscape falls into two basic types, the open fields of the north and the bocage of the south and west, inspired Marc Bloch to undertake his classic study of medieval agricultural methods. Quite unintentionally, changes in human ways often affect nonhuman nature. It has been noted, for example, that the advent of the automobile eliminated huge flocks of sparrows that once fed on the horse manure littering every street.²¹⁷

From this short passage, one can infer that a crucial aspect of the argument in “Historical Roots” begins with White’s connection to Bloch. White borrowed from Bloch the observation that changes in human agriculture in the medieval period in Western Europe changed the landscape. White would extend Bloch’s observation one step further by classifying that change in landscape as ecological change, rather than as simply agricultural or economic change in the way in which land is used. In his words, “[p]eople, then, have often been a dynamic element in their own environment.” Unfortunately, both historical and contemporary scholarship have hitherto been ill equipped to predict ecological change, but “concern for the problem of ecologic backlash is mounting feverishly.”²¹⁸

At Princeton, White’s inventiveness as a scholar and passion for new historical methods, traits that would define his historical scholarship and richly bolster his work in “Historical Roots,” thrived as White explored the history of medieval technology. Inspired by Kroeber, and building upon the work of Bloch, des Noëttes, and others, White pioneered the use of “an ingenious range of source material, including

²¹⁷ Ibid., 1203.

²¹⁸ Ibid.

archaeological, iconographical, and linguistic evidence to fill in the vast lacunae where no direct documentation exists.”²¹⁹

Following Kroeber, White realized that the written accounts of technology in the Middle Ages provided only a partial view of how technology developed at that time.²²⁰ Written records from the Middle Ages, White suspected, were limited not just by their scarcity, but also by the fact that they represented the views of the literate, wealthy elites of that period.

Technology, in White’s view, was a democratizing, leveling force in society and history. He argued that the written records of the elites left out the unspoken assumptions of those who truly pioneered technological advances in the Middle Ages, the non-elites. “White saw technology,” writes Hall, “as the artistic creation of the sub-literate masses of humanity, the ‘silent majority.’”²²¹ Although popularized by Richard Nixon, whom White “despised” and which “deeply embarrassed” White, White coined the term “silent majority” in 1967²²² to describe the voices of those who did not leave written records. In the words of White:

Over the years I had developed a passion for the spreading of a new notion of how to write history: one which transcends the traditional barriers between the histories of the major world cultures; one which recognizes that every society—including our own—neglects to put many of its doings into the written record; one which, in the wisdom of the accomplished

²¹⁹ Glick, “White, Lynn,” 1296.

²²⁰ White III also noted that his interest in non-verbal evidence was also related to his early desire to be an archaeologist. Lynn Townsend White, III, interview by Matthew T. Riley, April 17, 2014.

²²¹ Hall, “Lynn White’s *Medieval Technology*,” 91.

²²² *Ibid.*; Also see, Machen, *Cultural Values*, 59–60; “Lynn White, jr. University Professor of History,” 20 February 1973, Forty-Eighth Annual Faculty Research Lecturer, The Los Angeles Division of the Academic Senate of the University of California, Program Booklet, Coll. 1541, Box 11, Folder 12, VITA—Lynn White, JR, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California Los Angeles; and No Author, “University Professor Lynn White,” 4.

fact, searches not simply the un verbalized but even the subliminal elements of life in the past. For this sort of history I am an unabashed propagandist.²²³

To this end, White expanded upon the work of des Noëttes by delving into the Princeton Index of Christian Art. “In my opinion,” he wrote, “the Princeton Index is the greatest single research instrument for the history of Western civilization.” It contained “objects [and] symbols of ideas,”²²⁴ such as images of medieval horse collars, lateral traces, and the rotary grindstone that gave voice to the ‘silent majority’ in history and provided a foundation for most of his later scholarship.²²⁵

This method of looking at non-verbal symbols, at the unspoken assumptions of the “silent majority,” for historical evidence led directly into “Historical Roots.” There, White relied on items such as illustrations in calendars to prove his point, a method of interpreting history that drew considerable criticism, especially by readers who desired concrete, textual evidence. Calendars in the medieval period, he argued, differed from earlier calendars in that “they show men coercing the world around them—plowing, harvesting, chopping trees, [and] butchering pigs.”²²⁶

These non-verbal historical artifacts, in White’s estimation, demonstrated that medieval culture began to adopt the view that “[m]an and nature are two things, and man is master.”²²⁷ In “Historical Roots,” White argued that verbal accounts, represented in texts, could be deceptive. “It is often hard for the historian to judge,” he explained, “when men explain why they are doing what they want to do, whether they are offering real

²²³ White, “History and Horseshoe Nails,” 58.

²²⁴ Ibid., 52.

²²⁵ Ibid., 52–54; and White, *Oral History Transcript*, 49–50.

²²⁶ White, “Historical Roots,” 1205.

²²⁷ Ibid.

reasons or merely culturally acceptable reasons.”²²⁸ Thus while White believed written accounts could oftentimes be considered accurate, they must also be weighed against non-verbal symbols. Together, written accounts along with assessments of the evidence left behind by the “silent majority” offer a fuller depiction of the past. The evidence used in “Historical Roots,” therefore should be read as a result of nearly three and a half decades of innovative thinking and creative use of resources.

Eventually, White left Princeton to become an assistant professor in the Department of History at Stanford University (1937–40) where he would be promoted to full professor prior to the involvement of the United States in World War II (1940–43). During his time at Princeton, White met Maude McArthur, a member of the wealthy McArthur family. They fell in love and White convinced her to attend Stanford as a student so that they could continue their courtship. They married on September 10th, 1940.²²⁹

White’s Thought on the Well-Being of Individuals and Society

To some, it may seem strange that a historian of medieval technology would write about ecology. Why would he extend himself so far beyond his field of study, one might ask. Was “Historical Roots” an anomaly, or part of a larger pattern of thought? If a nuanced understanding of White’s infamous argument in “Historical Roots” is desired, it is necessary to look to other instances where White intellectually stretched himself to address the pressing concerns of current events.

²²⁸ Ibid., 1206.

²²⁹ White, *Oral History Transcript*, 55–56.

Over the course of his long career, White advocated for the well-being of individuals and of human communities in his speeches and writing. From the importance of democracy as an ethical ideal, to the need to make education more accessible for women, to the need to address social ills related to loneliness and violence, White blended together a number of humanistic elements with comfortable ease in his writings and advocacy. This concern for social causes stemmed from a two-fold belief in the value of the individual and the duty of intellectuals to contribute to the common good of society. It could be said that these “democratic” values present in White’s thought were derived, at least in part, from his affinity for the teachings of Niebuhr (see chapter 3). White, in other words, expressed views parallel to Niebuhr’s conviction that while individual liberty was essential to democracy, it must be carefully balanced with the well-being of communities. In Niebuhr’s words, “no democratic society can survive if it acts upon the assumption that [individual] liberty is the only principle of democracy and does not recognize that community has as much value as liberty.”²³⁰

Even though White wrote little about his influences on the subjects of education and democracy, it is worth noting that White was in some sense, mirroring broader intellectual and cultural trends in this arena. John Dewey, as a case in point, wrote of the value of progressive education in democratic societies in *Democracy and Education* in 1916.²³¹ Education, in Dewey’s eyes, needed to teach more than just the practical subsistence and technological skills of a culture. The educational system was, in other

²³⁰ Reinhold Niebuhr, *Reinhold Niebuhr on Politics: His Political Philosophy and its Application to Our Age as Expressed in His Writings*, ed. Harry R. Davis and Robert C. Good (Eugene, OR: Wipf & Stock: 1960): 201.

²³¹ John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: Macmillan, 1916).

words, a vehicle for transmitting and maintaining the values, interests, community ties, and aims of a democratic society. Even though White makes no references to Dewey or other thinkers on this matter, his beliefs parallel these concerns and are played out in his writings and in his work at Mills College (see below).

This impulse to emphasize and shape the common good of a society through education was not entirely divorced from his historical scholarship. Indeed, White viewed most of his work as being more than a mere recounting of historical facts. To be a historian was to do more than to report on the past, it was also to shape the future. As Whitney observes, White “also thought that the study of history was not merely an antiquarian enterprise but held meaningful lessons for the present.”²³² For example, in *The UCLA Monthly*, the newspaper of the UCLA Alumni Association, White commented on the ways in which historians can help to bridge cultural gaps: “I like to think that we historians can help bring about a moral sensitivity that embraces the entire human race.”²³³

White was, to a certain degree, a public intellectual. Never satisfied with the narrow confines of his chosen field of study, White found an outlet for his thought by writing for popular media outlets such as newspapers and nationally read magazines such as *Harpers*, through the flexibility and immediacy of speeches and sermons, and by participating in several radio interviews.

His impact as a scholar was far-ranging and this was owed in no small part to his acute interest in the current events of his day, a trait that helped him to reach a varied and

²³² Whitney, “White, Lynn,” 1736.

²³³ Mark Davidson, “The New History: Can it Free Us From the Past?” *The UCLA Monthly*, November 1971, 3.

non-academic audience. For instance, a short biography of White, written for the Los Angeles Division of the Academic Senate, argues that White “has succeeded perhaps better than anyone else in his generation in bringing the Middle Ages back into the consciousness of the educated public.”²³⁴ In the dedication to the volume, *On Pre-Modern Technology and Science: A Volume of Studies in Honor of Lynn White, jr.*, the authors thank White for having “given the historian a voice in modern affairs.”²³⁵ One of the reasons for the widespread popularity of “Historical Roots,” in fact, was because he initially published it in the journal *Science* which was not only read widely by non-historians, but by the general public as well. Nash also observes that when White later republished it in Ian Barbour’s *Western Man and Environmental Ethics*, it “exposed a large audience to the controversy engendered by Lynn White” and that this exposure would further incite a backlash from the Christian laity and leadership.²³⁶

White’s desire to apply his skills to the social issues of the day led to his later interest in ecology and would inform “Historical Roots.” On the surface, the non-ecological assertions in “Historical Roots” might seem unconnected, but by looking at White’s longer history of interest in social causes, the disparate pieces of “Historical Roots” can be viewed as a confluence of ideas that mirrors White’s interests in the well-being of others at the individual and societal level. With deft turns of phrase, White brings together thoughts on democracy, the historical development of labor-saving power

²³⁴ Los Angeles Division of the Academic Senate, Faculty Research Lecturer, v. The Academic Senate represents the faculty in the governance of University of California and votes on issues such as promotion of faculty, faculty welfare, research agendas, and so forth.

²³⁵ Bert S. Hall and Delno C West, eds., “Dedication,” in *On Pre-Modern Technology and Science: A Volume of Studies in Honor of Lynn White, jr.* (Malibu: Undena Publications, 1976).

²³⁶ Nash, *The Rights of Nature*, 109.

machinery, he hints at the subtle psychological shifts that stem from changes in human-nonhuman relationships, and he discusses religion—especially the relationship between religion, science, and technology—in ways that far exceed the skill and scope of a typical historian of technology.

White's passion for these causes is exemplified in his decision to take on the role of president of Mills College, an all-women's school in Oakland, relatively early in his career and just five years of teaching at Stanford. In 1942, aged only 35, White placed his prodigious talent for research and his blossoming career as a historian on hold in order to protect the intellectual, egalitarian, and democratic values that he held dear. Newly married, he and his wife Maude, visited Mills College to consider a job offer for the presidency.²³⁷ While there, he “bought [a] newspaper that changed [his] life. In it, Henry Stimson, Secretary of War, officially announced the adjournment of liberal education ‘for the duration.’” Troubled, by this, White and Maude felt that the United States “was in peril of destroying internally the values that globally we were claiming to defend. [...] We hoped that in the raging storm we might help to preserve precious things for the long future.”²³⁸ Concerned that the quality of education, and women's ability to access it, would suffocate under the economic and social pressures of war, he and Maude decided that he should take the job.

By the time he left in 1958, after a full fifteen years of service, White left an indelible mark on Mills. Mills pulled itself out of financial trouble under his guidance and

²³⁷ My initial research did not uncover any additional information regarding why White was offered the job or why such a young scholar would be offered such a high level administrative position. Additional archival research at Mills College may reveal further information.

²³⁸ White, “History and Horseshoe Nails,” 57.

the college established the “Lynn White, jr. Professorship” in his honor. As a historian, White attempted to remain active during his presidency, however most of his published work at that time was not scholarly in nature. “During his tenure at Mills,” Machen explains, “his publications, with the exception of book reviews on subjects in medieval history, were almost entirely about family values, liberal education, and women’s issues.”²³⁹

His time at Mills, no doubt, shaped White’s progressive, and oftentimes controversial, views on feminism and women’s education. While president of Mills College, White wrote and spoke on the topic of the role of women in society and the need for progressive reform of women’s education.²⁴⁰ Hall writes:

Although not a self-conscious ‘feminist’ in any political sense, White spoke to many issues feminism continues to debate today. He was the first person of either sex to be quoted in Gloria Steinem’s *Ms.* magazine (in the Spring 1972 ‘Preview Issue’) on the sexism of English grammar. It was this sort of intellectual range that brought him to the attention of many outside the academy.²⁴¹

Indeed, it was more than just intellectual range that brought White into public discourse on women’s education. While at Mills he spoke frequently on the subject, he fought for reform in the mission and curriculum of Mills, and he published widely in favor of women’s education in both scholarly formats and in public arenas.

The most significant of White’s publications at that time was his 1950 book, *Educating Our Daughters: A Challenge to the Colleges*.²⁴² “In this extraordinary

²³⁹ Machen, *Cultural Values*, 41.

²⁴⁰ Hall, “Éloge,” 479.

²⁴¹ *Ibid.*, 479.

²⁴² Lynn Townsend White, jr., *Educating Our Daughters: A Challenge to the Colleges* (New York: Harper & Brothers, 1950).

volume,” observes Clagett et al., “White reveals an unusual sensitivity to the issues of feminism and the problems that women confront.”²⁴³ In *Educating Our Daughters*, White made the argument that patterning women’s education after traditional men’s education is a “masculine bias” that is ultimately a disservice to both the men and the women who graduate. Both modes of education, White argues, were in need of reform.²⁴⁴ Controversially, he argued that women’s colleges should not follow the “masculine bias”²⁴⁵ of most colleges. Rather than attempting to force women into a mold unfit for them, it would be better to design curriculum specifically with the professional and psychological needs of women in mind. The book, as a contemporary reader might easily see, was simultaneously lauded in the 1950s for its progressiveness and it also made White the target of “fairly severe criticism” by feminists.²⁴⁶

Two years later, and still embroiled in the heat of controversy over *Educating Our Daughters*, White published an article in *Harper’s* magazine entitled “Do Women’s Colleges Turn out Spinsters?”²⁴⁷ Here, White condenses his earlier argument about women’s education and he spins it into a more sensitive and easily digestible format. In his words:

The fact that so many women of energy and independent mind have graduated from coeducational institutions is prime evidence of how hard it is to slay the soul. For, despite its claims to sex equality, coeducation as it now operates in America is socially and psychologically designed to produce women who are merely docile. The women’s colleges, on the other hand, are set up in such a way as to develop in their students those

²⁴³ Marshall Clagett, Richard H. Rouse, and Edward Grant, “Memoirs of Fellows and Corresponding Fellows of the Medieval Academy of America,” *Speculum* 63, no. 3 (July 1988): 770.

²⁴⁴ White, *Oral History Transcript*, 83–86.

²⁴⁵ White, *Educating Our Daughters*, 17.

²⁴⁶ White, *Oral History Transcript*, 83.

²⁴⁷ Lynn Townsend White, jr., “Do Women’s Colleges Turn out Spinsters?,” *Harper’s Magazine* (October 1952): 44–48.

qualities of self-confidence, directness, and initiative which too many people think of as masculine traits, but which are in fact human.²⁴⁸

Education, in short, for both women and men, was an act of empowerment in White's view. It improved not only the inner psychological and spiritual lives of the individual, but it also enriched the larger social communities. Again, White's work in this regard mirrors similar progressive educational trends occurring at the time such as that advocated by Dewey. For White, women's education should not only be focused on honing practical, private skills for use in the home or workplace. Instead, education should strive towards integrating women (and men) into the broader culture and democratic milieu of Western society. Education, in other words, prepares individuals for participation in a society built upon democratic and egalitarian values. Thus, as a historian and public intellectual, White frequently addressed a number of issues related to this broader concern for individual and societal welfare. For him, being an academic meant more than simply engaging in scholarship, it also demanded an engagement in society.

Loneliness and Democracy

Democracy figured largely in White's thought. While the faculty of UCLA, as represented by the Los Angeles Division of the Academic Senate, recognized that a hallmark of his scholarship was "a deeply American approach,"²⁴⁹ White's thought on democracy transcended national boundaries and defied political categorization. In fact,

²⁴⁸ Ibid., 48.

²⁴⁹ Los Angeles Division of the Academic Senate, "Faculty Research Lecturer," iv.

White primarily spoke of democracy as an ethical ideal that enhanced communal ties and held up the value of the individual rather than as a political framework for governance. Because of its complexity, I devote attention to two aspects of White's democratic thought in this section. First, I highlight White's deeply held belief in the ethical ideals of democracy as an endeavor aimed at the improvement of the lives of individuals and humankind as a whole through the improvement of social ties and the uplifting of meaningful connection. Inspired in large measure by his inner religious life, this altruistic facet of his thought featured prominently not only in his historical work, but also in his thought on religion and ecology. Second, for much of his early career, White held closely to the belief that technology largely grew out of impulses to improve human welfare, rather than as the natural outgrowth of technological and scientific advancement. He also believed that technology, properly applied, helped elevate humans out of drudgery and it contributed to the recognition that all humans, regardless of class or other distinction, were of equal social and spiritual worth. In this sense, for White, technology was democratized.

The boundaries of this concern for the well-being of the individual and for broader social communities extended far beyond education, technology, or religion. Like many thinkers of the early 20th century, White was troubled over the rise of fascism, socialism, and communism, and the threats that they posed—whether real or imagined—to the dignity and worth of the human individual. In this regard, White wrote and spoke about the problems of loneliness and the promise of democratic thought and practices.

In “The Crisis in Democratic Leadership: Importance of the Individual Must not be Denied,” a speech given as a commencement address at Pomona College in 1944, White mourned “the loneliness of millions who have lost all sense of being part of a community.”²⁵⁰ Immersed in an era reeling from the unprecedented violence of two world wars and the rapidly shifting technological and economic landscape of the U.S. at that time, White feared the alienation and nihilism that threatened to consume those around him. “[T]hat loneliness, in the sense of being unattached, is the greatest curse of our modern world,” White warned. “[F]rom it,” he continued, “springs a loss of self-respect and a loss of respect for others which is devastating to the human spirit.”²⁵¹ In a sense, his concern over alienation and a loss of community mirrors common rhetoric in the era in which he was writing. The philosophy of existentialism was gaining popularity. Sociologists such as Weber and Georg Simmel had been worrying over individual identity and alienation in the face of urbanization and economic reform, and in global affairs the United States was emerging from its isolationism while other nations were grappling with issues of identity in the wake massive decolonization. Niebuhr’s influence on White also contributed to his belief that society could address social ills and injustices through democratic thinking and values. White’s suggested solution, as I discuss further in chapter 3, was to bolster the individual spiritually through Christianity and to strengthen the “inter-relationships” of society through democratic processes “so that the fruits and flowers of the spirit may spring up.”²⁵²

²⁵⁰ Lynn Townsend White, jr., “The Crisis in Democratic Leadership: Importance of the Individual Must not be Denied,” *Vital Speeches of the Day* 10 (August 15, 1944): 658.

²⁵¹ *Ibid.*, 659.

²⁵² *Ibid.*

As a social enterprise, White valued democratic pluralism for its ability to create understanding amongst disparate social groups and to engender a sense of community and belonging. This connection between the value of the human individual, the importance of the community, and the power of democracy is particularly well-developed in some of White's wartime speeches, for instance, in a speech at the baccalaureate service at Stanford University on June 17, 1945. Entitled "The American Subversion: The Fundamental Worth of Every Human Being,"²⁵³ White's speech extolled the virtues of democracy and the respect for individual human lives as characteristics that set the Allies apart from those that they waged war against. America, he proclaimed, is "intent on building an equalitarian [sic] society," and citizens were "deeply concerned to provide a maximum of liberty to the individual."²⁵⁴ Here in this text, White contrasted his views on individual liberty with the rise of communism in Russia and China and with the "fear and distrust" of the average citizen implicit in the fascist regimes of Italy and Germany.²⁵⁵ While White makes no mention of thinkers like Dewey or John Stewart Mill, their thought seems to echo in White's words as he speaks of the American drive towards freedom and self-improvement.

Speaking from his own political stance as a lifelong Republican with strong liberal leanings,²⁵⁶ White listed several aspects of democracy that he held dear, among

²⁵³ Lynn Townsend White, jr., "The American Subversion: The Fundamental Worth of Every Human Being," *Vital Speeches of the Day* 11 (October 1, 1945): 755–57.

²⁵⁴ *Ibid.*, 757.

²⁵⁵ *Ibid.*

²⁵⁶ See, for example, Lynn Townsend White, jr., "What Can the Humanities Contribute to World Peace?" Speech, Second Annual Conference of the William Edgar Borah Outlawry of War Foundation (Moscow, ID: The University of Idaho, April 13, 1949), Box 3, Speeches and Articles, File 31, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College, 7; and Lynn Townsend White, jr., "Compassion and Impartiality," (Speech, LA Community Chest, October 8, 1958), Coll. 1541, Box 16,

them access to “free universal education” and an ideal of “the fundamental worth of every human being.”²⁵⁷ He felt that this respect for the inherent worth of the individual person could not be separated from America’s religious past. He explained, “Our American attitude [...] is rooted primarily in our dominant religious tradition,” namely Protestantism. “Protestantism,” he continued, stressed “the infinite worth of the individual.”²⁵⁸ The fundamental result of this—a result which White boldly praised—was egalitarian thinking. Foreshadowing his later thought on ecology, White stated:

We in America believe that spirit and matter, soul and body, idea and substance, brain and hand, thinker and worker are inextricably joined together in the nature of things. We believe that the attempt of any group to perpetuate or to create a special position for itself is in defiance of the nature of things, and is therefore, by definition, evil and doomed to failure²⁵⁹

By virtue of their Protestant roots, in other words, White believed that American citizens were the heirs to forms of democratic thought that recognized the inherent dignity and worth of every human individual. As I discuss in chapter 4, there is also a Weberian tendency in White’s attempt to find balance in the tension that exists between the autonomy and rights of the individual on the one hand, and the danger of the homogenization and erasure of individual value in democratic cultures.

White echoes and refines these same principles in dozens of sources, often mentioned in a few brief sentences or paragraphs. For instance, in “A Jewish Option in

Bibliographies, n.d., General, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 14–15.

²⁵⁷ White, “The American Subversion,” 757.

²⁵⁸ Ibid.

²⁵⁹ Ibid.

Modern America,”²⁶⁰ a speech given as a commencement address at the Hebrew Union College (Jewish Institute of Religion) in June of 1964, White urged the students to wholeheartedly embrace the role that Judaism could potentially play in American public life. Religious and cultural pluralism, he argued, is “fully attainable in a thoroughly democratized world” and it is valuable in that it “is compatible with mutual respect and peace.”²⁶¹ Such instances where White extolls the virtues of democracy and pluralistic egalitarianism, I argue, can be read as precursors to White’s later theological advocacy for a “democracy of all God’s creatures” in “Historical Roots,” a position which I explore in detail in the following chapter.²⁶²

Technology and the Democratization of Life

The interrelatedness of democracy, technology, and religion was a constant in White’s scholarship. White’s understanding of *how* they were interrelated, and what impact they might have on contemporary life, shifted as White matured and as he incorporated new facts about aggression, ecology, and society into his scholarship. Here I briefly examine the shifting sands of White’s thought as it developed over time. What relationship exists, I ask, between White’s early thought on democracy and the argument contained in “Historical Roots?” In “Historical Roots,” White informed his readers that “[o]ur ecologic crisis is the product of an emerging, entirely novel, democratic culture.

²⁶⁰ Lynn Townsend White, jr., “A Jewish Option in Modern America,” Pamphlet, Commencement Address (Los Angeles: Hebrew Union College—Jewish Institute of Religion, June 12, 1964): 1–11.

²⁶¹ Ibid., 4.

²⁶² White, “Historical Roots,” 1206.

The issue is whether a democratized world can survive its own implications.

Presumably we cannot unless we rethink our axioms.”²⁶³ What did White mean by this statement?

The answer to this question begins with White’s early insistence that technology was freeing to humans. As we have seen, White understood technology as the creative expression of the non-verbal majority. Moreover, he viewed technology as a universal and a unifying force in human affairs.”²⁶⁴ At least in the earliest part of his career, White was optimistic about the power of technology to simultaneously unite humanity, free the individual from drudgery, and also set the stage for a more peaceful, egalitarian society.

This optimism hinged upon White’s belief that the fusing of science and technology was a historical phenomenon that was itself rooted in democratic thinking. Prefacing his statement that the ecologic crisis is a result of democracy in “Historical Roots,” White stated that

“Science was traditionally aristocratic, speculative, intellectual in intent; technology was lower-class, empirical, action-oriented. The quite sudden fusion of these two, towards the middle of the 19th century, is surely related to the slightly prior and contemporary democratic revolutions which, by reducing social barriers, tended to assert a functional unity of brain and hand.”²⁶⁵

What made White’s approach quite distinct is that for White, technological progress, and the fusing of science with technology, grew out of a shifting religious attitude towards human worth and the value of labor.

²⁶³ Ibid., 1204.

²⁶⁴ Hall and Macleod, “Technology, Ecology and Religion,” 151.

²⁶⁵ White, “Historical Roots,” 1204.

Building upon the work of des Noëttes on animal power, White described technology's ability to free humans from drudgery by replacing human labor with animal and machine power. Technological advances, such as the horse collar, the horseshoe, and the yoke, he wrote in 1940, should not be regarded solely as an economic revolution. It was a spiritual triumph with deep religious roots. In his words,

The study of medieval technology is therefore far more than an aspect of economic history: it reveals a chapter in the conquest of freedom. More than that, it is a part of the history of religion. The humanitarian technology which our modern world has inherited from the Middle Ages was not rooted in economic necessity; for this 'necessity' is inherent in every society, yet has found inventive expression only in the Occident, nurtured in the activist or voluntarist tradition of Western theology. *It is ideas which make necessity conscious.* The labor-saving power-machines of the later Middle Ages were produced by the implicit theological assumption of the infinite worth of even the most degraded human personality, by an instinctive repugnance towards subjecting any man to a monotonous drudgery which seems less than human in that it requires the exercise neither of intelligence nor of choice. It has often been remarked that the Latin Middle Ages first discovered the dignity and spiritual value of labor—that to labor is to pray. But the Middle Ages went further: they gradually and very slowly began to explore the practical implications of an essentially Christian paradox: that just as the Heavenly Jerusalem contains no temple, so the goal of labor is to end labor.²⁶⁶

Religion, especially Christianity, is closely linked to labor and individual worth and drawing out this aspect of White's argument enhances, I argue, the scholarly understanding of White's ecological statements in the late 1960s by bringing him into conversation not just with theology or the biblical texts, but with the work of Weber as well. Thus in "Historical Roots," when White stated that "Man's relation to the soil was profoundly changed" by the advent of "power machinery, labor-saving devices, and

²⁶⁶ White, "Technology and Invention," 22 (emphasis mine).

automation,”²⁶⁷ he was building upon a strand of thought more than twenty years in the making, a strand which is inherently Weberian in its tone and findings.

White speculated that whereas labor, viewed through the lens of pre-medieval Christianity, was once viewed as spiritually enriching, this attitude changed in the Middle Ages because religious attitudes towards labor changed.²⁶⁸ Suddenly, labor posed a paradox to Christian thinkers. To labor was to pray, but certain kinds of labor also came to be viewed as physically and spiritually impoverishing.²⁶⁹ Spurred on by changes in religious attitudes towards labor, medieval attitudes towards labor-saving technology changed as well. Harkening back to his dissertation topic, White argued that Monastic communities that viewed labor as dehumanizing soon “became centers of technological change, disseminating various kinds of laborsaving technology from the course of the twelfth century on.”²⁷⁰

Moreover, the ecological turn in White’s thought in the late 1960s also signals a watershed moment in White’s shifting attitude towards the benefits of technology. In his

²⁶⁷ White, “Historical Roots,” 1204.

²⁶⁸ White stated that “there has been an element of Christian compassion motivating the development of power machinery and labor-saving devices” Lynn Townsend White, jr., “Cultural Climates and Technological Advance in the Middle Ages,” in *Medieval Religion and Technology: Collected Essays* (Berkeley: University of California Press, [1971] 1978): 237. For more discussion of changing attitudes towards technology in the Middle Ages, also see, Lynn Townsend White, jr., “Religion and Technology,” (speech, Science and Democratic Government Conference, Center for the Study of Democratic Institutions and the Twelfth Region of the United States Civil Services Commission, January 1962), Coll.1541, Box 7, Folder 11, Manuscripts—Tentative “Religion and Technology” 1962, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 13–14.

²⁶⁹ For further discussion of White’s views on this, see, David H. Hopper, *Technology, Theology, and the Idea of Progress* (Louisville, KY: Westminster/John Knox Press, 1991): 81.

²⁷⁰ Ibid., 97. For more information, and for contrasting points of view from White, see, White, “Religion and Technology,” 13–14; Lynn Townsend White, jr., “What Accelerated Technological Progress in the Western Middle Ages?,” in *Scientific Change: Historical Studies in the Intellectual, Social, and Technical Conditions for Scientific Discovery and Technical Invention, from Antiquity to the Present*, ed. Alistair C. Crombie (New York: Basic Books, 1963): 290–91; and White, “Cultural Climates,” 237.

book, *Technology, Theology, and the Idea of Progress*, religious studies scholar David Henry Hopper argues that “White underwent a significant change in attitude toward the whole technological enterprise” when he published “Historical Roots.”²⁷¹ Continuing, Hopper observes that White’s “[g]rowing concern with the ecological crisis led White to de-emphasize the humane, democratic, laborsaving theme expressed earlier and to accent instead Western society’s exploitative and abusive attitude toward nature.”²⁷² Technology, which had once freed humanity from oppressive social structures and physically grinding labor, is now the source of new, ecological problems. Where it once freed humanity, now it condemned humanity to ecological strife.

For White, the study of history is about more than developing an understanding of the past; it is also an attempt to shape a better future. For lack of a better term, one might describe White as a “scholar-activist.” In articles such as “Historical Roots,” he was interested not just in *what* happened in history, or even *why* it happened, but also went beyond that to suggest that something could be learned that would shape what *needed* to be done in contemporary society. “What shall we do? No one yet knows,” he wrote in “Historical Roots.” “But unless we think about fundamentals, our specific measures may produce new backlashes more serious than those they are designed to remedy.”²⁷³ By applying the tools of a historian, White believed that the ecological crisis, and its solution, might lie somewhere in the intersection where egalitarian and humanitarian thought meet religion, democracy, and science and technology.

²⁷¹ Hopper, *Technology*, 97.

²⁷² *Ibid.*, 97–98.

²⁷³ White, “Historical Roots,” 1204.

Cultivating the History of Technology—The Growth of White’s Historical Scholarship

White left Mills in 1958 after fifteen years of service. He returned again to the full time study of history when he took a faculty position in the department of history at the University of California, Los Angeles (UCLA). While at UCLA, he flourished as a historian. It was during this period that he published his most well-known works and dedicated himself most fully to professional service as a historian. Six years after arriving at UCLA, White also played a lead role in founding the Center for Medieval and Renaissance Studies at UCLA where he also served as founding director from 1964–70.²⁷⁴ He remained at UCLA until his retirement in 1974.

UCLA bestowed upon White a number of honors for his service to the university and for his work as a historian, including the distinction of giving the 1973 Faculty Research Lecture, “the highest research recognition the faculty gives to its members,”²⁷⁵ as well as the designation “Man of the Year.”²⁷⁶ White considered being named the first humanities professor at UCLA to receive the title of “University Professor”²⁷⁷ as the most noteworthy among his UCLA honors.²⁷⁸ It was a distinction bestowed upon only twelve other faculty members at that time.

²⁷⁴ The Center offers an annual “Lynn and Maude White Fellowship.”

²⁷⁵ No author, “A First for UCLA and Humanities: White Wins ‘Professor Award,’” *UCLA Daily Bruin* (October 4, 1972): 2. See also, White, *Oral History Transcript*, 221.

²⁷⁶ Demonstrating his always growing feminist sensibilities, he later quipped that would have preferred that it be called “Person of the Year.” White, *Oral History Transcript*, 221.

²⁷⁷ “A First for UCLA,” 2; and White, *Oral History Transcript*, 223–24.

²⁷⁸ Many at UCLA call this award the “hall of fame” and it allows professor to teach and do research at any University of California campus. “A First for UCLA,” 2; and White to People’s Republic, “Biography and Statement.”

In 1983, White was interviewed at UCLA by Rick C. Harmon on the subject of his upbringing, his development as a scholar, and his personal and family life.²⁷⁹ When asked what sort of honors and benefits come with the title of University Professor, White commented on the acceptance of his work and his attempts to bring his work to nonacademic audiences:

One is supposed to have [...] some influence in the nonacademic world. Well, now that [Pope John Paul II] has made Saint Francis the patron saint of ecologists, I suppose the fact that I made the original suggestion indicates that I've had influence—although I'm not sure that the pope knew that he was following Lynn White's lead in this matter. I tend to chalk it up to the fact that the pope and I live in the same world.²⁸⁰

Although receiving this award is something that he would refer to as his greatest honor,²⁸¹ White was humble and lighthearted whenever asked about it. For instance, in his interview with Harmon he observed that “[n]o increase of salary is involved. I sort of asked about this, but was told that it was great kudos but no increase in salary.” After pausing to laugh at his own joke, he quipped, “[a]nd I thanked them for the kudos.”²⁸²

His move to UCLA marked an important ripening in White's historical thought, a time when he began to turn more intently from understanding ‘what’ happened in history to attempting to discern ‘why’ changes happened in history. Machen writes:

In his own personal accounts of his career as a medieval historian, White lists 1959, the year the manuscript of *Medieval Technology and Social Change* was completed [and the beginning of White's many years at UCLA], as the moment he realized he had neglected the historian's

²⁷⁹ The interview was part of a project conducted by the UCLA's Center for Oral History Research that gathers together oral history interviews related to the history of Southern California. The interview was recorded in White's office on the UCLA campus on audio tape (and partially on video recording). The interview was later transcribed and kept at the Charles E. Young Research Library at UCLA under the title “Technology, History, Democracy Oral History Transcript.”

²⁸⁰ White, *Oral History Transcript*, 226–27.

²⁸¹ White to People's Republic, “Biography and Statement.”

²⁸² White, *Oral History Transcript*, 224.

responsibility to tell us why things happened as well as what happened. From that time on, he consciously searched out the reasons for, as well as tracing the development and consequences of, Europe's increasing velocity of technical inventiveness during the Middle Ages compared to progress in Byzantium, Islam, and China.²⁸³

Medieval Technology and Social Change was published three years later, in 1962, and it was an immediate and long-lasting success.²⁸⁴

Needham deemed White's text to be "the most stimulating book of the century on the history of technology."²⁸⁵ Within a decade, *Medieval Technology and Social Change* had become a "scholarly 'best-seller'" both domestically and internationally and had been translated into Italian, German, French, and Spanish.²⁸⁶ Hall, in acknowledgement of both the success and the controversy of the book, writes:

Lynn White's *Medieval Technology and Social Change* ranks as one of the most widely read and influential works of historical scholarship in the twentieth century. In my own experience, it is often the only serious work about medieval technology that most historians have read. It was always a controversial work, generally better received by historians of science and technology than by conventional medievalists.²⁸⁷

Despite scattered controversy, the book was showered in accolades. The History of Science Society gave White the Pfizer Award in 1962, the year that it was published. The Society for the History of Technology lauded *Medieval Technology and Social Change* as well, bestowing upon White the Leonardo da Vinci Medal, their highest honor, just two

²⁸³ Machen, *Cultural Values*, 52.

²⁸⁴ Richard Holt, "Medieval Technology and the Historians: The Evidence for the Mill," in *Technological Change: Methods and Themes in the History of Technology*, ed. Robert Fox (Amsterdam, NL: Harwood Academic Publishers, 1996): 103.

²⁸⁵ Joseph Needham, book review of Lynn White's *Medieval Technology and Social Change*, *Isis* 54, no. 3 (September 1963): 418.

²⁸⁶ Hall, "Lynn White's *Medieval Technology*," 86.

²⁸⁷ *Ibid.*, 85.

years later in recognition of the book and White's other contributions to the field of study.

Medieval Technology and Social Change deals with the introduction and flux of technologies in medieval Western Europe and their effect on changing social and economic structures.²⁸⁸ In turn, White examined a number of technological advances that shifted the way in which energy was harnessed by those living in Western Europe during the Middle Ages. Particularly, he focused on a number of ways in which animal power was used to replace human power. For example, by examining the introduction of the stirrup into Western Europe and other changes such as developing improved saddles, White posited that the radical reorganization of medieval military practices in turn led to a complete restructuring of agricultural methods and social structure.

Relatedly, by building upon Marc Bloch's history of the plow and the horse in medieval agriculture,²⁸⁹ White demonstrated how religion stimulated changes in technology which in turn then required individuals to move to cities and larger villages in order to consolidate their resources to support these new methods. The replacement of the scratch plough with the heavy plough, for instance, necessitated larger teams of oxen. While small farmers could sometimes afford a small team of oxen, they often needed to pool their resources in order to assemble teams of eight or more oxen to pull the heavy plough. This required a massive change in social structure. He also focused attention on

²⁸⁸ Glick identifies many of White's arguments in this text as an expansion upon ideas developed by White in the early 1940s. "His first publication on medieval technology was a 1940 article entitled 'Technology and Invention in the Middle Ages' in which he sketched out a number of problems that, in effect, became a blueprint for the next phase of his career. This resulted in his influential 1962 volume, *Medieval Technology and Social Change*." Glick, "White, Lynn," 1295.

²⁸⁹ For White's discussion of Bloch, see, Lynn Townsend White, jr., *Medieval Religion and Technology: Collected Essays* (Berkeley: University of California Press, 1978): xv.

the use of machine power via the windmill and watermill. White's research on these technological advances hinges upon an argument that most, if not all, of these advances were precipitated primarily by changes in religious ideas and values and less so by material factors such as economic need.

To date, *Medieval Technology and Social Change*, much like "Historical Roots," remains influential yet controversial.²⁹⁰ Hall observes that it "was never very highly regarded by medievalists themselves" and that "White's dramatic explanation of one of medieval history's oldest conundrums was soon criticized, and since then his arguments have been systematically demolished."²⁹¹ White was, by and large, inured to the criticism of his book. According to Hall, White joked about the "'tone of high emotion'" displayed by some of his critics.²⁹² He was pleased, if anything, with the book and what it did to advance his field of study. Arguments put forth in historical scholarship, in White's view, tended to be "inherently transitory," and, Hall claims, White judged his own work not for its historical accuracy and for its immunity to criticism, but rather for its contribution to critical thinking and to the growth of the field.²⁹³

Indeed, throughout his career, White seemed to generally ignore criticism and he avoided defending his published works. Reflecting on the controversy generated by "Historical Roots," for instance, White stated "that 'replies' [to critics of one's work] almost inevitably degenerate into defenses of the writer's ego." Rather than writing

²⁹⁰ Hall, "Lynn White's *Medieval Technology*," 97. See also, Nelson, "Lynn White"; and Alex Roland, "Once More into the Stirrups: Lynn White jr., *Medieval Technology and Social Change*," *Technology and Culture* 44, no. 3 (July 2003): 574–85

²⁹¹ Hall "Lynn White's *Medieval Technology*," 95.

²⁹² *Ibid.*, 86.

²⁹³ *Ibid.*

defensively, he was inclined to think “that it was better to let the longer future judge the values of various positions.”²⁹⁴ And, writing specifically of the tendency of other scholars to critique his historical methodology, and in an attempt to invite other historians to take similar risks, White suggested that he would rather be adventurous and creative in his scholarship than to worry about being “wrong.”²⁹⁵

As I have shown, White’s scholarship profoundly changed the direction, focus, and methodology of the study of medieval technology. His study of medieval technology, and the questions that he asked about its development, led him to the distinct observation that the transformation of ideas in medieval Western Europe had implications that reached far beyond the economic and technological landscape of the European continent; those ideas would transform the land itself. As Clagett et al. explain:

Lynn White was an extraordinary catalyst for the history of technology. [...] Lynn White has also left a recognized discipline in the wake of his creative efforts. At the heart of this discipline lay one fundamental tenet: even though many, if not most, of medieval Europe's technological inventions were diffused from Asia and the Middle East, labor-saving, and even nature-dominating, devices became, in White's judgment, a unique feature only of medieval Western society. Thus were the foundations laid for the innovations and inventions that would eventually transform Europe into an industrial society.²⁹⁶

This transformation, White believed, would profoundly affect the worldviews and values of those who inherited the European worldview from which these attitudes grew. This intellectual development serves as a foundation upon which “Historical Roots” was built. In the section that follows, I discuss White’s growing interest in ecology.

²⁹⁴ White to Grinevald.

²⁹⁵ White, *Medieval Religion and Technology*, xx.

²⁹⁶ Clagett, Rouse, and Grant, “Memoirs of Fellows,” 771.

Foreshadowing “Historical Roots” – The Development of White’s Thought on Religion and Ecology.

The first clear indicator that White was thinking about religions and their varying attitudes towards nature long before the publication of “Historical Roots” was the publication of an article called “Natural Science and Naturalistic Art in the Middle Ages” in 1947.²⁹⁷ In this text, published two full decades before “Historical Roots,” White argues that changes in the subconscious, un verbalized attitudes of Europeans towards science and nature can be found in Gothic sculpture and architecture. “[T]he emergence of Gothic art reflects a fundamental change in the European attitude towards the natural environment,”²⁹⁸ wrote White. In this text he examines symbolic depictions of natural objects, such as reliefs of grapes, and he argues that the shift away from symbolic images towards botanical, lifelike accuracy can tell historians something about changes in medieval worldviews and values. Artistic renderings of the natural world, in other words, signaled a deeper shift in religious and philosophical values.²⁹⁹

With this evidence and interpretive framework in hand, White turned his attention to the life and outlook of Francis of Assisi, the historical figure that he would later recommend as the patron saint of ecologists in 1967. White’s interest in Francis, it should be noted were more than a fleeting romance with an ecologically friendly figure in the Christian tradition. Rather, White had a longstanding interest in Francis linking back not

²⁹⁷ As Nash observes, “White anticipated his thesis twenty years earlier in ‘Natural Science and Naturalistic Art in the Middle Ages.’” Nash, *The Rights of Nature*, 236 n. 3. See also, Hall and Macleod, “Technology, Ecology and Religion,” 153 fn. 21; and Machen, *Cultural Values*, 42.

²⁹⁸ Lynn Townsend White, jr., “Natural Science and Naturalistic Art in the Middle Ages,” *The American Historical Review* 52, no. 3 (April 1947): 428.

²⁹⁹ “Modern science [...] as it first appeared in the later Middle Ages was more than the product of a technological impulse,” White explained, “it was one result of a deep-seated mutation in the general attitude towards nature.” *Ibid.*, 435.

only to his historical studies on technology and science but also in his personal life growing up in San Francisco, a city named after Francis, which White was intensely aware of. He saw Francis as an exemplar of pre-scientific attitudes towards nature. Rather than espousing a scientific understanding of the world that was strictly mechanistic and devoid of spiritual meaning, White explained, Francis saw nature as both something that could be understood empirically while also existing as a spiritually rich complex of symbols imbued with vitality and spirit:

It is among the Franciscans as well that the scientific expression of the new attitude towards nature is most clearly seen. As has been remarked, the older view of the natural creation as symbol was completely anthropocentric: everything existed solely for man's spiritual benefit, and for nothing else. Against this human egotism the humility of St. Francis rebelled. To him the things of nature were indeed symbols, but they were more than that: they were fellow creatures placed on earth for God's inscrutable purposes, praising him in their proper ways as we do in ours. Such an attitude is, of course, implicit in the Benedicite³⁰⁰ and Psalm 148, but never before had it become explicit to such an extent within the Christian tradition.³⁰¹

Francis, as an exemplar of pre-scientific attitudes towards nature, also marked a metamorphosis of European thought that marked a transition to the appreciation of nature for its own sake. White continued:

It may be said without exaggeration that St. Francis first taught Europe that nature is interesting and important in and of itself. No longer were flames merely the symbol of the soul's aspiration: they were Brother Fire. The ant was not simply a homily to sluggards, the worm not solely a sermon on humility: now both were autonomous entities. St. Francis was the greatest revolutionary in history: he forced man to abdicate his

³⁰⁰ The Benedicite, which is also known as “omnia opera Domini” or “A Song of Creation,” is used in the Roman Catholic Liturgy of the Hours as well as in Anglican worship. White refers to it often and uses it as evidence to support his claim that the Christian tradition supports an ecologically positive worldview. The Benedicite repeats a call for all parts of creation (humans, mountains, whales, birds, lightning, and so forth) to bless the Lord and to exalt God.

³⁰¹ White, “Natural Science,” 433.

monarchy over the creation, and instituted a democracy of all of God's creatures. Man was no longer the focus of the visible universe. In this sense Copernicus is a corollary of St. Francis.³⁰²

White contended that Francis' attitude towards other creatures was a sea change in the scientific attitudes of the early medieval period. Francis' thought "provided an adequate, and hitherto lacking, emotional basis for the objective investigation of nature."³⁰³ This established a foothold in the culture and attitudes of the time, White argued, from which figures, such as William of Ockham, would take the first major strides forward into what is now considered modern scientific thought. Curiously, while he here refers to Francis as a stimulus in the creation of scientific worldviews, he later considers Francis to be a figure whose thought could help to alleviate the negative ecological effects of modern science.

Elements from these passages appear nearly verbatim in "Historical Roots" almost twenty years later. Captivated by Francis' views towards nature, White's own ecotheological point of view, developed in the 1960s, 70s, and 80s, translated Francis' thought into the language of ecology. White borrowed Francis' view of nature, understood as fellow worshippers of God, and made it a central, defining feature of his ecotheological worldview that was first expressed in "Historical Roots." For a full discussion of this aspect of White's thought, see chapter 3.

Other publications also presaged the ecological turn and controversy that would emerge in "Historical Roots." Whereas much of White's writings on technology were flavored with an optimistic concern for the human individual, a celebration almost, of the

³⁰² Ibid.

³⁰³ Ibid., 434.

power of technology to positively impact human lives, White gave some indication in 1954 that there was also a dark side of humanity's changing relationship with technology. "The Changing Past," an article written for the general audience, of *Harper's* magazine, and later republished as a book chapter in *The Frontiers of Knowledge*, contains many of the same facts and ideas found in White's other historical work but with a dark twist in interpretation.³⁰⁴ Machen explains:

White introduced a somber tone we have not heard before. In discussing the worsening climate, starting about 1300 A.D., he noted that climate however could not account for the 'almost terrifying changes in the intellectual and emotional climate of the fourteenth century'. The Middle Ages, previously described by White in terms of its almost joyous vitality, now emerged from his pen as an age of 'turmoil, agony, soul-searching, and new departures.' For the first time, he described mentalities in terms of neuroses. And he closed his essay by characterizing the modern era in which he was writing as one in which rapid change had bred fear.³⁰⁵

Perhaps inspired by his father's interest in psychology—one can only guess—this description of the mindset of the Middle Ages as potential neurosis denotes a dual turn in White's thought on technology: First, White recognized the potential for strife and internal agony inherent in times of rapid religious or technological change. But tied in with this personal and social upheaval are climactic factors. Human well-being and planetary health, White subtly suggests, could be interconnected.³⁰⁶ Second, he suggested that historians might also employ the interpretive tools of psychology in order to better

³⁰⁴ Lynn Townsend White, jr., "The Changing Past," *Harper's Magazine* (November 1954): 29–34; and Lynn Townsend White, jr., "The Changing Past," in *Frontiers of Knowledge in the Study of Man*, ed. Lynn Townsend White, jr. (New York: Greenwood Press, 1969): 68–78.

³⁰⁵ Machen, *Cultural Values*, 45.

³⁰⁶ White wrote: "One of the most startling results is the discovery of a sudden worsening climate about 1300 A.D. which made farming so difficult that during the next three generations thousands of villages in Northern Europe were abandoned. No change in physical climate can account entirely for the almost terrifying changes in the intellectual and emotional climate of the fourteenth century. It has been long recognized as an age of turmoil, agony, soul-searching, and new departures." White, "The Changing Past," 1969, 70.

understand how the subconscious impulses of individuals shape cultural practices and formation.³⁰⁷

But more to the point, for the first time White directly links Western worldviews and the idea that it might be appropriate to view them as exploitative of nature and potentially harmful to both humans and nature. This differs from non-Western worldviews. In his words:

Anyone who has become acquainted with educated and sensitive Asians travelling among us to explore our minds has been told, not once but often: ‘The thing which fundamentally separates you Americans and Europeans from all the rest of mankind is that you live *on* nature, not *with* nature.’ To which we refrain from replying, ‘Why, yes! This accounts for our superiority!’ and, with evasive amiability, pour another martini for our guests.³⁰⁸

Living on nature, he seems to be implying in this discussion of Western worldviews, is a fact that Westerners are uncomfortable with, a source of potential embarrassment.

To make sense of this difference, and to substantiate his claims, White posited that changes in agricultural technology and techniques, specifically the use of bigger teams of oxen and the use of the heavy plow, led to changes in land distribution—changes which overturned not just the topsoil itself, but also the social and economic layout of Western medieval society. These changes, more importantly, had profound ecological implications both in the impact upon the land and in the psyche of those living at the time: “No more fundamental change in the idea of man’s relation to the soil can be imagined: once man had been part of nature; now he became her exploiter,” he wrote.³⁰⁹

³⁰⁷ Machen, *Cultural Values*, 45.

³⁰⁸ White, “The Changing Past,” 1954, 31.

³⁰⁹ *Ibid.*, 32.

Astute readers will note that this argument, formulated in the early 1950s, is recycled, with slight changes in wording, nearly a decade and a half later in “Historical Roots”:

peasants pooled their oxen to form large plow-teams, originally receiving (it would appear) plowed strips in proportion to their contribution. Thus, distribution of land was based no longer on the needs of a family but, rather, on the capacity of a power machine to till the earth. Man's relation to the soil was profoundly changed. Formerly man had been part of nature; now he was the exploiter of nature.³¹⁰

White took his argument one step further in “Historical Roots.” He argued that when considered in the context of the ecological movement of the late 1960s, being the “exploiter of nature” had a darker connotation. The introduction of this new heavy plow that violently “attacked the land,” as well as the changing attitudes that led to it and that also grew out of it qualified in White’s eyes as “ruthlessness towards nature.”³¹¹ The intellectual descendants of those northern European peasants, White argued, eventually inherited that same ruthlessness.

This reinterpretation of earlier evidence and ideas from White’s research as exploitative of nature can be found in other pre-“Historical Roots” texts as well. A 1961 speech, published as “What Accelerated Technological Progress in the Western Middle Ages?,” can also be read as a precursor to “Historical Roots.” In this first major address on why the Western Middle Ages developed technology as quickly as it did,³¹² White “entertained the thought that a unique and positive relation existed between the religious tradition and the distinctive growth of technology in medieval Europe.”³¹³ Changes in religious ideas, White believed, led to rapid changes in technology that brought with it

³¹⁰ White, “Historical Roots,” 1205.

³¹¹ Ibid.

³¹² Machen, *Cultural Values*, 56. See also, White, *Medieval Religion and Technology*, xix.

³¹³ Hopper, *Technology*, 97.

changes in core Western attitudes towards nature. Amongst the many concepts in this text that predate “Historical Roots,” he described historical changes in the application of animal and water power as a means of alleviating human labor as “profoundly humane in intent” and “rooted in religious attitudes.”³¹⁴ He noted the social and economic implications of changes in the stirrup and saddle, and he outlined some ways in which the Latin forms of Christianity—as opposed to Greek forms of Christianity—in Western Europe led to distinctively exploitative attitudes towards nature.³¹⁵ These, and other elements of this text, would comprise the core argument of “Historical Roots.” It is helpful, then, if one is to understand the many strands of argument in “Historical Roots,” to understand the evidence and arguments behind his assertions.

The most notable idea developed in “What Accelerated Technological Progress in the Western Middle Ages?” is his discussion of what in “Historical Roots” he would deem, in an ecological sense, “the greatest psychic revolution in the history of our culture”: the eradication of animism.³¹⁶ Medieval Christianity, he argued, “smashed animism” by replacing the local nature spirits of Europe—the spirits of trees and waterfalls—with human saints. “When the saint replaced [the] animistic sprite as the most frequent and intimate object of popular religious concern,” he gravely opined, “our race’s early monopoly on ‘spirit’ was confirmed, and man was liberated to exploit nature

³¹⁴ White, “What Accelerated Technological Progress,” 291. Machen observes: “Although he advanced two, new, nontheological reasons for the West’s dynamism in his 1961 presentation, White’s conclusions ignored them. His last paragraph was a mirror, in language and substance, of that he had written twenty-one years earlier to close his 1940 survey of technical innovation. Despite its abuses, White concluded, Western technology was ‘profoundly humane in intent’ and was ‘rooted in religious attitudes’ that can be summed up with the phrase he used to end both works: ‘The goal of labor is to end labor.’” Machen, *Cultural Values*, 58.

³¹⁵ For further discussion of White’s commentary on differing religious attitudes of the time, please see, Machen, *Cultural Values*, 57.

³¹⁶ White, “Historical Roots,” 1205.

as he wished.”³¹⁷ This same observation comprised a major component of “Historical Roots” several years later and also drove his endorsement of St. Francis as the patron saint of ecologists.

Here again in “What Accelerated Technological Progress in the Western Middle Ages?,” White recycles the same argument developed fifteen years earlier in “Natural Science and Naturalistic Art in the Middle Ages” in 1947 as a central piece of evidence. Writing of the use of larger teams of oxen with the heavy plough, White repeatedly used assertion that “[n]o more fundamental change in the idea of man’s relation to the soil can be imagined: once man had been part of nature; now he became her exploiter.”³¹⁸ As Hopper notes:

White used much of the same historical data found in his earlier 1963 article, but in place of the emphasis upon the emerging medieval, ‘democratic’ commitment to a more humane workplace, White now stressed the exploitative character of the Western development of the heavy plow, the rapid spread of water and windmills.³¹⁹

Just as in “Historical Roots,” here he pointed towards the artistic works of the silent majority to show how these technological innovations eventually led to an accompanying set of “coercive attitudes towards nature.”³²⁰ These novel psychological mindsets and the acceleration in technological innovation, in White’s view, were both rooted in religion and tied closely with democratic impulses.

Another important conclusion in “Historical Roots,” the notion that the unprecedented anthropocentrism of Christianity contributed to changes in ecological

³¹⁷ White, “What Accelerated Technological Progress,” 283.

³¹⁸ Ibid., 283–84.

³¹⁹ Hopper, *Technology*, 98.

³²⁰ White, “What Accelerated Technological Progress,” 284.

behavior, is seen in “What Accelerated Technological Progress in the Western Middle Ages?” These changing attitudes towards nature and technology could be “found in Christian theology as enunciated with a Latin intonation.”³²¹ So, when White controversially proclaimed that the ecological crisis was due, in part, to the fact that “Christianity is the most anthropocentric religion the world has seen” in “Historical Roots,” he was drawing upon this earlier formulation of his argument.

What conclusions can be drawn from this examination of White’s scholarship leading up to “Historical Roots?” First, these passages substantiate and elaborate the historical claims that White was making, in brief passing, in “Historical Roots.” Critics of White have often complained that White did not provide evidence for his argument, but by turning back to these precursors to “Historical Roots” one can find his thoughts developed more fully and his evidence neatly cited, footnoted, and placed within a larger intellectual analysis that was taking place in the study of history at that time. It signals to us as readers, in other words, that there is more than meets the eye in “Historical Roots.”³²²

Second, it demonstrates that White was accustomed to thinking and writing about religion and that those who knew his work were also likely to be familiar with White’s discussions of religion, particularly Christianity. With Christianity featuring so prominently in White’s scholarship, these elements of his thought reveal themselves to be no mere tangents, but rather central aspects of his scholarship. With this in mind, one

³²¹ Ibid., 290

³²² It is also worth noting that White expanded upon much of this historical research as well as some of the ideas found in “Historical Roots” in other texts. See, for example, Lynn Townsend White, jr., “The Iconography of *Temperantia* and the Virtuousness of Technology,” in *Medieval Religion and Technology: Collected Essays*. Berkeley: University of California Press, [1969] 1978.

might ask: How does White understand the relationship between religious ideas and values and human attitudes towards nature in a historical sense. How might a deeper look into these elements of his thought change how scholars interpret “Historical Roots?” And, how does White theorize the way in which changes in ideas and values in religious culture lead to changes in attitudes and behavior in human-nature relations? I explore these questions in the chapters that follow.

Third, it shows that White was thinking about religion and ecology far earlier than 1967, and leads to the question of where else might he have written about the subject. More importantly, if White had been thinking about the relationship between religion and the environment for several decades prior to “Historical Roots,” did he continue to expand these ideas in subsequent scholarship? Considering the reaction to “Historical Roots” in chapter 3, I explore how his thought continued to evolve and find expression in the ensuing excitement and debate it generated.

Lastly, connecting these earlier works to the publication of “Historical Roots” provides a framework for looking more deeply into White’s thought on a variety of subjects, all of them intimately linked with his argument in “Historical Roots” such as his thought on democracy, on animism and the role of Saint Francis in history and theology, and his humanistic thought on labor, community, and human-nature dualisms. This invites, I hope, further research.

Learning About Ecology—Developing his Ecological Consciousness

Just as “Historical Roots” was developed in the fertile soil of White’s earlier historical scholarship, the “genius” of his thought was cross-pollinated by his interactions with a number of conversation partners concerned with issues related to political and ecological consciousness in the 1960s and 70s. “Genius is a bit like asparagus. It always comes in bunches. I have yet to discover the individual—the lonely genius,” White wrote. “They sometimes look lonely, they are sometimes recluses, but they are not lonely. I think it can be shown that geniuses always have contact with other people of extraordinary interest.”³²³ And White, indeed, was in contact with “people of extraordinary interest” in a variety of ways. For instance, he developed a life-long friendship with anthropologist Margaret Mead, who provided him with criticism and conversation on women’s education. During his 1983 interview with Harmon, White fondly claimed that Mead reportedly drew inspiration from so many of his ideas that his wife, Maude, wanted to “make an anthology of White ideas stolen by Mead.”³²⁴

As he gravitated towards ecological thought, a number of prominent ecological thinkers pulled him into their intellectual orbits. For example, the iconic landscape photographer, Ansel Adams, wrote to White to express his agreement that the conservation movement was but one expression, or a “surface effect,” brought on by deeper cultural currents.³²⁵ George Sessions, a leading proponent of the Deep Ecology

³²³ White, “Religion and Technology,” 4.

³²⁴ White, Oral History Transcript, 79. See also, White, Oral History Transcript, 243.

³²⁵ Lynn Townsend White, jr., *Machina ex Deo: Essays in the Dynamism of Western Culture*, (Cambridge, MA: MIT Press, 1968): viii. Adams was also in contact with White regarding White’s use of art and iconography in his historical scholarship and he wrote to White inquiring about the history of crucifixions in White’s 1978 “Science and the Sense of Self” article. Ansel Adams to Lynn Townsend White, jr., 24 April 1978, Coll. 1541, Box 14, Folder 3, Correspondence—Research Projects 1978–85, The Lynn

movement, was also in contact with White.³²⁶ Alan Watts, the philosopher, was also a friend of White's and later, shortly after the publication of "Historical Roots," he and White spoke and debated the relationship between theology and ecology.³²⁷ I discuss further that particular event in chapter 3 of this dissertation.

Perhaps the figure in the environmental movement who features most prominently in White's archived correspondence and in his published works is Aldous Huxley. Beginning in the late 1950s, White and Huxley began corresponding with one another and exploring their shared interests in subjects as diverse as the relationship between human population and resource depletion,³²⁸ psychology,³²⁹ and the use and benefits of psychedelic drugs.³³⁰ However, the most significant result of their friendship came out of a public conversation on the subject of religion and the environment.

Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.

³²⁶ Sessions gave White a signed copy of his article, "Shallow and Deep Ecology: A Review of the Philosophical Literature." On the cover page is written "For Lynn White All best Wishes George S." George Sessions to Lynn Townsend White, jr., n.d., Coll. 1541, Box 27, Folder 1, Articles, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.

³²⁷ Lynn Townsend White, jr., and Alan Watts, "Ecological Crisis: Religious Cause and Religious Solution," Audio Recording (Sausalito: Big Sur Recordings, 1971).

³²⁸ Aldous Huxley to Lynn Townsend White, jr., 5 March 1957, Box 14, Presidential Papers, Files 701–62, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College; and Lynn Townsend White, jr. to Aldous Huxley, 8 March 1957, Box 14, Presidential Papers, Files 701–62, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College.

³²⁹ In 1956, for example, White wrote to Huxley stating: "The other day in the *New York Times* I saw a brief account of an address in which you said that the now accumulating studies of the chemistry of the brain were going to compel us to a new analysis of and formulation of ethics and religion." Feeling that they shared a common interest both in religion and the functioning of the human brain, White enclosed one of his own talks which he summed up as follows: "The essence of it is Robert Fludd's statement that 'True practical theology is nothing but mystical chemistry.'" Lynn Townsend White, jr. to Aldous Huxley, 29 October 1956, Box 14, Presidential Papers, Files 701–62, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College. Also see, Aldous Huxley to Lynn Townsend White, jr., 16 December 1956, Box 14, Presidential Papers, Files 701–62, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College.

³³⁰ Either in their correspondence or during one of their several in-person meetings, Huxley gave White a copy of his 1954 book, *The Gates of Perception*, a text in which Huxley reflects on mescaline use [i.e. Peyote] and the connection between art, psychology, and religion. In a letter written to Mrs. William

“A conversation with Aldous Huxley not infrequently put one at the receiving end of an unforgettable monologue,” White wrote in the opening line of “Historical Roots.” “About a year before his lamented death he was discoursing on a favorite topic: Man’s unnatural treatment of nature and its sad results.”³³¹ White then goes on to recall this conversation with Huxley, in which White interrupts Huxley’s discourse on the ecological side effects of human interference in order to point out that the loss of “nature” that Huxley so strongly laments is itself a product of human interference. “All forms of life,” White pointed out, “modify their contexts.”³³² The more important issue, White argued, was the extent and preventability of that modification.

This brief mention of Huxley, which seems to garner little or no comment from the majority of White’s respondents, harkens back to a weeklong conference on March 16th, 1962 on “Technological Order” by the Center for the Study of Democratic Institutions in Santa Barbara. At this conference, White and Huxley served on a panel together and discussed the ecological effects of technology.³³³ In the conversation, he and White, as White recalled his talk in “Historical Roots,” spoke to the negative ecological effects—both large and small—brought about by human interaction with the environment. Huxley focused more on the ecological aftershocks of human interventions

Denman, the co-editor of the 1957 book, *The Peyote Ritual*, White stated that “[e]ver since Aldous Huxley gave us a copy of his *[Doors] of Perception*, we have been much interested in Peyote and its psychological effects.” Lynn Townsend White, jr. to Mrs. William Denman, 11 November 1957, Box 14, Presidential Papers, Files 701–62, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College.

³³¹ White, “Historical Roots,” 1203.

³³² Ibid.

³³³ Aldous Huxley et al., *Tangents of Technology, Program 7, Parts A and B*. audio recording. (Technological Order conference, Santa Barbara, 16 March 1962). Item 5201, Center for the Study of Democratic Institutions Collection, 1950-1991 (Mss 18), Digital Collections, Department of Special Collections, University of California Santa Barbara Library. <http://digital.library.ucsb.edu/items/show/5201> and <http://digital.library.ucsb.edu/items/show/5202>.

in nature while White gave some speculation on the history and motivation of changes in human attitudes towards nature. During White's portion of the talk, he spoke at length on three central aspects of his argument in "Historical Roots": The technological shifts of the Middle Ages, their relation to changes in religious ideas and values, and the resulting changes in how humans interact with their environment.

White suggested to his audience that "Antipater's [of Thessalonica] Lyric," a document which he refers to as a "poem in favor of a labor saving device,"³³⁴ could be a historical record of the existence of the first watermills in Europe. Written between 20 B.C.E. and 10 C.E., the poem describes the mechanical workings of a watermill in relation to Greek mythology and to the easing of human labor, details which indicate that the watermill was in use far earlier than archeological evidence suggests. Humans in this poem, White noted, could "sleep late long after cock crow" because their labor had been "turned over [...] to the water nymphs."³³⁵ This poem was not an allegory, he argued, "those were *real* water nymphs" in the eyes of the author. He then speculated, much like he would several years later in "Historical Roots," that the separation of humans and nature that Huxley described was "rooted in exactly the destruction of ancient animism which is one of the chief results of the victory of Christianity." In his estimation, recent scholarship

pointed out that the destruction of the animistic concept of nature by the victory of Christianity was fundamental to the liberation of mankind to exploit nature. That is so long as every water fall had its spirit in it, so long as every tree was inhabited by a spirit, so long as every rock or mountain had its spirit not only guarding it in some superficial sense but in a sense in it. You didn't mine the mountain without taking precautions against

³³⁴ Ibid.

³³⁵ Ibid.

revenge. You didn't chop down the tree without making sure that that spirit would not get revenge; that the spirit would be propitiated. There was a tremendous psychic block to our exploitation of nature in this animistic *weltanschauung*. And this vanished to a great extent with Christianity.³³⁶

Clearly foreshadowing "Historical Roots," White regarded the rise of technology, particularly labor saving devices such as watermills, as integral to the destruction of animism and connected to the rise of Christianity. Christianity, in this sense, was intimately tied to the manipulation and use of nature for human ends.

To bring this ecological insight full circle, he argued that replacing local spirits with Christian saints contributed to this vanishing. Whereas nature spirits were "partly in animal, nonhuman shape" (e.g. nyads, dryads, centaurs, fauns, etc.), Christian saints were "in every sense a man." And humans, he added, did not physically reside in nature in the same way as these nature spirits did. In his words:

the cult of saints confirmed human monopoly in the realm of time and space on this thing which we call spirit. The cult of saints despiritized, deanimized nature and liberated us spiritually to exploit nature ruthlessly and sometimes thoughtlessly. [...] I am wondering also whether, maybe the concept of ecology may not turn out, this is a very new concept as Aldous Huxley has said, whether this notion of ecology may not be functionally perhaps and even psychically the equivalent of the ancient animism. [...] It would seem that life is no longer confined in any sense, the organic and the inorganic, the lines are broken down, I wonder if in the concept of ecology we can regain our psychic unification with what is around us and possibly be lyrical in our experience of the technological adventure.³³⁷

³³⁶ Ibid. Here, he cites "Professor [Robert Jacobus] Forbes at the University of Amsterdam" and a scholar from the University of Jerusalem whose name he could not recall. Most likely, he is referring to the 1956 work of Robert Forbes of Leyden and Samuel Sambursky who, much like Benz, as White wrote in a 1971 article, "simultaneously pointed out that Christianity, by destroying classical animism, brought about a basic change in the attitude toward natural objects and opened the way for their rational and unabashed use for human ends. Saints, angels and demons were very real to the Christian, but the *genius loci*, the spirit inherent in a place or object, was no longer present to be placated if disturbed." White, "Cultural Climates," 237.

³³⁷ Huxley et al., *Tangents of Technology*.

In many ways, White's correspondence and collaboration with others undoubtedly shaped his thought on a number of issues ranging from women's education to ecology. This intellectual lineage, particularly those conversations centered upon ecology, is important in that it provides an insight into the emergence and maturation of White's thought on the relationship between religion and environmental attitudes and behaviors. Indeed, I argue that White's 1962 talk with Huxley should be considered to be the prototype for White's "Historical Roots" article. From the connection between the destruction and transformation of animism to the exploitation of nature to the role of Christianity in that process, White and Huxley explored many of the key concepts that would feature in White's "Historical Roots" article five years later.

"Historical Roots"

"The Historical Roots of Our Ecologic Crisis" was first presented December 26, 1966³³⁸ as a paper at the Annual meeting of the American Association for the Advancement of Science (AAAS) in Washington, DC. White, who was a faculty member at UCLA by that time, was invited to the AAAS "to address the American Association for the Advancement of Science on what was becoming the hottest topic of the 1960s: ecology."³³⁹ Although White was able to draw upon his previous work, he was unable to

³³⁸ "In the cold of the Washington, DC winter of 1966, Lynn White, Jr presented a ground-breaking and controversial paper at the annual meeting of the American Association for the Advancement of Science (AAAS) In the paper, which was published the following year in the journal *Science*, White laid much of the blame for the current environmental predicament upon the doorstep of Christianity. It is, therefore, deeply ironic that 'The Historical Roots of Our Ecologic Crisis', a paper considered to be so critical of the Christian tradition, was presented by a Christian thinker on the day after Christmas." Nelson, "Lynn White," 201.

³³⁹ Hall and Macleod, "Technology, Ecology and Religion," 153. Hall and Macleod note that White "intended the AAAS talk as a challenge to some deeply-held beliefs about the character of modern

come up with any original research for the presentation itself. As Hall and Macleod note, White's "preparatory research did not yield any significant work on the history of ecology, and he was thrown back on his own resources."³⁴⁰ In White's own words, as already discussed in chapter 1 of this dissertation, "I just sat down and wrote that speech out of my head (there being no other source available)."³⁴¹ Not only was White working with a dearth of resources, but he also characterized his argument in "Historical Roots" as underdeveloped and as limited by the restrictions of the format in which it was presented. In a letter written in 1984, for instance, he explained that the length and depth of his argument was restricted by the time allocated to him for his speech. "The time limitation was strict," he stated, "and on a topic like that much had to be omitted."³⁴²

Three months later, in the Spring of 1967, White's AAAS speech was published in the journal *Science* in 1967.³⁴³ The chief development that sets it apart from his earlier work is twofold: First, as many have noted before, it appeared in a widely read journal *Science* which allowed it to reach a new and larger audience. As the deep ecologist George Sessions notes, White's ecological ideas were in tune with the conservationist attitudes of the day, but his biggest "contribution was to bring the viewpoint to a larger audience, with the authority and literary panache of a skilled historian."³⁴⁴

Second, "Historical Roots" harnesses the pessimism and moralistic tone of the ecological movement of the late 1960s. In other words, whereas his other observations

technology, the ecological crisis it produces, and the entire body of assumption about the relationship between human beings and nature."

³⁴⁰ Ibid.

³⁴¹ White, et al., "Ecology and Religion."

³⁴² White to Duitsman, cited in Duitsman, "*Ecology and Theology*," 15.

³⁴³ De Steiguer, *The Age of Environmentalism*, 71; and Duitsman, "Ecology and Theology," 2.

³⁴⁴ Sessions, "Ecocentrism," 172.

about human-nature relations were more observational than activist in nature,

“Historical Roots” identifies the ecological implications of his historical findings in terms of a need for action and change—in both a practical sense and also in a moral sense.

According to Hall and Macleod:

Historiographically, the essay challenged the ‘modern’ character of technology (i.e., the tendency to see technology as a child of science) in ways that are utterly consistent with the totality of White’s other work. There is, to be sure, a dramatic difference in tone between ‘Roots’ and much of White’s earlier work: where White was once mainly optimistic about the possibilities for a technological future, he was now plainly much more worried.³⁴⁵

“Historical Roots,” as a synthesis of his earlier historical work considered in the light of the environmental movement of the late 1960s, asks what role religion has played in historical technological dynamism. “Here White faced squarely the implications contained in virtually all his earlier work,” write Hall and Macleod.

If medieval technology is indeed of seminal importance for the modern world, and if Latin Christianity could somehow be credited with fostering the medieval West’s technological dynamism, then religion must also share some of the responsibility for our culture’s shameful treatment of the natural world.³⁴⁶

The elements of Christianity pinpointed by White, as I explain in further detail below, include 1) the notion that humans, who are created in the image of God, are granted “dominion” over the Earth; 2) the understanding of history as an unfolding of “progress” across linear time; 3) an interpretation of historical change in which religious ideas, which are often later hidden or obscured in secular terms, motivate and shape human attitudes and behavior; and 4) the eradication of pre-Christian pagan animism by

³⁴⁵ Hall and Macleod, “Technology, Ecology and Religion,” 153–54.

³⁴⁶ Ibid., 152.

Christianity in the Middle Ages. These elements of Christianity, and the role played by religion in generating social change, can be identified in changes in science and technology. More importantly, they set the stage for sweeping changes in human attitudes towards nature. “The implications of Christianity for the conquest of nature,” wrote White in “Historical Roots,” “would emerge more easily in the Western atmosphere.”³⁴⁷

More to the point, this interpretation of the relationship between science, technology, and religion is an extension of White’s previous historical research. As he notes in “Historical Roots,” “[f]rom the 13th century onward, [...] every major scientist, in effect, explained his motivations in religious terms” and this continued up until the late 18th century.³⁴⁸ White recognized that this implication of Christianity would be worrying to his readers:

We would seem to be headed toward conclusions unpalatable to many Christians. Since both science and technology are blessed words in our contemporary vocabulary, some may be happy at the notions, first, that, viewed historically, modern science is an extrapolation of natural theology and, second, that modern technology is at least partly to be explained as an Occidental, voluntarist realization of the Christian dogma of man's transcendence of, and rightful mastery over, nature. But, as we now recognize, somewhat over a century ago science and technology—hitherto quite separate activities—joined to give mankind powers which, to judge by many of the ecologic effects, are out of control. If so, Christianity bears a huge burden of guilt.³⁴⁹

Science and technology, in other words, were “cast in a matrix of Christian theology”³⁵⁰ and, therefore, if scholars are to understand the ecological crisis, they must first understand the religious ideas that made science and technology possible.

³⁴⁷ White, “Historical Roots,” 1206.

³⁴⁸ Ibid.

³⁴⁹ Ibid.

³⁵⁰ Ibid.

It is important to note that a central part of his argument rests on a hypothesis that he had been arguing for decades, that science and technology did not historically develop together as is commonly assumed. Instead, he sees them as separate entities, evolving on separate tracks of innovation. He wrote, “it was not until about four generations ago [in the mid-19th century] that Western Europe and North America arranged a marriage between science and technology, a union of the theoretical and the empirical approaches to our natural environment.”³⁵¹ This development, a fusing of scientific thought and technological efficacy, gave humanity tremendous power over nature. “Its acceptance as a normal pattern of action,” he maintained, “may mark the greatest event in human history since the invention of agriculture, and perhaps in nonhuman terrestrial history as well.”³⁵²

While science and technology also developed in other cultures at varying stages in history, this marriage of the two, in his estimation, was a uniquely Western phenomenon that was “surely related to the slightly prior and contemporary democratic revolutions.”³⁵³ This phenomenon, rooted in religious ideas and powered by egalitarian thought in the form of democratic revolutions, had pronounced ecological implications on a scale never before seen. “Almost at once,” he wrote with the gravity of a practiced historian, “the new situation forced the crystallization of the novel concept of ecology [...] Today, no

³⁵¹ Ibid., 1203.

³⁵² Ibid.

³⁵³ The quote, in context, is: “Science was traditionally aristocratic, speculative, intellectual in intent; technology was lower-class, empirical, action-oriented. The quite sudden fusion of these two, towards the middle of the 19th century, is surely related to the slightly prior and contemporary democratic revolutions which, by reducing social barriers, tended to assert a functional unity of brain and hand. Our ecologic crisis is the product of an emerging, entirely novel, democratic culture. The issue is whether a democratized world can survive its own implications. Presumably we cannot unless we rethink our axioms.” Ibid., 1204.

less than a century later, the impact of our race upon the environment has so increased in force that it has changed in essence.”³⁵⁴

What this meant in terms of mediating environmental damage was a question which White was somewhat unsure about. “What shall we do?” he wrote, “[n]o one yet knows. Unless we think about fundamentals, our specific measures may produce new backlashes more serious than those they are designed to remedy.”³⁵⁵ Rather than leaping to action, he suggested that this problem was in need of further historical exploration. He proposed that the first step should be an attempt to “clarify our thinking by looking, in some historical depth, at the presuppositions that underlie modern technology and science.”³⁵⁶ However deeply connected the ecological crisis is to this marriage of science and technology, White maintained that the most productive approach to the problem lay in an examination of its religious roots. “Since both our technological and our scientific movements got their start, acquired their character, and achieved world dominance in the Middle Ages,” he observed, “it would seem that we cannot understand their nature or their present impact upon ecology without examining fundamental medieval assumptions and developments.”³⁵⁷ White found Christianity, in particular, to be the most cogent explanatory factor:

I personally doubt that disastrous ecologic backlash can be avoided simply by applying to our problems more science and more technology. Our science and technology have grown out of Christian attitudes toward man’s relation to nature which are almost universally held not only by Christians and neo-Christians but also by those who fondly regard themselves as post-Christians. Despite Copernicus, all the cosmos rotates

³⁵⁴ Ibid., 1203.

³⁵⁵ Ibid., 1204.

³⁵⁶ Ibid.

³⁵⁷ Ibid., 1204–05.

around our little globe. Despite Darwin, we are not, in our hearts, part of the natural process. We are superior to nature, contemptuous of it, willing to use it for our slightest whim.³⁵⁸

There is, in other words, no technological or scientific fix, at least not without first getting to the religious roots of the problem. “What we do about ecology depends on our ideas of the man-nature relationship,” he opined in one of his most frequently quoted passages, “More science and more technology are not going to get us out of the present ecologic crisis until we find a new religion, or rethink our old one.”³⁵⁹ For White, as I discuss in chapter 3, the ideas of Saint Francis of Assisi seemed to point the way, theologically speaking, out of the ecological crisis.³⁶⁰

This attempt at explaining the ecological crisis in Christian terms was not an act of fingerpointing or a sentiment fueled by anti-religious thought, as some critics read it. Rather, White was trying to make sense of ecological problems using the best tools he had available to him: the ideas, data, and methodologies of a historian of medieval technology. Hall and Macleod contend that “his rhetoric should not be seen as an attempt to cast blame, and certainly not as a search for a convenient scapegoat. Rather, he is engaged in a very difficult task for the cultural historian: pointing to an absence.”³⁶¹ White also did not consider his answer to be the definitive explanation, to the contrary, he

³⁵⁸ Ibid., 1206.

³⁵⁹ Ibid.

³⁶⁰ In his words, “the present increasing disruption of the global environment is the product of a dynamic technology and science which were originating in the Western medieval world against which Saint Francis was rebelling in so original a way. Their growth cannot be understood historically apart from distinctive attitudes toward nature which are deeply grounded in Christian dogma. The fact that most people do not think of these attitudes as Christian is irrelevant. No new set of basic values has been accepted in our society to displace those of Christianity. Hence 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.” Ibid., 1207.

³⁶¹ Hall and Macleod, “Technology, Ecology and Religion,” 155.

viewed his answer as one amongst many and he considered “Historical Roots” to be an invitation for others to dig deeper into the research.

Looking Back on White’s Thought After “Historical Roots”

The two decades of scholarship following “Historical Roots” was a time of refinement and recollection for White. It was a time in which he revised old arguments and continued to expand upon the works of the past. This is not to say that White ran out of new ideas, to the contrary, but rather to say that White’s earlier successes and his reputation as a leading historian of medieval technology afforded him the freedom to dig more deeply into the relationship between the history of technology and the changing world in which he lived.

After the publication of “Historical Roots,” White quickened his pace of publication as his work attracted the attention of scholars from a wide array of disciplines. Although too numerous to review in this dissertation chapter, many were extensions of his earlier thought on the historical relationship between technology and religion, and they often addressed these relationships with regard to issues of his contemporary society. Notable examples include a 1971 article in the journal *Viator* called “Cultural Climates and Technological Advance in the Middle Ages” in which White expanded upon the work of historian Ernst Benz to discuss why technology progressed so rapidly in the Christian atmosphere of West while faltering in other parts of the world where it had once thrived, such as in China where Buddhism flourished.³⁶² Here, he deepened his exploration of the role of Christianity in the eradication of

³⁶² White, “Cultural Climates,” 236–37.

animism and in the development of technology. He also worked to uncover why Greek Christianity and Latin Christianity differed in their views of technology in the medieval period.³⁶³

Christianity in the East and West and Buddhism in China were not the only cultures and religions that he examined for evidence of religion's influence on the development of science. In a 1976 panel at the American Historical Association, White gave a paper called "The Rise and Decline of Science in Civilization: The Islamic Case in Comparative Perspective."³⁶⁴ Here, he contrasted the influence of Daoism and Islam in other parts of the medieval world with that of Latinized Christianity in the West. These two texts are but two of many instances where White explored the connection between religion and technology.

Two of his most notable texts published after "Historical Roots" were collections of his essays published in book form. The first, *Machina ex Deo: Essays in the Dynamism of Western Culture*, was published in 1968. This book, which was later renamed *Dynamo and Virgin Reconsidered: Machina ex Deo*, grew out of an unpublished book that White began working on in the early 1950s. Originally conceived under the title of *Religion and Culture in Our Time*,³⁶⁵ the book initially addressed the role of religion in shaping contemporary culture. The drafts, found in the UCLA archive, also

³⁶³ Ibid., 237–53.

³⁶⁴ Lynn Townsend White, jr., "The Rise and Decline of Science in Civilization: The Islamic Case in Comparative Perspective," Paper Presentation, American Historical Association, annual convention, Washington, DC, December 29, 1976, Coll. 1541, Box 5, Folder 14, Dead Manuscripts, n.d., The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.

³⁶⁵ Lynn Townsend White, jr., *Religion and Culture in Our Time*, Unpublished Book Manuscript, n.d., Coll. 1541, Box 8, Folder 11, "Religion and Culture in Our Time," Drafts of Chapters, n.d., The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.

contained chapters such as “The Intellectual Worship of God,” later published separately in journals or given as speeches under similar titles (e.g. “Presbyterians and the Intellectual Worship of God”). In the preface of that draft, dated October 12, 1956, White described the book in Christian terms:

Since the essence of the Christian thought-process is to envisage the identity of timeless things with passing events, it is natural that most Christian writings are, in the proper sense of the term, occasional: they are hammered out, often in the heat of controversy, to serve an immediate purpose, a given audience and moment. A large part of the New Testament is fugitive in form; St. Augustine, Martin Luther and John Wesley were normally letter-writers and pamphleteers, constantly concerned with some specific situation as well as with ultimate matters.

Without aspiring to such good company, I am encouraged by this precedent to hope that others may find stimulus for their own thinking in the gathering of these reflections on religion and culture in our time. [...] I trust that even when these meditations arouse disagreement, the reader and the author may embrace spirituality in the intellectual worship of God.³⁶⁶

Steering away from this faith-centered language when the book finally went to press in 1968 as *Machina ex Deo*, White instead framed the essays in terms of the reaction to “Historical Roots.” White wrote, “[t]he collecting and revising of these essays was occasioned by the very diverse reactions to [“Historical Roots”],³⁶⁷ which White included as a chapter in the book. “I realized,” White wrote in the preface, ‘that both the enthusiasm and the rage which [“Historical Roots”] evoked were caused by the fact that it was written in the context of a larger pattern of thinking which has not occurred to most people.’³⁶⁸ Speaking of “Historical Roots,” and the deeper historical and religious undercurrents that shaped it, White stated that this book was “an effort to analyze the

³⁶⁶ Ibid., preface.

³⁶⁷ White, *Machina ex Deo*, vii.

³⁶⁸ Ibid., vii–viii.

nature of those forces and the changes which they bring about.”³⁶⁹ *Machina ex Deo*, therefore, can and should be read as both an account of the emergence of “Historical Roots” from within a larger intellectual unfolding of ideas, and also as an extension of White’s historical thought as it pertains to the intersection of religion and ecology.

The chapters are diverse both in subject matter and in chronology. The chapters, it should be noted, like many of White’s books are reprints of previous publications from the 1940s, 1950s, and 1960s. Much of the book is dedicated to the historical study of engineering and science, which for the purposes of this dissertation, will be largely left unexamined. He brackets the book by beginning with “Then and Now,” a chapter which is White’s attempt to outline the role of a historian in understanding the religious undercurrents shaping modern society followed by an examination of the impact of Hellenic thought on modern society.³⁷⁰ White then concludes with a “coda pondering the fearful psychological perils inherent in rapid cultural change.”³⁷¹ Thus, when considered as an attempt to contextualize the broader pattern of thinking in which “Historical Roots” was enmeshed, the closing words of the final “coda” are fitting: “In our time we are subject not only to individual but also to group anxiety, and this seems to be related to a velocity of change which is hard to assimilate emotionally [...] Only by understanding ourselves can we tame the wolf in our hearts.”³⁷² Although writing specifically of witch-hunting in Navajo culture, a topic far removed from the ecological and religious problems addressed by “Historical Roots,” it reveals an important aspect of White’s thought in this

³⁶⁹ Ibid., viii.

³⁷⁰ This chapter is a version of “The Changing Past,” which, as noted earlier, White also published in *Harper’s* magazine and the *Frontiers of Knowledge* book.

³⁷¹ White, *Machina ex Deo*, viii.

³⁷² Ibid., 179.

volume that can be interpreted as a commentary on the relationship between society, technology, and religion. In times of change, such as in the present state of ecological upheaval, the deeper psychological and historical roots must be tended to. Changing the present and future, begins with self-reflection.

In the third chapter, “Christian Myth and Christian History,” White expressed his fundamental belief in Christianity as the central shaping force of Western ideas, culture, and history. It is more than a historical study. The chapter is formulated in such a way that it can be read as an expression of his own Christian faith. “Christian myth,” he wrote, “remains the most compelling expression of man’s timeless spiritual experience evolved by any religion.”³⁷³ And in closing, he underscores the immediacy of Christ in contemporary life. “[W]e still stand facing a cross,” he wrote, speaking both of Christianity as a shaping force in history and as a personal challenge of faith. “Yet in each generation this man who was crucified reaches through the enveloping web and touches us with bleeding hands; and we may touch his side.”³⁷⁴

The fourth chapter, a chapter which becomes the namesake of later reprints of the book, “Dynamo and Virgin Reconsidered,” takes the relationship between Christianity and contemporary culture head on. Of it, Machen writes:

This essay, written for a general audience, is simply a distillation, sometimes almost verbatim, of ideas he had been presenting since 1940 to show that technology had its roots not merely in economic developments but in religion. It also included his more recent argument that the Age of Faith saw nature as a source of power to be exploited for human needs.³⁷⁵

³⁷³ Ibid., 54.

³⁷⁴ Ibid., 55.

³⁷⁵ Machen, *Cultural Values*, 51.

Labor saving technology, White believed, was “the chief glory of the Middle Ages” and in creating this “humanitarian technology,” humanity penned another “chapter in the conquest of freedom.” These advances in technology were “nourished in the tradition of Western theology” and White considered them to be “harmonious with the religious assumption of the infinite worth of even the most seemingly degraded human personality.”³⁷⁶ This chapter, considered in the larger flow of ideas found in the book, is a prelude to the next chapter, “Historical Roots.”

The second of White’s post-“Historical Roots” books is a 1978 collection of his most well-known and lauded historical articles, gathered together under the title *Medieval Religion and Technology*. White outlined the book’s premise in the preface:

The purpose of this collection of articles is not only to indicate the velocity and variety of inventiveness visible in medieval engineering, but also to explore the relation of technology to the values of western medieval culture. Values, and the motivations springing from them—even those underlying many activities that to us today seem purely secular—were often expressed during the Middle Ages in religious terms and shaped in some measure by religious presuppositions. Engineering was so creative in Europe partly because it came to be more closely integrated with the ideology and ethical patterns of Latin Christianity than was the case with the technology and the dominant faith of any other major culture. Hence this book’s title.³⁷⁷

Thus this book is yet another wave in a broader pattern of thought that flows into, around, and out of the stream of thought from which “Historical Roots” emerged.

It should also be noted that concerns for individual and societal well-being continued to preoccupy his thought after the publication of “Historical Roots.” From democracy, to ecology, to violence, and to a number of other subjects which interested

³⁷⁶ Lynn Townsend White, jr., “Dynamo and Virgin Reconsidered,” in *Dynamo and Virgin Reconsidered: Essays in the Dynamism of Western Culture* (Cambridge, MA: The MIT Press, 1968): 70-73.

³⁷⁷ White, *Medieval Religion and Technology*, ix.

him from the earliest days of his career, he continued to puzzle over human relations.

The most notable difference in his post-“Historical Roots” publications was the emergence of a new guiding star in the constellations of his thought: ecology.

In an unpublished article titled “Cultural Analysis and Environmental Decision Making,” which was rejected by the American Academy of Arts and Sciences in 1976, White claimed that “the basic question of human relationships is no longer poverty; it is pollution.”³⁷⁸ Humanity was flourishing, he observed, but it was hard pressed to deal with the ecological backlash of its materialism. “We enjoy the goodies,” he wrote, “but find ourselves smothering under a mountain of candy wrappings.”³⁷⁹

Similarly, White’s interest in human welfare and ecology can be seen in other aspects of his thought, for example in his scholarship on engineering, which has received little attention in this dissertation. In “Engineering and the Making of a New Humanism,” published in the *Journal of Engineering Education* in 1967, White stated that “the expert engineer must also be a humanist.”³⁸⁰ His concern was that in learning to control nature, engineers had neglected ethics—both the aspects of engineering that “may threaten other human values” but also that might undermine “nonhuman values” as well.³⁸¹ Engineers, he believed, could be integral in the protection of ecological and egalitarian values. They

³⁷⁸ Lynn Townsend White, jr., “Cultural Analysis and Environmental Decision Making,” n.d., Unpublished Paper, Coll. 1541, Box 5, Folder 14, Dead Manuscripts, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 1.

³⁷⁹ Ibid.

³⁸⁰ Lynn Townsend White, jr., “Engineers and the Making of a New Humanism,” *Journal of Engineering Education* 57, no. 5 (January 1967): 375.

³⁸¹ Ibid.

could, in other words, “join with alert humanists to shape a new humanism which will speak for and to a global democratic culture.”³⁸²

Conclusion

If the attestations of his peers or the words of his scholarship tell us anything, White was a deeply compassionate and moral person. He abhorred violence and aggression, topics with which he struggled often in his writings. His concern for individuals and his compassion for others—not just human others—led him to promote women’s education, democracy, and environmental thought. Even in his personal life, he took fifteen years out of his promising career as a historian to be the president of Mills College when he thought that education was threatened by the Second World War.

White was an activist in a sense. He believed that the study of history could help humanity to shape a more peaceful, egalitarian future. Like the mythical Janus, White bore two countenances in his scholarship: one that gazed thoughtfully over the past, and one that looked ahead with hope towards the future. He was both a historian and a humanist; these dual features cannot be separated:

The research of historians, however, is far more than a passive reflection of the change of values which is at the heart of the turmoil of our time. What they are discovering and how they are discovering it is a major part of our present intellectual adventure, and affects all other parts of it. Like every humanistic scholar, the historian is trying to show people the meaning of what they are up to. By making men aware, conscious of the implications of their actions, history is to some extent modifying and molding the historical processes which it studies: the historian is actor as well as spectator.³⁸³

³⁸² Ibid.

³⁸³ White, “The Changing Past, 1954, 34.

Yet in attempting to forge a better future, White discovered, historians were challenged to offer tangible solutions.

“History can offer no solutions,” he proffered in his presidential address at the annual meeting of the American Historical Association in 1973, “but it may help to guide an acute mind toward kinds of questions that in the present state of systems analysis tend to be overlooked.”³⁸⁴ Questions inherent in the study of technology, such as how to address issues rooted in religious impulses and related to “our national crises of energy, exhaustion of natural resources, and pollution of air, water, and soil interlock with global crises of armaments, population, and food. The real question is: Do we know how to assess a proposed technological change, whether it be a new invention or a new canal across Central America?”³⁸⁵ Offering tangible, workable solutions, White discovered, lay in first posing difficult questions and in uncovering new modes of understanding ourselves. The past is not stagnant, he maintained, it is something that historians are constantly reinventing. “The way the past is changing,” he wrote, “may foreshadow a better future.”³⁸⁶ By better understanding the past, in essence by changing it by changing scholars understanding of it, White thought that historians could help to envision new, more peaceful and egalitarian vistas for humanity’s future.

What one might call White’s “ecological consciousness” is far from static. Its roots are deeply embedded in a rich and complex intellectual development. But some constants remain. White never wavered in his belief that technological progress and

³⁸⁴ Lynn Townsend White, jr., “Technology Assessment from the Stance of a Medieval Historian,” *The American Historical Review* 79, no. 1 (February 1974): 3.

³⁸⁵ *Ibid.*, 2.

³⁸⁶ White, “The Changing Past,” 1954, 34.

religious values and worldviews were intimately linked. “The study of the Middle Ages is essentially the discovery of the long, slow build-up of technical competence, of economic power, and of spiritual arrogance,” he wrote in 1972. This build-up, he believed, “enabled our European ancestors to spill out over the world, exploring, trading, conquering, and looting.”³⁸⁷ And while he had neither the ecological language, nor the proper audience to express this build-up in environmental terms until the late 1960s, the nascent presence of this ecological consciousness can be detected even in his earliest work.

But to boil down White’s thought to its ecological essence is also to obfuscate a grander, more comprehensive portrait of his intellectual life. As noted in the program book to White’s induction as University Professor at UCLA in 1973:

The most significant common denominators of Professor White’s many contributions to Western medieval history are perhaps two: a deeply American approach and a widely ecumenical outlook. On the one hand, he has laid bare many of the medieval roots of such eminently American phenomena as high technological achievement and the gradual expansion of the democratic forms of life—phenomena recognized as interrelated by Professor White, at least insofar as technology can relieve man from drudgery and thus contribute to his freedom. On the other hand, his awareness of the dangerous uses of modern technology and of the still ominous insufficiencies of the democratic processes has been a factor in making him an ardent propagator of the necessity to look beyond our own culture, to rediscover links with other civilizations (especially those of the East) and also to learn from differences that exist between our ways of life and those of men of other times and spaces. One of these differences concerns religious attitudes, and here Professor White has shown that not a few of the troubles of Western civilization have their origins in certain interpretations of the Judeo-Christian religious tradition and that these troubles will therefore be overcome only through a change in the religious dynamism which produced them.³⁸⁸

³⁸⁷ Lynn Townsend White, jr., “The Medieval Meeting of East and West,” *Journal of the Blaisdell Institute* 7, no. 2 (1972): 24-25).

³⁸⁸ “University Professor of History,” program book.

White's outlook, in other words, was far more comprehensive in its humanitarian and intellectual goals.

Some measure of this comprehensiveness and these broader goals can be seen in White's final pieces of scholarship. Non-western religions, and their relationship to technology, were of particular interest to White in the 1980s. It was at this time that White returned, full circle, to his early interest in China. Reviewing Joseph Needham's *Science and Civilisation [sic] in China*, White contemplated the relationship between science and technology in China with Buddhism, Taoism, and Confucianism.³⁸⁹ In his studies, White sought out connections between the rise of technology in the West and in the East. "[M]y ambition in my next seventy-six years," he joked in 1983 as he discussed his research plans during his retirement, "is to do a book on India and medieval Europe, since there isn't even a bad book on this theme."³⁹⁰ Left unfinished upon his death in 1987, this book was one part of White's broad interest in religion in other parts of the world, most notably the religions of India, but also the relationship between Islam and science, Tibet and the mechanization of prayer, and more.³⁹¹ White understood the present as of unprecedented unity and globalization brought about by science and technology, or as Hall described it, as a "belief that the West and East are currently synthesizing a global culture that will not entirely resemble either of its parents."³⁹² By understanding the past, White hoped to make some sense of that particular present.

³⁸⁹ White, Oral History Transcript, 256.

³⁹⁰ Ibid., 247.

³⁹¹ Ibid., 256.

³⁹² Hall, "Éloge," 480.

White retired from UCLA in 1974. He remained active as a historian and he continued to publish, lecture, and contribute to public discourse until the mid-1980s. Just one month prior to his 80th birthday, on March 30th, 1987, Lynn Townsend White, jr. suffered a heart attack in his Brentwood home. An hour later he was pronounced dead at the UCLA Medical Center.³⁹³ His memorial was held at the Westwood Presbyterian Church, where he had been a long-time member.³⁹⁴

This survey of the development of White's thought leading into "Historical Roots" establishes a general overview that supports the chapters that follow. In the next chapter, chapter 3, I look more closely at White's publications on religion and ecology in order to outline what he called his own "personal theology of ecology." Then, in chapter 4, I examine White's understanding of how changes in religious ideas lead to changes in environmental attitudes and behaviors.

³⁹³ Ibid., 478.

³⁹⁴ White was survived by his wife, Maude, and their four children.

Ch. 3—White and Ecotheology

As the inadvertent founder, it would seem, of the Theology of Ecology, I confess amusement at the speed with which the Churches have abandoned the old scion of Man's Dominion over Nature for the equally Biblical position of Man's Trusteeship [i.e. Stewardship] of Nature. Since the Churches remain, despite some competition, the chief forges for hammering out values, this is important. I feel that before too long, however, they will find themselves going on to the third legitimately Biblical position, that Man is part of a democracy of all God's creatures, organic and inorganic, each praising his Maker according to the law of its being.

—White, "A Remark from Lynn Townsend White, Jr."

This quote reveals a Lynn Townsend White, jr. that few know. Whether familiar with White's article or not, many have absorbed his now highly debated and frequently misunderstood argument that "Christianity bears a huge burden of guilt" for the ecological crisis.³⁹⁵ In response to this reductionist view of White as merely a critic of Christianity, I wish to propose a different approach for understanding his work. As others, such as the theological ethicist Willis Jenkins and the historian Elspeth Whitney have already noted, the scholarship that has emerged from the controversy surrounding White's work has fixated on his environmental critiques of Christianity and the dominion-stewardship debate. I share Jenkins's and Whitney's concern that these tightly bounded interpretations of White have obfuscated the nuance and depth of his thought and, by extension, limited the development of alternative ways of understanding the relationship between religion and ecology.³⁹⁶

³⁹⁵ White, "Historical Roots," 1206.

³⁹⁶ For two excellent attempts to recover White's legacy and to reform scholarly responses to him, see Jenkins, "After Lynn White;" and Whitney, "Lynn White."

In the preceding chapter, I explored White's work as a historian in order to demonstrate that there is a deeper historical methodology and development of ideas informing White's scholarship in "Historical Roots." In this chapter, I suggest that a fairer assessment and a more accurate understanding of White is possible only when "Historical Roots" is read in the context of White's larger body of work where he explores the relationship between religion and the environment. What I hope to demonstrate by this brief glimpse into his texts is that White's intellectual engagement with theology was complex and frequent. Furthermore, it offers an intriguing invitation to read his work on ecology as part of a larger theologically oriented project.

In order to accomplish this task I include evidence from a wide sampling of his early publications and his numerous historical texts on technology, but I focus particularly on his publications on religion and ecology. What emerges when his texts are read together, rather than focusing on "Historical Roots" as a stand-alone piece, is not the work of an iconoclast, but the attempts of a scholar working across disciplines to apply his ideas constructively to an issue that he cares deeply about: the worsening ecological crisis and the potential of his own faith, Christianity, to help solve the dilemma. At the core of White's thought is an impassioned, albeit largely overlooked, environmental and theological interest in human relationships with nature.³⁹⁷ So radical and all-embracing

³⁹⁷ Although I use the term "nature" here, White often used the term "creatures" to refer to non-human nature. White employed the term "creatures" in an inclusive way, it should be noted, to indicate not just living animals, but also nonliving entities such as rocks, mountains, and natural processes. See, for example, Lynn Townsend White, jr., "Christians and Nature," *Pacific Theological Review* 7 (Summer 1975): 7; Lynn Townsend White, jr., "A Remark from Lynn White, Jr.," *CoEvolution Quarterly* 16 (Winter 1977/78): 108; Lynn Townsend White, jr., "The Future of Compassion," *Ecumenical Review* 30 (1978):

was White's theological ethic, that Nash described it as "one of the most radically inclusive ethical systems yet evolved. His sense of community literally knew no bounds."³⁹⁸

My goal, then, is twofold: First, throughout this chapter I draw attention to White's theological training and religious life in order to demonstrate that his historical research grew alongside, and out of, his identity as a practicing Christian. Second, and more important, I show that reading beyond "Historical Roots" to understand the content and depth of his larger body of work reveals White's central and radical theological postulate that all of nature—whether animal, human, or something altogether different—is part of a "spiritual democracy of all God's creatures."³⁹⁹ White is best understood, I argue, not just as a critic of Christianity but also as a prophetic, constructive Christian voice.⁴⁰⁰

A Naturally Theological Mind—The Meeting of Faith and Historical Scholarship

Distinctly layered amongst the strata of White's historical publications runs a continuous and forward-looking interest in religion and religious values. From his 1938 dissertation on medieval Sicilian monasteries to his final published works in the mid-

105; and Lynn Townsend White, jr., "Commentary on St. Francis of Assisi," *Bohemian Club Library Notes* (July 29, 1982): 19.

³⁹⁸ Nash, "Greening of Religion," 200. Others have also noted White's ecologically egalitarian theology. See, for example, Haberman *People Trees*, 210 endnote 8; Hall and Macleod, "Technology, Ecology and Religions," 161; Livingstone, "Historical Roots," 55; Sessions, *Deep Ecology*, x and 101; Shinn, "Science," 141; and Stewart, *Nature in Grace*, 21.

³⁹⁹ Lynn Townsend White, jr., "Snake Nests and Icons: Some Observations on Theology and Ecology," *Anticipation: Christian Social Thought in Future Perspective* 10 (February, 1972): 37.

⁴⁰⁰ As ecotheologian James A. Nash points out, "Unlike many of his imitators, however, White was 'a churchman' who called for a reformed Christianity." James A. Nash, "Christianity (1)—Introduction," *The Encyclopedia of Religion and Nature*, vol. 1, ed. Bron Taylor and Jeffry Kaplan (New York: Continuum, 2008), 316.

1980s, White strove to understand the role of religion in shaping history.⁴⁰¹ Most, but not all, of these historical studies were attempts to make sense of the role that religious ideas and values played in shaping the use and development of technology. Technology, in his estimation, was a morally ambiguous phenomenon. In a wide range of texts, such as his 1961 “What Accelerated Technological Progress in the Western Middle Ages?,”⁴⁰² White praised the relationship between humanistic religious values and technological progress.

The moral endorsement of technology by Christianity, he argued, was historically a liberating force in society that freed humans from mindless toil and drudgery. The shift in religious values away from a lingering animism in the European religious landscape and toward a human-centered set of medieval Christian values allowed humans to replace human labor with animal and machine power. He spoke of teams of oxen, when yoked to new plow technology, for instance, as “a new power-engine” that freed people from meaningless labor.⁴⁰³ Yet later that same decade White would begin focusing on the hidden ecological costs of this historical change in values. This shifting of the religious moral landscape and its impact on technological development was, for White, a conundrum that he continued to struggle with through his career as a historian as well as in his later writing on ecology.⁴⁰⁴ These sediments and complexities in his thought, however, remain largely unearthed by White’s ecotheological legatees.

⁴⁰¹ For the most extensive bibliography of White’s work currently available, see Bert S. Hall, “Lynn Townsend White, Jr. (1907–1987),” *Technology and Culture* 30, no. 1 (January 1989): 194–213.

⁴⁰² White, “What Accelerated Technological Progress.”

⁴⁰³ Ibid., 283. See also, White, “Technology and Invention,” 156.

⁴⁰⁴ See, for instance, the articles gathered in White, *Machina Ex Deo*.

Furthermore, it is essential to note that even when he was writing as a historian, White's interest in religion was more than academic. Throughout his life, White was an active and vocal Christian. In "Historical Roots," White refers to himself as a "Churchman,"⁴⁰⁵ a claim which is evidenced in his correspondence,⁴⁰⁶ in his publications and speeches,⁴⁰⁷ and in his self-identification as a life-long Presbyterian.⁴⁰⁸

He was also regularly involved in church and seminary affairs in a number of capacities.⁴⁰⁹ For instance, he served on the Board of Directors for the Church Society for College Work in the Diocese of California,⁴¹⁰ he spoke on ministry at the Westminster

⁴⁰⁵ White, "Historical Roots," 1206.

⁴⁰⁶ In his correspondence to his parents throughout the first half of the twentieth century, White records his frequent visits to churches (Episcopal, Unitarian, and others) and his thoughts on the sermons delivered. See, for example, Lynn Townsend White, jr. to Mother, 19 May 1930, Box 1, Personal Correspondence, Files 1-71, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College; Lynn Townsend White, jr. to Mother, 22 May 1940, Box 3, Articles and Speeches, Files 1-43, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College; Lynn Townsend White, jr. to Mother, n.d.—Sunday evening, Box 1, Personal Correspondence, Files 1-71, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College; and Lynn Townsend White, jr. to Mother, 4 May (no year), Box 1, Personal Correspondence, Files 1-71, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College.

⁴⁰⁷ White, "Jewish Option," 4.

⁴⁰⁸ White regularly identified himself as a Presbyterian in his publications, speeches, and personal and professional correspondence. See, for instance, Lynn Townsend White, jr., "Presbyterians and the Intellectual Worship of God," *Presbyterian Outlook* 138, no. 25 (1956): 5; White, "Medieval Meeting," 21; White, "Jewish Option," 5-8; Lynn Townsend White, jr. to The Reverend Kenneth L. Hubler, 29 June 1972, Coll. 1541, Box 9, Folder 3, Research Letters, 1971-1985, The Lynn Townsend White Papers, 1937-1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles; White, "Christians and Nature, 6; and Lynn Townsend White, jr., "The Westminster Foundation and Your Parish," Speech, n.d., 10 index cards, Coll. 1541, Box 16, Bibliographies, n.d., General, The Lynn Townsend White Papers, 1937-1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 8.

⁴⁰⁹ White, III states that White, jr. "grew up going to church every Sunday and hearing his father's sermons" and he also notes that he was a member, albeit a relatively inactive member, of the Westwood Presbyterian Church in Los Angeles. White, III, interview by author, April 17, 2014.

⁴¹⁰ White was on the Board of Directors for the Church Society for College Work in the Diocese of California. The goal of the Society is to hold discussions on religion, conduct chapel services, promote Christianity, and to teach the Christian faith. It is non-sectarian but stems from the Episcopal Church. He was also given a "Certificate of Appreciation" by the United Ministries in Higher Education In Southern California. It was presented to him "for leadership and service, for tangible and significant contributions to the Campus Ministry during its first fifty years in Southern California." United Ministries in Higher Education In Southern California, "Certificate of Appreciation," 20 November 1977, Coll. 1541, Box 9,

Foundation,⁴¹¹ he supported his father in his advocacy for “Church union” across denominations,⁴¹² he gave a commencement address and served as a Trustee at the San Francisco Theological Seminary,⁴¹³ he called for the “increased support [of] theological seminaries,”⁴¹⁴ and he even gave a sermon at the Westwood Church near UCLA’s campus.⁴¹⁵

From a personal perspective, White seemed to have been deeply emotionally invested in the Christian faith. In a letter written in 1972, he emphasized that “[w]hen, in the Apostles Creed, I say that I believe ‘in the Holy Catholic Church, the communion of saints,’ I *mean* it.”⁴¹⁶ When asked “what the effects of religion have been on the actions of [White] as a scholar and a human being” in a 1983 interview by Rick Harmon, White stated that he “[could not] take communion without tears” and that he had considered going into the clergy, but that he felt that he would be ill-prepared to offer comfort to those in need of comfort.⁴¹⁷

Folder 2, Research Letters, 1959–1970, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.

⁴¹¹ White, “Westminster Foundation”.

⁴¹² Discussing “Church union” in his correspondence with his father, White often expressed his love for liturgy and theology. For instance, he wrote, “the preamble of the act of union says that Christianity is ‘a way of life,’ in other words that it is essentially an ethical attitude. I would agree; but that attitude is not simply an abstract idea [...] it is the vital impulse of the institution of the Church which has developed in time and space an amazingly rich and valuable tradition much of which has precious little to do with the ethical religion of Jesus. Jesus didn’t go in for either theology or liturgy very much, but I should hate to lose either of those; for they are legitimate religious manifestations.” Lynn Townsend White, jr. to Father, 28 July 1931, Box 1, Personal Correspondence, Files 1–71, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College.

⁴¹³ White, “Christians and Nature,” 6.

⁴¹⁴ White, “Presbyterians,” 6.

⁴¹⁵ White gave a sermon on the role and education of Presbyterian clergy at the Westwood Church in 1960. Lynn Townsend White, jr., “The Clergy,” Sermon, Layman’s Sunday, October 1960, 16 index cards, Coll. 1541, Box 16, Bibliographies, n.d., General, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.

⁴¹⁶ White to Hubler.

⁴¹⁷ White, *Oral History Transcript*, 251.

More to the point, White was explicit about the role his faith played in his work as a scholar. In an article written in 1961, “The Social Responsibility of Scholarship,”⁴¹⁸ to name one of the many instances where White couched his work in Christian terms, he described the work of a historian as an ongoing act of social responsibility that was rooted in religious purpose. “The professional historian,” maintained White, “believes that his particular discipline has a peculiarly important spiritual function.”⁴¹⁹ Scholarship was, in his words, “a profound emotional commitment, a ‘calling,’ a vocation in the religious sense.”⁴²⁰ So pervasive was White’s own Christianity within his work that he was prone to describing his scholarly papers as his “sermons.”⁴²¹

That White’s Christian beliefs were a defining personal characteristic that shaped his entire body of work was well known to his fellow historians.⁴²² According to Hall, White’s “deep [religious] convictions informed his writings in many ways.”⁴²³

⁴¹⁸ Lynn Townsend White, jr., “*The Social Responsibility of Scholarship: History: Is Clio a Tutelary Muse?*” *Journal of Higher Education* 32, no. 7 (1961): 357–61.

⁴¹⁹ Ibid., 359.

⁴²⁰ Ibid.

⁴²¹ Lynn Townsend White, jr., “*Medieval Technology: Transfers and Spinoffs*,” Lecture, *The First Annual Rolf Buchdahl Lecture on Science, Technology and Values* (Raleigh, NC: Division of University Studies, North Carolina State University, November 3, 1981), 5. White was dedicated to the hypothesis that theological ideas and religious values lay at the root of Western thought. “Theological controversy,” he proclaimed, “is the basic form of all disagreements.” Lynn Townsend White jr., “A Renegade Calvinist Looks at Methodist Theology and Education,” Speech, MacMurray College, n.d., Box 2, Speeches and Articles, File 57, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College.

⁴²² This aspect of his life was also known to many of his colleagues: “Throughout his life,” writes Hall, “White was a believing Christian, and in his early publications he argued for the importance of medieval Christianity in our cultural makeup. He came to see technology as an expression in specific terms of an action-oriented style of Christianity distinctive of Western Europe. Hall, “Éloge,” 480. Scholar of religion George Thomas also introduces White and the other authors in *The Vitality of the Christian Tradition* as not just experts in their field of study, but as advocates for Christianity and as members of the National Council on Religion in Higher Education. George F. Thomas, ed., *The Vitality of the Christian Tradition* (New York: Harper and Brothers. 1944), ix.

⁴²³ Hall, “Lynn Townsend White, Jr.,” 195. Hall also states that White was “a believing Christian” his entire life. Hall, “Éloge,” 480. In addition, Hall describes the role of White’s faith in his work as follows:

Continuing, Hall states, “White regarded himself as both a defender of an old faith and as a pioneer. His old faith was a twofold belief in Christianity and humane letters; his role as a pioneer was to place technology into intimate connection with both.”⁴²⁴ This sense of religious purpose, along with White’s willingness to formulate his academic arguments from a religious standpoint, remains clear throughout a significant portion of his published work. It also serves to undergird the prophetic Christian voice employed in his later works on religion and ecology.

White’s religious commitments also provided the moral basis for his lifelong dedication to a broad range of social justice issues, about which he tirelessly wrote. Although evident throughout his expansive body of work, a few of his earliest publications from the 1940s and 1950s provide striking examples of the evolution of his thought. Shortly into his promising career as a young historian, the social upheaval brought on by World War II challenged some of the values that White held dear. During this time, he published several speeches and articles denouncing racism and extolling the virtues of democracy.⁴²⁵ Additionally, he advocated for women’s rights to better secondary education in texts such as his book *Educating Our Daughters: A Challenge to the Colleges*.⁴²⁶

“He was the son of a Presbyterian professor of Christian ethics, and, although he wore his religious convictions with grace and charm, White remained an active Presbyterian layman his entire life. His deep convictions informed his writings in many ways.” Hall, “Lynn Townsend White,” 195.

⁴²⁴ Hall, “Lynn Townsend White,” 198.

⁴²⁵ See, for example, White, “*Democratic Leadership*,” 655–59; White, “*The American Subversion*,” 755–57; and Lynn Townsend White, jr., “*A Climate of Courage: Loneliness, the Great Disease of the Twentieth Century*,” *Vital Speeches of the Day* 21 (March 1, 1955): 1075–77.

⁴²⁶ White, *Educating Our Daughters*. White wrote a number of other short texts on women’s education. For a more complete list, consult Hall, “Lynn Townsend White, Jr.”

Undergirding these seemingly disparate subjects is White's belief in the inherent worth of each individual, an aversion to aggression, and an affinity for egalitarianism. His dedication to these democratic ideals and his concern for individual well-being flowed from his Christian faith and shaped his scholarship for the duration of his career. His belief in the inherent worth and autonomy of the individual human, as well as his commitment to democracy, eventually evolved and expanded to include nonhumans, as evidenced in his later writing on ecology and religion in the last twenty years of his life. This concern for social justice issues stemmed from White's vantage point as a Christian. He felt that racism and aggression, for instance, grew out of a deep spiritual void and a sense of profound loneliness. Christianity, he believed, offered the spiritual, emotional, and moral solutions to these larger issues.⁴²⁷

Thus the tendency within ecotheological circles to downplay White's religious convictions runs counter to White's view of his work as religiously inspired. "Sometimes I claim to be the founder of the theology of ecology, but no one takes me seriously," he stated with his customary balance of acumen and self-deprecating wit in an audio interview.⁴²⁸ Indeed, although most scholars do not go so far as to label him as anti-Christian, few recognize that he was arguing from a religiously informed standpoint. It is not uncommon, for instance, for scholars to categorize White as a "secular" scholar.⁴²⁹

⁴²⁷ See, for example, White, *Educating Our Daughters*, 125.

⁴²⁸ White, et al., "*Ecology and Religion*."

⁴²⁹ See, for instance, Laura Hobgood-Oster, *The Friends We Keep: Unleashing Christianity's Compassion for Animals* (Waco, TX: Baylor University Press, 2010), 107; and Conradie, "Ecological Hermeneutics," 295. This more recent trend stands in contrast to the practice of clearly identifying White as a Christian which was common in many early reactions to "Historical Roots" or in books containing reprints. For instance, in *Ecology and Religion in History*, one of the earliest books to explore the relationship between religion and the environment in depth, David and Eileen Spring write that "White is a Christian thinker." Spring and Spring, *Ecology and Religion*, 4.

This type of erasure via omission, I argue, is counterproductive to fairly assessing the nuances and deeply theological themes in White's thought.

White's Theological Training

For scholars interested in White's understanding of the relationship between religion, science, and technology, and particularly those in the field of religion and ecology, it is important to recognize White's theological grounding and formal training. White was no mere dilettante when it came to theology. As Hall notes, White "possessed a nearly professional knowledge of theology,"⁴³⁰ a claim to expertise which is substantiated by White's theological background.

Although it would be a stretch to label White a theologian, a title that he avoided, he does attempt to be more than a historian of medieval technology. Looking back on his writings in an autobiographical piece titled "History and Horseshoe Nails" published in 1970, White reflected on his tendencies to think theologically in his work as a historian. In addition to being raised as "the son of a liberal Calvinist professor of Christian ethics," White also explained that he was a graduate of Union Theological Seminary, where he studied theology "at the feet of the most passionate neo-Augustinian of our times, Reinhold Niebuhr."⁴³¹ Taken together, claimed White, these experiences led him to favor theological explanations of historical change. "I have," he wrote, "a *mens naturaliter theologica*."⁴³²

⁴³⁰ Hall, "Lynn White's *Medieval Technology*," 88.

⁴³¹ White, "History and Horseshoe Nails," 60.

⁴³² Ibid. I translate White's statement as follows: "I have a naturally theological mind." Despite White's assertions that he was not a theologian, he was aware of his own propensity for theological thinking. "I am

From a very early age, White showed a strong interest in theological matters. With a seemingly insatiable passion, he earnestly discussed Christian ethics and theology with those near to him, particularly his father, Lynn Townsend White, Sr. A Presbyterian minister and the first professor of Christian Social Ethics at the San Francisco Theological Seminary (1920-1948),⁴³³ his father not only influenced White's socially liberal faith, but he also inspired White to attend seminary in 1928.

Following a deeply held sense, inherited from and imparted by his father, that religious ideas and values had a profound shaping force on history and social change, White was struck by the dearth of theological knowledge in the historical scholarship of his day. To remedy this, he sought out ways to improve his own knowledge of theology so that it might better inform his own studies as a scholar of medieval history. "I wanted to get a thorough knowledge of Christian systematic theology," White reflected during a biographical interview in 1983. This theological background, he thought, would not only enrich him personally, but also would be a resource upon which he could draw during his graduate studies of medieval history. "So," he explained, "I decided to go to Union [Theological] Seminary."⁴³⁴

Niebuhr's thought—and this is a matter of great importance for understanding and reassessing White's ideas—would have a profound affect on his theological, political,

not a theologian," White admitted, "although I do have *the knack*." Lynn Townsend White, jr., "Christian Materialism," speech, n.d., 21 index cards, Coll. 1541, Box 16, Bibliographies, n.d., General, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 12.

⁴³³ White, Sr. also became pastor of the First Presbyterian Church in San Rafael, California in 1908, served as minister of the Community Church in Mill Valley, and he was a YMCA secretary in France during World War I. For his service in World War I, France awarded him the Croix de Guerre. "Dr. Lynn T. White," *San Anselmo Bulletin* (San Anselmo, CA), Thursday, July 8, 1948.

⁴³⁴ White, *Oral History Transcript*, 24.

and, ultimately, his ecological outlook: “[M]y debt to Niebuhr is very great,” White stated, “because theology became real [for me] as a human activity.”⁴³⁵ By this, White meant that his studies with Niebuhr instilled in him a sense that theology was not an abstract, intellectual exercise. Rather, theology became an embodied, efficacious mode of being that stretched beyond the personal into the social and political. Theology, in this sense, was a shaping force in history that merited serious study and that also demanded thoughtful action.

And, although Niebuhr remained at the forefront of his thought, it should be noted that White drew inspiration from the work of a number of other theologians such as Karl Barth, Rudolf Bultmann, Emil Brunner, and Søren Kierkegaard to name but a few.⁴³⁶ He was particularly inspired by the work of Paul Tillich, whom he considered “one of the greatest contemporary theologians.”⁴³⁷

Christian Realism—The Impact of Niebuhr’s Thought

From this theological grounding, White entered into the public sphere in the early 1940s with a keen interest in promoting both the inward and the outward work of

⁴³⁵ Ibid., 29. White also referred to Niebuhr as “the most seminal religious thinker of contemporary America.” Lynn Townsend White, jr., “Christian Myth and Christian History,” *Journal of the History of Ideas* 3, no. 2 (April 1942): 157.

⁴³⁶ See, for example, White, *Oral History Transcript*, 28; Lynn Townsend White, jr., “Christian Conversations, IV,” n.d., Speech, 4 index cards, Coll. 1541, Box 16, Bibliographies, n.d., General, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 4; Lynn Townsend White, jr., “Christian Materialism,” unknown format, Coll. 1541, Box 16, Bibliographies, n.d., General, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 11; and Lynn Townsend White, jr., “The Universities and the Problem of Religious Illiteracy,” n.d., unknown format, 17 index cards, Coll. 1541, Box 16, Bibliographies, n.d., General, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 11–12.

⁴³⁷ Lynn Townsend White, jr., “More Incense for Caesar,” *Christian Century* (April 6, 1955): 421.

theology and democracy. But, despite being optimistic regarding the contribution that science, technology, and Christian theology could make to the building of a better world, Niebuhr's *Christian Realism* tempered his bright-eyed optimism.⁴³⁸ Understood theologically, Christian Realism reflects Niebuhr and White's belief in the inherent sinfulness of humanity.⁴³⁹ Original sin, in other words, obstructs human attempts to attain moral perfection or to create just or ideal social systems.⁴⁴⁰ Echoing Niebuhr, White described this dilemma and the problem of sin in 1954: "[T]here is no way of extricating ourselves, by our own choice, from the web of sin in which we are involved."⁴⁴¹ "After all," he asserted, "the Church exists in a sinful world and is itself a communion less of saints than of sinners."⁴⁴² Human sin, White and Niebuhr believed, was unconquerable by human means. Only divine grace could truly lift humanity from its moral imperfection.

Although society might work to create just social systems, White and Niebuhr believed, new structures of social injustice and inequality inevitably arise. For instance, White felt that the Social Gospel Movement in the mid-twentieth century had failed to achieve its goals and he attributed this shortcoming to Original Sin. For each social justice issue addressed, a new injustice arose to take its place.⁴⁴³ White felt, in other

⁴³⁸ White, "Christian Materialism," 10.

⁴³⁹ See, Reinhold Niebuhr, *The Nature and Destiny of Man: A Christian Interpretation* (New York: Scribner's Sons, 1941).

⁴⁴⁰ In a letter to his father, White described one of Niebuhr's sermons that he had attended. In that description, White referred to humanity's inherent sinfulness, which he believed stemmed from original sin, as "plain human cussedness." Lynn Townsend White, jr. to Father, 25 March 1931, Box 1, Personal Correspondence, Files 1-71, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College.

⁴⁴¹ Lynn Townsend White, jr., "Can a Christian Be a Good Citizen?," *An Address Delivered at Presbyterian Synod of California at Mills College* (publisher and location not identified, July 27, 1954).

⁴⁴² Ibid.

⁴⁴³ Lynn Townsend White, jr., "The Christian Faith in an Age of Anxiety," Speech, 24 June 1954, Ministerial Conference, Berkeley Baptist Divinity School, 14 index cards, Coll. 1541, Box 17,

words, that the creation of just social systems did not necessarily equate to the creation of a just society. This is because humanity, at heart, is spiritually incapable of achieving moral and political perfection. There is no assurance, then, that it is possible to create a better society, or that if it is created that it will last.

This skepticism, to a certain extent, is something that White shared with his father. When asked about his father's attitudes towards the Labor Movement in San Francisco, a social justice movement in which his father was involved, White reported that his father "recognized that in all human affairs, there is an element of corruption."⁴⁴⁴ This belief in the inevitability of corruption was rooted in Original Sin, a belief that stemmed from his own and his father's Calvinistic leanings. "I mean," he continued, "this is the essence of Calvinism. We're not particularly optimists about human nature."⁴⁴⁵

This is not to say that White was inured to social injustice or that he advocated for a mute complacency in human affairs. To the contrary, White maintained that there are social systems which are "repugnant to the mind of Christ" and that although the social gospel had its failings, there were problems in the world that Christians and the church should speak out against.⁴⁴⁶ "On the other hand," White continued in his discussion of the Calvinistic pessimism he and his father shared, "we think there is a chance, and indeed, a good chance" that social reform is possible in situations such as the San Francisco Labor Movement.⁴⁴⁷

Bibliographies, n.d., General, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 3.

⁴⁴⁴ White, Oral History Transcript, 4.

⁴⁴⁵ Ibid., 4.

⁴⁴⁶ White, "Age of Anxiety," 2.

⁴⁴⁷ White, Oral History Transcript, 4.

Thus, as a self-proclaimed Calvinist,⁴⁴⁸ and as a Christian Realist in the Niebuhrian sense, White was sensitive to the tension that existed between humanity's *desire* to act morally and to create systems that were socially just, and humanity's *ability* to do so. This is indicative, in political and ecological terms, of White's tentative distrust in the human ability to create a society premised on anything resembling utopian ideals.⁴⁴⁹

He was committed, both to the notion that Christians could not create just societies and to the belief that despite this, Christians were morally obligated to struggle for justice. Yet, these commitments caused tension with which he struggled both in private and in public. "We have to come to realize," he argued in a 1954 speech at the Berkeley Baptist Divinity School, "that Christianity cannot be identified with any specific political or economic order."⁴⁵⁰

In a letter to his father, to give another example, he announced that did not believe that "the Church should espouse any particular scheme of social amelioration *in toto*." Continuing, he observed that it was Niebuhr's and Calvin's opinion, "that the Church should never commit itself to anything but an unrealizable perfection."⁴⁵¹ Simultaneously recalling Niebuhr and also injecting his own commentary, White qualified this by stating that:

⁴⁴⁸ White, "Renegade Calvinist," 1.

⁴⁴⁹ White, "Christian Materialism, 1–6. White's son recalls that White had an appreciation for "the church as a vessel for conveying gospel among generations" as well as "Calvinist doubts about all human institutions (including churches." Lynn Townsend White, III, email message to the author, February 26, 2014.

⁴⁵⁰ White, "Age of Anxiety," 5.

⁴⁵¹ Lynn Townsend White, jr. to Father, 3 April 1935, Box 1, Personal Correspondence, Files 1–71, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College.

“the Church is perfectly within its rights in passing moral judgment upon any social plan, judging it by the standard of the City of God. [...] In other words, the City of Man can never become the City of God, but it can ‘approach’ it, in the sense than [sic] one can ‘approach’ infinity by walking on a line extending to infinity. The tension between the two Cities, the actual and the ideal, is the secret of the Christian life and of its prophetic duty.”⁴⁵²

Thus, in White’s view, Christians were by necessity required to exist in a state of constant imbalance. On the one hand, they bore the burden of sin and an inability to create socially just systems. And, on the other hand, they were buoyed up by a desire and a duty to move inexorably towards that unachievable ideal.

For this reason, one might hypothesize that in his early years, White would have been skeptical, yet still supportive, of the idea that humanity could forge an ecologically flourishing society. The same ecological skepticism tempered with tentative hopefulness is found in White’s ecological writings. Although worried that humanity might lack the political will and moral fortitude to correct its downward spiral of ecological collapse, he also maintained hope that humanity might prevail.

These facets—that White was a practicing Christian, that he was a Calvinist who subscribed to Niebuhr’s Christian Realism, and that he had formal training in theology which he also applied to his professional and personal thought—all point towards a need to reinterpret White’s scholarship on religion and ecology. His “naturally theological mind,” as it were, shaped not just his writings as a historian but also his work on religion and the environment. White is no outsider to Christianity, nor can his scholarship be viewed as that of a secular

⁴⁵² Ibid.

historian. He was, more often than not, writing from a Christian standpoint, and he was interpreting Christian beliefs and texts to make theologically normative claims. Acknowledging this, in tandem with reading his work *in toto*, rather than piecemeal, should change the way White is understood by scholars.

White's "Theology of Ecology"—Saint Francis and the Spiritual Autonomy of Creatures

Employing his theological approach to interpreting history, and in timely concurrence with the budding environmental movement in the late 1960s, White applied his keen historian's eye to the ecological crisis. It is in these writings on religion and ecology, I suggest, that paying close attention to White's attitudes toward theology clearly reveals a different portrait of White than most are acquainted with. Perhaps the best way to attempt a recovery of White's prophetic theological voice is to seek out instances where White describes the development of his own theological understanding of the relationship between humans and their environment.

Six years after publishing his now infamous article, White penned a book chapter called "Continuing the Conversation" in which he expanded on his argument in "Historical Roots" and answered some of the complaints of his critics. In that text, White described the pivotal moment where he first began to perceive the connection between religious ideas and ecological attitudes.⁴⁵³ Here, to introduce and underscore the emergence of his own ecotheological thought, is the same anecdote, paraphrased, that White used to begin that article: "The roots of my personal theology of ecology," wrote

⁴⁵³ White also recounts this story during his talk with Watts. See, White and Watts, "Ecological Crisis."

White, “go back to a time before I had heard the word *ecology*.”⁴⁵⁴ The year was 1926 and White, who was at that time, just nineteen years old, had traveled to Ceylon during his year aboard the “Floating University.” There he witnessed the efforts led by colonial officials to cut roads through the dense, green jungles of the island’s interior in order to expedite the shipping of tea to the seaside ports. In the midst of these developing roadways, White observed large, conspicuous cones of red earth that the local, non-British workers had left standing in the otherwise level paths through the thick vegetation. When he asked what the cones were, he was told that they were snakes’ nests and that the local laborers had left them undisturbed out of respect for the animals that lived there. “They were spared not because the workmen were afraid of snakes,” White remarked, “but because of a feeling by the workers that the snake had a right to its house so long as it wanted to stay there.”⁴⁵⁵ He reported that this was because the local laborers were Buddhists, and their religious beliefs and values invited them to see nature much differently than their overseers saw it. “Many of the officials seemed to be Scots,” he observed, “and it occurred to me that if the men with the shovels in their hands likewise had been Presbyterians the snakes would have fared less well.”⁴⁵⁶

This chance encounter with snakes, White went on to explain, led him to his first insights regarding the relationship between religious ideas and ecological attitudes and

⁴⁵⁴ White, “Continuing the Conversation,” 55. White’s “theology of ecology,” as I argue later in this chapter, is that Christianity needs to move beyond notions of dominion and stewardship to a “third legitimately Biblical position, that Man is part of a democracy of all God’s creatures, organic and inorganic, each praising his Maker according to the law of its being” and that this point of view requires that humans extend compassion and courtesy to other animals both as autonomous, rights-bearing beings that also praise God. White, “A Remark,” 108.

⁴⁵⁵ White, “Continuing the Conversation,” 55.

⁴⁵⁶ Ibid.

actions.⁴⁵⁷ In other words, it was, as just noted, the “roots” from which his “personal theology of ecology” grew. Recognizing this as a seminal moment in the formation of his thought, and underscoring White’s choice to frame his thought in theological, rather than historical terms, does not necessarily challenge scholars to rethink how his arguments in “Historical Roots” have been interpreted. However, White’s description of his work here as theological in nature is not an isolated incident. Rereading his work with an eye towards theological language reveals a surprising abundance of such claims scattered through his entire body of work. His lesser-known writings on religion and ecology, in particular, weave together historical insights, theological interpretation, and personal reflections on faith in an overlapping, dynamic matrix of thought. Where does his work as a historian end and his own theological view begin, one might ask? Or, perhaps more importantly, did White view them as distinct or as joined together, inseparably, into one distinct whole?

Returning once again to White’s theological approach to understanding history, the question remains as to what connection, if any, exists between White’s own Christian faith and his constructive theological claims. White’s argument, in its simplest form, is essentially a postulate that the contemporary ecological crisis, historically understood, has its roots in Latinized medieval Christianity.⁴⁵⁸ Whereas others have devoted

⁴⁵⁷ Interestingly, the connection between religious ideas and values and ecology, here specifically in reference to the treatment of animals, occurred to White only “later, after [he] had read Max Weber.” Although many have compared the work of White to that of Max Weber, White’s self-admitted intellectual indebtedness to Weber remains largely unexamined and undocumented by scholars in the field of religion and ecology. I explore White’s use of Weber’s thought further in chapter 4. Ibid.

⁴⁵⁸ It should be noted that White did feel that Christianity, especially in the West, was most likely the prime shaper of the current environmental crisis. But he was also careful to point out that he did not subscribe to a monocausal view of history. Although he argued strongly that Christianity was most likely the chief source of values and ideas that led to the ecological crisis, he acknowledged that other causal factors, in other

considerable attention to White's discussion—or lack thereof—of the biblical mandate to have dominion over the Earth in the Genesis text, an important scholarly conversation that has emerged out of his rich and complex work,⁴⁵⁹ I wish to highlight an equally significant aspect of his multifaceted argument: the erasure of the subjectivity and the spirituality of nonhuman creatures.

An important feature of Latinized medieval Christianity that led to the ecological crisis, White thought, was the triumph of Christianity over pre-Christian animistic religions, which he referred to as “paganism.”⁴⁶⁰ “In Antiquity,” he argued, “every tree, every spring, every stream, every hill had its own *genius loci*, its guardian spirit.”⁴⁶¹ However, a surge of new ideas in the Middle Ages, ideas which he identified as Christian in origin, soon swept the intellectual landscape of Western Europe. The notion that nature was designed solely for humanity's benefit, the resurgence of the idea that manual labor could be spiritually enriching,⁴⁶² and other disparate changes in attitude crashed together in a flood of changing attitudes towards nature. “To me it seems clear that the Christian

places and during other time periods, could generate values and ideas that could have led to similar results. See, for example, White, “Continuing the Conversation,” 58. Furthermore, he was quite clear in his assertion that although he felt religious ideas were a primary shaper of history, he did not think that all negative attitudes toward the environment came from religious values. In his words, “No sensible person could maintain that all ecologic damage is, or has been, rooted in religious attitudes.” White, “Continuing the Conversation,” 57. Also see, White, “Historical Roots,” 1206.

⁴⁵⁹ See, for instance, Norman C. Habel and Shirley Wurst, *The Earth Story in Genesis* (Sheffield: Sheffield Academic Press, 2000); and Kearns, “Context of Eco-Theology.” For an excellent discussion of the term *dominion* as it appears in Genesis, see Theodore Hiebert's “*Rethinking Dominion Theology*,” *Direction* 25, no. 2 (1996): 16–25.

⁴⁶⁰ See, for instance, Huxley et al., *Tangents of Technology*.

⁴⁶¹ White, “Historical Roots,” 1205.

⁴⁶² For example, White wrote, “[i]t seems equally evident that the monastic revival of the very nonclassical Jewish idea that manual labor is an essential part of the spiritual life helped to narrow the old gap between the practical and the speculative during the centuries in which the working monks were also the most highly educated men of their society. Such a combination [i.e. changing attitudes towards labor and the eradication of animism] could scarcely fail to encourage technological growth.” White, “History and Horseshoe Nails,” 60.

destruction of animism—the notion that spirit exists in nature apart from man and angels, fallen or other—and the Christian conviction that the whole of nature was divinely designed solely for man’s benefit,” White wrote, “undercut the ancient pagan inhibitions about the rational exploitation of our environment.”⁴⁶³ In the aftermath of this deluge, “[t]he spirits in natural objects, which formerly had protected nature from man, evaporated. Man’s effective monopoly on spirit in this world was confirmed, and the old inhibitions to the exploitation of nature crumbled.”⁴⁶⁴

He posited, in other words, that Christianity’s attempts to eradicate animistic, pre-Christian “paganism” laid down the ethical, psychological, religious, and social foundations that would later allow thinkers, such as Descartes, to proclaim animals to be nothing more than mere machines. This replacement of an animistic understanding of nature with a materialistic one that posited that nature as comprised of material *things* rather than as personality imbued *subjects*, in turn, allowed all of nature—including animals—to be viewed as objects that could be exploited for human ends. “This indifference to the possibility of autonomy in other creatures,” White wrote in “Continuing the Conversation,” “has much facilitated our style of technology and thus has been a major force in polluting our globe.”⁴⁶⁵ So significant was this sea-change in worldviews, White believed, that he dubbed “[t]he victory of Christianity over paganism” as “the greatest psychic revolution in the history of our culture.”⁴⁶⁶ By purging the

⁴⁶³ White, “History and Horseshoe Nails,” 60.

⁴⁶⁴ White, “Historical Roots,” 1205.

⁴⁶⁵ White, “Continuing the Conversation,” 63.

⁴⁶⁶ White, “Historical Roots,” 1205.

religious landscape of pagan animism, White maintained, humanity gained full license “to exploit nature in a mood of indifference to the feelings of natural objects.”⁴⁶⁷

White continued to pursue this line of thought in a variety of texts. In both “Historical Roots” and in “Continuing the Conversation,” White maintained that this indifference to the autonomy of other creatures and the extirpation of animistic understanding of nature from Christian theology and Western thought constituted a key theological hurdle to overcome. If the eradication of animistic understandings of nature led to an indifference to (and exploitation of) nature, then recovering such a view might be of help in reversing or slowing the ecological crisis. “The religious problem,” he enigmatically wrote in “Continuing the Conversation,” “is to find a viable equivalent to animism.”⁴⁶⁸ But he offered little explanation in his two most well-known publications regarding what he meant by this. Fortunately, his other texts do contain more clues which can shed light on what White meant.

David Gill, of the Church and Society Office of the World Council of Churches, interviewed White during White’s visit to the World Council of Churches headquarters in Geneva. The transcript of this interview was published in 1972 as “Snake Nests and Icons: Some Observations on Theology and Ecology.” In this conversation, White further articulated his thoughts on animism, the erasure of the autonomy and spirituality of other creatures, and the religious implications of this view:

Perhaps the most shocking way in which we can phrase the quest for a theology of ecology at the present time is as follows: what is a viable, modern, *Christian equivalent* of animism? The question shouldn’t be asked publicly in that way, because to ask it thus would be to alienate a

⁴⁶⁷ Ibid.

⁴⁶⁸ White, “Continuing the Conversation,” 62.

good many people unnecessarily. I am not wanting a revival of animism! I am searching for ways to regain perception of the spirituality of all creatures and to demote modern man from absolute monarchy over nature.⁴⁶⁹

The religious problem, then, was not simply to stop thinking in terms of dominion. It was also a search for a way to recognize other creatures as spiritually autonomous beings.

Beyond Dominion and Stewardship—A Spiritual Democracy of All God's Creatures

The solution to this problem of animism, White thought, might lie in the “recessive genes” of the Christian tradition.⁴⁷⁰ One such recessive gene could be found in the thought of the “greatest spiritual revolutionary in Western history,” Saint Francis of Assisi.⁴⁷¹ “We must rethink and refeel our nature and destiny,” White wrote in his conclusion to “Historical Roots.” “The profoundly religious, but heretical, sense of the primitive Franciscans for the spiritual autonomy of all parts of nature may point a direction.”⁴⁷² He continued to expound on this theme and to praise Saint Francis’s creature-friendly, ecological vision in most of his publications where ecology was a focus, such as “Continuing the Conversation,” “A Commentary on St. Francis of Assisi,”

⁴⁶⁹ White, “*Snake Nests*,” 37.

⁴⁷⁰ White, “Continuing the Conversation,” 61. In his 1971 talk with Alan Watts, White expanded on this notion. In his words: “I think that one of the great spiritual needs of our time is to discover a viable equivalent of pagan animism. We obviously cannot go back to the nyads, the dryads, the pans, the satyrs rustling in the darkness woods [sic]. We no longer think mythologically, and yet there is something there which I think we must recover if we are to survive. And I believe that there are recessive genes as demonstrated by the Benedicite and St. Francis in the major religious tradition of the west.” White and Watts, “Ecological Crisis.”

⁴⁷¹ White, “Historical Roots,” 1207. Additionally, it should be of interest to scholars engaging with White’s texts to note that he was writing about Saint Francis’s revolutionary religious thought and notion of a “democracy of all God’s creatures” as early as 1947, at least two decades before the publication of “Historical Roots.” See, for example, White, “*Natural Science*,” 433; and Nash, “Greening of Religion,” 221 n. 3.

⁴⁷² White, “Historical Roots,” 1207. In his talk with Alan Watts, White also stated: “Let’s develop a bit more of the Franciscan enthusiasm for the spiritual autonomy of our fellow creatures whether organic or inorganic.” White and Watts, “Ecological Crisis.”

and “The Future of Compassion.” Saint Francis’s attitude toward nature is so necessary, claimed White, because he “tried to substitute the idea of the equality of all creatures, including man, for the idea of man’s limitless rule of creation.”⁴⁷³ Thus not only was White engaged in a historical analysis of the religious ideas and values that led to the present ecological crisis, but he was also exploring theological solutions. Indeed, he started writing about St. Francis and a democracy of all creatures as early as 1947.

White’s focus on Saint Francis and his repeated assertion that Christians need to recover their appreciation for the autonomy and spirituality of other creatures reveal much about White’s personal theological outlook and his attitude toward his respondents. Although it is an undeniably important theological task, and one that has proved incredibly fruitful in the development of contemporary ecotheology, White was critical of the widespread focus of scholars and religious leaders on the dominion-stewardship debate that grew out of the responses to “Historical Roots.” He framed this criticism in contrast to the more radical democratic model found in stories of Saint Francis.⁴⁷⁴

The alacrity and consistency with which White made this critique of the ecotheological response to “Historical Roots” leaves little doubt as to where he stood on the issue. On May 12, 1967, just two months after publishing “Historical Roots,” White was already giving voice to this concern in *Science*, the same journal that had published his original article. There, under the title “Christian Impact on Ecology,” White and several other scholars published short responses to “Historical Roots.” The first author in this collection of responses, Ernest Feenstra, wrote a rather positive review of White’s

⁴⁷³ White, “Historical Roots,” 1207.

⁴⁷⁴ White, “Christian Impact on Ecology,” *Science* 156, no. 3776 (1967): 738.

proposals and suggested that, in light of White's argument, Christians ought to see themselves as stewards of God's nature. White, however, did not agree. Stewardship, or the idea that Christians are the caretakers rather than the rulers of God's creation, was viewed by White as being more like "enlightened despotism" when compared to Saint Francis's model.⁴⁷⁵ White indicated that replacing the idea of humanity's dominion over nature with a stewardship model, or "Trusteeship" as he habitually called it, would be an inadequate response to the looming environmental crisis. Although only a few short sentences in length, White was clear, in his very first published response to "Historical Roots," that attempts to reform Christianity must be more radical than a position of stewardship.

Eleven years later, White continued to espouse this position. In "The Future of Compassion," an essay exploring Christian values published in *The Ecumenical Review* in 1978,⁴⁷⁶ he wrote:

Religious thinkers have been precipitously abandoning the doctrine of Man's Dominion over Nature for that of Man's Trusteeship [i.e. Stewardship] of Nature. This is rational, because no other visible creature seems to be as capable of analysing [sic] complex situations and calculating the options as is *homo sapiens*. Yet it is precisely for this rational reason that this choice will only deepen disaster: it overlooks the fact of sin, which is compounded of inertia, of a nice talent for discovering moral reasons for committing evil deeds, and of self-love both individual and for our species as compared with other creatures. Mankind cannot be trusted to be trustee for the rest of nature. When we must decide whether to benefit lilies or sparrows or ourselves, we will recall that while our Heavenly Father is mindful of both lilies and sparrows, he cares even

⁴⁷⁵Feenstra et al., "Christian Impact," 738.

⁴⁷⁶In a letter, he described "The Future of Compassion" as being indicative of "the general direction of my thinking about these matters" in response to a request to write an introduction explaining the development of his thought for a French translation of "Historical Roots." White to Grinevald.

more deeply for us; so, in obedience to the divine preference, we shall opt for us.⁴⁷⁷

Put differently, White was too much of a Christian Realist to trust that humans would be able to place the interests of others above their own. He believed that replacing the notion of dominion with an ethic of stewardship would only exacerbate ecological problems because it continues to place humans above other creatures in a value hierarchy that allows nonhumans to be exploited.

He claimed that a theology or ethic that claims to protect animals while maintaining the human-nature divide and allowing other creatures to be valued on prudential, anthropocentric grounds is nothing more than an “enlightened self-interest” that cannot stand the litmus test of theology, ecology, or ethics.⁴⁷⁸ For White, moving away from prudential ethics meant valuing nature for nature’s sake, rather than on anthropocentric, utilitarian grounds.

Observing the environmental movement of the 1960s and 1970s, he argued that most forms of environmentalism, particularly theologically based environmental ethics, were mistaken in holding humans up as the epicenter of value. Such ethics “are usually prudential,” he asserted. The driving impulse of these ethics is to ask, “[I]f we damage the biotic system, won’t it produce a backlash that will hurt *us*?” However, White doubted the efficacy—and even the ecological and religious authenticity—of such ethics. “We should ask whether a prudential ethic can rightly be called an ethic,” he wrote,

⁴⁷⁷ White, “Future of Compassion,” 106.

⁴⁷⁸ White, “Continuing the Conversation,” 63.

“[i]sn’t it simply a rule of enlightened self-interest to be junked if feared results cannot be shown to occur?”⁴⁷⁹

Building a case against prudential ethics, or ethics which take human welfare as a primary end, White argued that Christians had a spiritual and ethical obligation to be compassionate towards nonhumans. “It follows,” he wrote, “that Christian ethics must be purged of all prudential motivations.”⁴⁸⁰ Continuing, he explained:

“We should not be pleasant to people in order that they may treat us pleasantly, and we should not be kind to trees lest they drop branches on us. One of the great spiritual adventures of science is to discover of what the well-being of each creature consists, and how it is related to that of other creatures. In this process, we learn increasingly more about human well-being and its context. Some conservationists, in reaction against the old axiom of Man's Dominion, talk as though man has no rights as against whooping crane or whale. But man too is a creature with rights that must be balanced—but not merely on an anthropocentric pivot—with those of his companion creatures. Ecology, as it is now developing, provides us with new religious understandings of our own being, of other beings, and of being.”⁴⁸¹

Developing an ethic that moved beyond the anthropocentrism of Dominion and stewardship, therefore, was something that White thought was critical to the environmental movement. Not only did he believe that it would be more ecologically efficacious, but he also felt that it was religiously transforming as well. Saving nature meant changing the human heart at the deepest level.

It should be noted, however, that White was not entirely critical of efforts to replace the biblical notion of dominion with a stewardship model. He viewed the move from dominion to stewardship as a necessary, albeit intermediate step, in the evolution of

⁴⁷⁹ Ibid., 62–63.

⁴⁸⁰ White, “Future of Compassion,” 107.

⁴⁸¹ Ibid.

Christian attitudes toward nature and other creatures. “Scripture warrants any of three human attitudes towards nature external to man,” White wrote. The dominant view in the history of Christian biblical interpretation is “man’s absolute rule over the rest of nature.” The second potential reading of scripture implies that “man is a trustee [i.e. steward] responsible to God for the decent care of his fellow creatures.” The third, recessive interpretation, shared by Francis, is “that man is a comrade of the other creatures in God’s praise.”⁴⁸² Since an ethical position emphasizing stewardship is insufficient, White averred, this third theological step would be necessary.

Drawing together his historical observation that the erasure of the autonomy and spirituality of other creatures has precipitated the ecological crisis along with his religious commitments to egalitarianism, democracy, and the inherent worth and dignity of each individual, he searched Christian history and scripture for an alternative theological point of view. “Perhaps,” wrote White as he reflected on the ecological crisis and his own belief that Christian history was punctuated by moments of divine revelation,⁴⁸³ “the Holy Ghost is whispering something to us.”⁴⁸⁴

Borrowing heavily from the “recessive genes” in Christianity found in scriptural sources such as Psalms 96:11–13 and Daniel 3:57–90,⁴⁸⁵ stories about Saint Francis,⁴⁸⁶

⁴⁸² Ibid., 105.

⁴⁸³ In his words: “In its doctrine of the Holy Spirit, Christianity fortunately makes provision for continuing revelation.” White, “Continuing the Conversation,” 60.

⁴⁸⁴ Ibid., 61.

⁴⁸⁵ White described his ecological reading of scriptures as follows: “It is based on several parts of the Psalms, for example 96:11–13: ‘Let the heavens rejoice, and let the earth be glad; let the sea roar, and the fullness thereof. Let the field be joyful, and all that is therein: then shall all the trees of the wood rejoice before the Lord.’ Its supreme expression, however, is found in the so-called ‘Song of the Three Children of Israel in the Fiery Furnace’, found in Daniel 3: 57–90. Here the entire creation—angels; sun, moon, and stars; rain, dew, wind and fire; frost, ice and snow, nights and days; lightnings [sic] and clouds; mountains and hills; green things, seas and rivers; sea creatures, birds, beasts; the children of men; Israel, the priests of

and in the liturgy of the monastic orders he studied,⁴⁸⁷ White developed a theological position of his own:

As the inadvertent founder, it would seem, of the Theology of Ecology, I confess amusement at the speed with which the Churches have abandoned the old scion of Man's Dominion over Nature for the equally Biblical position of Man's Trusteeship of Nature. Since the Churches remain, despite some competition, the chief forges for hammering out values, this is important. I feel that before too long, however, they will find themselves going on to the third legitimately Biblical position, that Man is part of a democracy of all God's creatures, organic and inorganic, each praising his Maker according to the law of its being.⁴⁸⁸

White believed, in other words, that there has always been room in the Christian tradition for alternative views of nature and that more ecological readings of scripture were possible. "[I]f one points to the fact that historically Latin Christians have generally been arrogant towards nature," he wrote, "this does not mean that Scripture read with twentieth-century eyes will breed the same attitude."⁴⁸⁹ For White, the physical reality of environmental issues necessitated more than just dominion and stewardship models.

This third theological position appears with surprising frequency in White's texts. If "Historical Roots" is read alone, outside of the context of his larger body of work, then this notion of a "democracy of all God's creatures" appears to be but one small aspect of

God, the souls of the righteous, men of humble heart, and, lastly, the three in the furnace—all are enjoined to praise and magnify God forever." White, "Future of Compassion," 105–06.

⁴⁸⁶ In "Continuing the Conversation," he wrote, "[i]n every complex religious tradition there are recessive genes which in new circumstances may become dominant genes. In my 1967 discussion I referred to St. Francis's abortive challenge to the anthropocentric concept of God's world. Scattered through the Bible, but especially the Old Testament, there are passages that can be read as sustaining the notion of a spiritual democracy of all creatures. The point is that historically they seem seldom or never to have been so interpreted. This should not inhibit anyone from taking a fresh look at them." White, "Continuing the Conversation," 61.

⁴⁸⁷ "The most remarkable," of these, "by far is the *Benedicite, omnia opera domini, domino*," he wrote in 1973. White, "Continuing the Conversation," 61. Then again, in 1978, he stated that the "view of the man-nature relationship [found in the *Benedicite*] was so at odds with the dominant doctrine of Man's Dominion that it has remained a recessive gene in the Body of Christ." White, "Future of Compassion," 106.

⁴⁸⁸ White, "Remark," 108.

⁴⁸⁹ White, "Continuing the Conversation," 61).

a multilayered and complex argument. But when his larger body of work is read together, the importance and centrality of this third theological position in his thought is clear. In the overwhelming majority of his publications focused on ecology, White repeatedly emphasizes the theologically normative claim that Christians need to begin thinking of themselves as members of an expansive community of creatures.⁴⁹⁰ This advocacy for a “democracy of all God’s creatures,” or as he sometimes calls it “a spiritual democracy of all God’s creatures,” is found in nearly all his published works on religion and ecology, including, but not limited to “Historical Roots,” “Christian Impact on Ecology,” “Snake Nests and Icons,” “Continuing the Conversation,” “A Remark from Lynn White, Jr.,” “The Future of Compassion,” and “Commentary on St. Francis of Assisi.”⁴⁹¹

His perduring commitment to this notion when all of his texts are read together is too prevalent to ignore. Moreover, I argue that this understanding of White’s thought as spread over multiple publications is substantiated by White’s own views of his 1967 article. As discussed in chapter 1 of this dissertation, White frequently explained that his argument, as it was published in *Science*, was incomplete. This sense that his work was unfinished prompted him, along with frequent requests from scholars and publishers to publish more on the subject, sometimes forthrightly in works like “Continuing the Conversation” and sometimes tacitly in other speeches, interviews, and articles.

⁴⁹⁰ See, for example, White, “Continuing the Conversation,” 61; White, “Historical Roots,” 1206; White, “Christian Impact on Ecology,” 738; White, “Commentary on St. Francis,” 19; White, “Future of Compassion,” 105; and White, “Snake Nests,” 37.

⁴⁹¹ White also advocates for a “democracy of all God’s creatures” in a number of talks and audio recordings as well. See, for example, White and Watts, “Ecological Crisis.”

Participatory Creatures—Inclusivity and Christian Compassion

The repeated emphasis on this democracy of creatures calls for more attention to be given to the theological expressions in White's texts. He argued, as noted earlier, that an important task for ecotheology was to recover an appreciation for the inherent "spirituality of all creatures."⁴⁹² But what are scholars to make of this assertion? What practical and ethical implications did White think these "recessive genes" had for practicing Christians?

Like St. Francis, White maintained that creatures of all kinds are religious actors. In his speeches and writings on ecology and theology, White often portrayed non-human animals and other parts of nature as more than mere symbols or examples to be cited in his historical arguments. Referring to the depictions of animals both in the Bible and in the stories of Saint Francis, he wrote that "the ant is no longer simply a homily for the lazy, flames a sign of the thrust of the soul towards union with God, now they are Brother Ant and Sister Fire, praising the Creator in their own ways as Brother Man does in his."⁴⁹³ Other creatures—and not just humans—as White pointed out in "Christians and Nature," "praise God in their own ways."⁴⁹⁴ All of nature, not just humans, are *ensouled*⁴⁹⁵ beings, they are worshippers of God. To conceive of other non-human entities as members in this "spiritual democracy of all God's creatures" is important not

⁴⁹² White, "Snake Nests," 37.

⁴⁹³ White, "Historical Roots," 1207.

⁴⁹⁴ White, "Christians and Nature," 11.

⁴⁹⁵ Speaking of St. Francis's attitudes towards animals and animal souls, he said, "the wolf had a soul to be saved, the little birds had souls to be saved. This, however, is absolute heresy! It all has the smell of India." White, "Medieval Meeting," 24.

just for its ecological implications, but also because it challenges the way that humans view themselves and the other creatures around them.

It is worth noting that White was not entirely alone in his observations. In a sermon published in 1948, theologian Paul Tillich, whom White admired and referenced often, also worried over humanity's seemingly lost ability to hear the voices of nature. Recalling a discussion with a biologist, in which the scientist wondered if a tree could be communed with, Tillich wrote "Is such communion possible in our period of history?" Technology, he explained has led not only to the "domination and ruthless exploitation" of nonhuman nature, but humanity has also "lost the ability to live with nature." To live with nature, in this sense, implies listening to nature and allowing its full expression of itself. In his words, "[w]e fill [nature] with noise of empty talk, instead of listening to its many voices, and through them, to the voiceless music of the universe."⁴⁹⁶ Yet, wrote Tillich, scripture urges humanity to be attentive to the voices of nature. "The Psalmist *has* heard it," he explained, so Christians must also turn an attentive ear to the praising voices of creation.⁴⁹⁷ To this end, Tillich concluded his sermon with the exhortation that his fellow Christians should go out and "commune with nature!"⁴⁹⁸ Yet, while the archival and published record left by White gives no indication that he was aware of this aspect of Tillich's thought, there are strong echoes of this sense of "communion" in White's scholarship that hinted at an even deeper sense of belonging and kinship.

⁴⁹⁶ Paul Tillich, "Nature, Also, Mourns for a Lost Good," sermon, in *The Shaking of the Foundations* (Eugene, OR: Wipf & Stock, 1948), 79.

⁴⁹⁷ Ibid., 78.

⁴⁹⁸ Ibid., 86.

There is a profound inclusivity within the spiritual democracy described by White. He proposed opening up to the autonomy and spirituality of other creatures is not a spiritual demotion for humans in his eyes—far from it. Instead, humans and animals take their place in a great cosmic liturgy. Bestowed with a better understanding of their role in Creation, humans are able “to rejoice and to join the cosmic dance of the creatures,”⁴⁹⁹ both in daily life and in worship. If anything, taking up a position in the democracy of creatures frees humans from their former loneliness. In a speech to the graduating class of the San Francisco Theological Seminary that was published in 1975 as “Christians and Nature,” White passionately described what it means to view oneself as part of this vast, inclusive community of co-worshippers:

We are *not* alone. We human beings are here in exactly the same sense, and for the same purpose, that sea urchins, banana trees, icebergs, quartz crystals, asteroids, interstellar hydrogen clouds and astronomical black holes are here. Our purpose, and that of all our fellow creatures, is, as the Psalmist so often proclaims, to praise our Creator with all our being.⁵⁰⁰

White imagined that this unbounded community, in contrast to the perspective found in the “dominant genes” of Christianity, stretched the limits that are commonly thought to exist between humans, animals, and nonliving entities. Throughout his writings on ecology, White used the term “creatures” loosely to indicate not just humans and animals, but also plants, viruses, and even nonliving objects and natural processes such as rocks and the cycles of nature.⁵⁰¹ He referred to nature, in its broadest sense, as “our fellow

⁴⁹⁹ White, “Christians and Nature,” 11.

⁵⁰⁰ Ibid., 10.

⁵⁰¹ See, for example, White, “Commentary on St. Francis,” 19.

creature.”⁵⁰² In the fellowship of creatures that he envisioned, all parts of nature are spiritually autonomous members in a vast, cosmic spiritual democracy.

White found biblical support for this position, as well as inspiration, in the stories of Saint Francis. Recalling the “jubilant exhortation to all created things to glorify their Maker” in Daniel 3:57–90, White pointed out that the biblical text “makes no distinctions between categories of creatures: the angels, the heavenly bodies, winds and rain, ice and snow, fire and heat, night and day, seas and rivers, mountains and hills, whales and birds and beasts, men and souls of the dead. All of these creatures,” he wrote, “are urged to praise him and glorify him forever.”⁵⁰³

Traces of White’s tendency to blur the boundaries of what he considered to be a creature can be found in his earlier historical writings as well. On a number of occasions, he gave voice to his concern that dualistic thinking had gone too far in the categorization of “things.” In his estimation, the Platonic-Cartesian dualisms of mind and matter, space and time, organic and inorganic, or animals and humans did not stand up in the face of science, biblical revelation, and individual experience.⁵⁰⁴ During an address given in Philadelphia to celebrate the 250th anniversary of the first American presbytery, a speech published in 1956 as “Presbyterians and the Intellectual Worship of God,” White framed his displeasure with dualistic conceptions of nature in terms of his own belief in the Incarnation of Christ as well as the discoveries of modern science. He asserted, “Just as

⁵⁰² White, “Christians and Nature,” 7.

⁵⁰³ White, “Continuing the Conversation,” 61.

⁵⁰⁴ He wrote, for example, that “the traditional conceptual dualisms of mind-matter, organic-inorganic, matter-energy, and space-time are being undermined by new kinds of insights emerging out of science itself.” White, “Christians and Nature,” 10. For more examples where White discusses the inadequacy of Cartesian dualism, see White, “Dynamo and Virgin Reconsidered,” *The American Scholar* 27, no. 2 (Spring 1958): 194; and White, “Presbyterians,” 7.

the dogma of the Incarnation implies the flat denial of all Platonic-Cartesian dualisms of mind-body, time-eternity, spirit-matter, so scientific research has reached a point at which a materialistic interpretation of the universe is just as obsolete as a vitalistic interpretation.”⁵⁰⁵

During this same period, White wrote another article on the changing perceptions of technology in recent Western history called “Dynamo and Virgin Reconsidered.” There he also demonstrated a budding mistrust in the dualistic separation of humans, animals, and nonliving things in Western thought. In his words:

We have been too easily impressed by the dualities of Descartes [...] Closely observed, experience does not in fact fall into neat opposing categories—spirit and matter, religion and technology, man and cosmos, cathedral and powerhouse. Reality is more complex than this, and its parts more intricately interlocked. Man is a bit cosmic; the cosmos is a bit humane; and the free man may worship without despair.⁵⁰⁶

Thus the borders between humans, animals, technology, and the rest of nature were, for White, blurred. This applied particularly to the spiritual democracy of all God’s creatures that he was attempting to articulate in his texts on ecology where he applied the term “creatures” in a broad, inclusive sense. “Francis was trying to set up a democracy of all creatures. And not simply living creatures,” White wrote in 1982, “but also inorganic creatures like rocks and mountains. He taught that we are all brothers and sisters.”⁵⁰⁷ This blurring of boundaries is present, at least to some extent, in his depictions of individual animals as well.

⁵⁰⁵ White, “Presbyterians,” 7. Also see, White, “Future of Compassion,” 106.

⁵⁰⁶ White, “Dynamo and Virgin Reconsidered,” 194.

⁵⁰⁷ White, “Commentary on St. Francis,” 19.

Hidden among the biological animals in White's texts, one also finds a small population of boundary-blurring beings that defy perfunctory classification. Time and time again, for example, White marveled at the crystallizing of the tobacco mosaic virus by the Nobel Prize-winning scientist Wendell Stanley.⁵⁰⁸ Although Stanley's experiments were later shown to be flawed, his work paved the way for others who would show that simple viruses could both be crystallized and broken into their constituent, nonliving RNA and protein parts and then reassembled into living, functioning viruses. This smashing of "the artificial conceptual frontier between organic and inorganic matter" gave White theological pause.⁵⁰⁹ Gone, he wrote, was the "recent and faulty distinction between the living and the non-living parts of God's creation."⁵¹⁰ So profound were the theological implications of this event for White that he referenced it in at least a half dozen texts dealing with religion and nature.⁵¹¹ This breaking down of the boundaries between a living being and nonliving matter confirmed, he believed, the need for Christians to rethink their attitudes toward nature.⁵¹² In particular, he was tuned in to the idea that the separation of humans, animals, and the nonliving parts of nature was inherently tied in with the present ecological crisis.

⁵⁰⁸ White, "Presbyterians," 7; White, "Christians and Nature," 9–10; and White, "Continuing the Conversation," 62.

⁵⁰⁹ White, "Continuing the Conversation," 62.

⁵¹⁰ Ibid.

⁵¹¹ White, "Future of Compassion," 106 and 109; White, "Presbyterians," 7; White, "Christians and Nature," 9; White, "Continuing the Conversation," 62; White "Rethinking Science," 14; White, "The Future of Compassion," 9–10; and Lynn Townsend White, jr., "Religion and the Disciplined Mind," 1961, Unpublished Paper, Coll. 1541, Box 7, Folder 10, Manuscripts—Tentative "Religion and the Disciplined Mind," The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles, 6.

⁵¹² White was enthralled by the implications of Stanley's work long before he began couching his arguments in ecological terms. "[H]ow can we doubt that man is in every sense part of nature?," he wrote. White, "Presbyterians," 7.

White used this complex understanding of nature to build upon and revise existing Christian ethics and to redraw the boundaries of moral considerability. To do so, he continued to push the ontological limits of creatureliness and the theological boundaries of Christian compassion. For example, in his “Continuing the Conversation,” White wrote about animal welfare and animal rights as means of entering into a conversation regarding the ethical implications of the blurring of these boundaries. “During the past few generations, kindness to animals (as distinct from pets) has become a virtuous sentiment in Western culture,” he observed. But, he countered, scientific evidence such as the crystallizing of the tobacco mosaic virus adds another layer of complexity to this inquiry.

Building on this line of thought, he asked, “is it only to living creatures that we should be kind?”⁵¹³ Even though “more and more of us are inclined to think that we should have a decent respect for our living fellow creatures,” he averred, limiting this question only to animals that are considered to be living does not get to the root of the theological issue. Since he felt strongly that all creatures—whether animal, human, mountain, or something altogether different—are God’s creatures and spiritually autonomous beings, he argued that the question of animal rights does not dig deeply enough.⁵¹⁴ “The problem grows,” he observed, if theologians ask: “Do people have ethical obligations towards rocks?”⁵¹⁵ In reply to his own question, he wrote:

Today to almost all Americans, still saturated with ideas historically dominant in Christianity (although perhaps not necessarily so), the question makes no sense at all. If the time comes when to any considerable

⁵¹³ White, “Continuing the Conversation,” 62.

⁵¹⁴ Ibid., 63.

⁵¹⁵ Ibid.

group of us such a question is no longer ridiculous, we may be on the verge of a change of value structures that will make possible measures to cope with the growing ecologic crisis.⁵¹⁶

But in White's view the necessary foundations for such a value structure were already present in the recessive genes of his own faith, Christianity. The solution, he felt, was in the biblically supported idea of a spiritual democracy of all God's creatures. When viewed through this lens, he maintained, the question as to whether or not rocks had value did not seem ridiculous. A rock is one of God's creatures too. Not only that, rocks are participants in the praise of God alongside humans, animals, and other creatures.

Although White never offered an extended explanation of how this spiritual democracy of all God's creatures would function or how these values would play themselves out, his later writings on religion and ecology offer brief insights. The most salient example comes from "The Future of Compassion." In this article, White described Christianity as being in the "greatest crisis of its history of two millennia."⁵¹⁷

Christianity, he argued, has been so focused on human problems that it has excluded other creatures from the ethical community. "I have myself concluded," wrote White as he outlined the development of Christian compassion and ethics, "that Christian compassion must be based on an ascetic and self-restraining conviction of man's comradeship with the other creatures."⁵¹⁸ He pointed out, however, that this goes beyond Albert Schweitzer's "respect for life":

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

⁵¹⁶ Ibid.

⁵¹⁷ White, "Future of Compassion," 109.

⁵¹⁸ Ibid., 106.

subatomic particle or a spiral nebula. Man must join the club of the creatures. They may help to save us from ourselves.⁵¹⁹

White insisted, in short, that all of nature must be respected and included in the same manner, whether it is living, nonliving, or somewhere in between, as in the case of the tobacco mosaic virus.⁵²⁰

Thus the future of Christian compassion, as he saw it, must move beyond human-centered thinking as well as beyond utilitarian value systems. He grounded this view not on prudential concerns, but rather on a theological foundation which stood with one foot anchored in the skepticism of Christian Realism and the other planted firmly in the belief that Christianity was capable of a new ethic. This new ethic, he contended, requires active respect and care for all creatures, not just living, biological ones.⁵²¹ In his words:

From Christian compassion we must defend the continued existence of our fellow animal, plant, insect and marine species, as well as the integrity of landscapes, seascapes and aircapes that are periled [sic] by human activity, whether or not these in any way affect human existence. We must do this because of our belief that they are all creatures of God, and not from expediency. We must extend compassion to rattlesnakes and not just to koala bears.⁵²²

Compassion, in this case, is an act that is both actively engaged in and rooted in nonanthropocentric theological values. “Compassion,” he stated, “is showing reverence actively to another being.”⁵²³

Building on this theme, he framed compassion for other creatures in terms of reciprocal courtesy. He argued that humans must respect the rights of all animals, and

⁵¹⁹ Ibid., 107.

⁵²⁰ Ibid., 106.

⁵²¹ Ibid., 104.

⁵²² Ibid., 108–09.

⁵²³ Ibid., 105.

these animals must show the same “cosmic manners” to humans in return.⁵²⁴ To add emphasis to his point, he referenced coyotes and locusts, two creatures that are regularly targeted by humans for extermination, to talk about what this courtesy entailed. Showing courtesy and compassion to other creatures does not mean extending rights to one creature at the expense of another. “But man too,” stated White, “is a creature with rights that must be balanced—but not merely on an anthropocentric pivot—with those of his companion creatures.”⁵²⁵ Just as humans have a right to eat other living things and to build shelter for themselves, coyotes too have “a right to dig a den and to kill to eat.”⁵²⁶ Both humans and coyotes have the right to the resources they need to live, and they must not infringe on one another’s right to flourish.

Having courtesy, in other words, means “not impinging on the ability of our companions to satisfy their needs.”⁵²⁷ Even locusts have a right to exist so long as they do not overwhelm other creatures in their environment. Although humans can defend their crops, White felt that humans go too far when they attempt to exterminate locusts en masse.⁵²⁸ Instead, he recommended that humans and locusts seek out a mutual accord. In

⁵²⁴ Ibid., 107. Flourishing together and extending compassion and courtesy to other creatures, however, do not require that the rights of humans be heedlessly denied. Indeed, as should be evident in the example just given, White is careful to pay attention to human needs as well. He noted, in “Snake Nests and Icons,” that simply extending rights and compassion to other creatures can still lead to ethical conundrums for humans. Some forms of Hinduism and Buddhism, he mused, may serve as examples of the way in which Christian thought might eventually respect other animals and creatures as individuals. But even the most exemplary forms of religious concern for animals can lead to unexpected dilemmas. Speaking of the widespread human suffering and poverty that he and his wife observed on a visit to Calcutta, he recalled that “we yearned to take the sacred cows that were blocking the traffic and turn them into hamburgers to feed the city’s refugees! People are part of nature too,” he continued, “the other creatures don’t have all the rights.” White, “Snake Nests,” 36–37.

⁵²⁵ White, “Future of Compassion,” 107.

⁵²⁶ Ibid.

⁵²⁷ Ibid.

⁵²⁸ The wholesale eradication of species, even species that caused profound human death and suffering such as the smallpox virus, troubled White on religious grounds. He wrote: “This will involve a religious

short, humans have no right, whether through pollution, overpopulation,⁵²⁹ or deliberate destruction, to be discourteous to other creatures.

According to White, the extension of compassion and courtesy to fellow creatures, and respecting their autonomy as praisers of God, is necessary “so that we and other creatures may flourish together.”⁵³⁰ This compassion, in White’s eyes, could only come about with a rapprochement between humanity and other creatures. “The two new, and essential, elements in Christian ethics, then, as I see it,” he wrote in contemplation of how flourishing comes about, “must be man’s self-denying comradeship with the other creatures, and the abandonment of prudential considerations.”⁵³¹

The Future of Christianity—The Renaissance of Theology

Ultimately, White was hopeful about the future of humanity and of the planet. However, as noted throughout this chapter, he also harbored doubts about humanity’s ability to transcend their own sinful nature. In order for both humans and nonhumans to

rethinking of the ecological concept of territoriality. Western Christians, who for so long have considered man’s total dominion over nature to be axiomatic, will find this difficult. What is the rightful territory of homo sapiens! Must courtesy to other creatures require us to withdraw from some of their rightful territories that we have overrun? If so, who pays the bill? How forcefully may we defend our own rightful territory, including our own bodies? Recently the smallpox virus was totally eradicated. Its sole territory was the human anatomy, which it devoured with dreadful results from the human point of view. Mankind has exterminated many species in the past, usually by inadvertence or over-enthusiasm in the hunt. This is the first time we have altogether eliminated a fellow creature by deliberate planning. From our standpoint the advisability of the action is beyond debate. Variola could not be consulted because of a communication gap. What the God who created both homo sapiens and Variola thinks about all this, we do not yet know.” White, “The Future of Compassion,” 109.

⁵²⁹ Like many other environmental thinkers of his time, such as Aldous Huxley, the growing human population was a concern of White’s. “In my own country, as all over the world, forests are falling, marshes are vanishing, the sea and the air are polluted, mountains are gutted, and our fellow creatures are vanishing,” he wrote, “because of man’s discourtesy to them in overbreeding.” White, “The Future of Compassion,” 107. See also, White to Huxley, 8 March 1957.

⁵³⁰ White, “The Future of Compassion,” 109.

⁵³¹ Ibid., 108.

flourish together, he urged his fellow believers to awaken to the need for profound changes in Christian ethics and theology in order to bring about this change.

But yet, one can read his concern for the ecological crisis within the larger theological context in which White situated himself. As an avid reader of theology, and as a practicing Christian engaged in analysis of the culture in which he was immersed, White viewed the mid-twentieth century as a great turning point in Christian history. Indeed, he called the twentieth century the “Renaissance of Protestant Theology” in which thinkers like Tillich, Barth, and Niebuhr were transforming Christian thought in unprecedented ways.⁵³² In an unpublished 1961 manuscript, titled, “Religion and the Disciplined Mind,” he proclaimed that contemporary Christians lived “in the most creative period in Christian theology [...] since the 16th century.”⁵³³

His ecological writings, in other words, emerged at a time when he felt that Christianity was poised on the brink of dramatic shifts in perspective, not just in an ecological sense, but in a larger theological setting that had been fomenting for decades. The ecological crisis only proved this point further for White, I argue. When asked to provide a quote for the dustcover of Paul Santmire’s pivotal ecotheological book, *The Travail of Nature*, White charged that the ecological crisis was bringing about this revolution in theology. He described Christian theology as existing in a period of unparalleled “creative ferment” as it responds to the climate crisis.⁵³⁴ “Clearly religious

⁵³² White, “Christian Conversations, IV,” 4.

⁵³³ White, “Disciplined Mind,” 10.

⁵³⁴ Lynn Townsend White, jr., “For the Dustcover of Paul Santmire’s *The Travail of Nature*,” n.d., Coll. 1541, Box 9, Folder 3, Research Letters—1971–1985, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.

sensibilities are changing rapidly” in response to the ecological crisis, he wrote. “Yet Christians are still in the process of clarifying in their own minds whether their duty to praise God and love their neighbors should or can be extended to God’s nonhuman creatures, whether organic or inorganic.”⁵³⁵ Although a different set of quotes from White was used in the printed version, these passages highlight White’s belief that the science of ecology and the environmental crisis that it revealed were critical to the future of Christianity.

Yet, despite feeling that “Christian ethics is in the greatest crisis of its history of two millennia,” as he wrote in 1978, White was, at heart, hopeful about the changes that this renaissance of Christian theology would bring about. Even though he observed that his own ecotheological ideas might not take hold, he was eager that the ideas of others would fare better. “If my very tentative suggestions for reformulating our ways of showing compassion are not acceptable,” he wrote in 1978, “I trust that others may have the grace to do better.”⁵³⁶

This hope for the ecological and theological future, can be heard in his 1962 talk given alongside Aldous Huxley, the talk which is the prototype for the argument contained in “Historical Roots.” “I wonder if in the concept of ecology we can regain our psychic unification with what is around us” through the breaking down of the lines between the organic and inorganic, he mused. “I hate to end on a note of hope,” he joked, “but I can’t help being hopeful.”⁵³⁷

⁵³⁵ Ibid.

⁵³⁶ White, “Future of Compassion,” 109.

⁵³⁷ Huxley et al., *Tangents of Technology*.

Counseling Wolves and Exhorting Birds

By reading White with an attentive eye toward the ways in which he expressed himself theologically throughout his larger body of work, it seems clear that White was more than the mere critic of Christianity that he is often caricaturized. His work was more constructive, more complex, and more theological than scholars in the field of ecotheology usually credit it. Reclaiming White as a prophetic theological voice, especially one with distinctive ecological and animal-friendly insights, empowers scholars to move beyond White's hypotheses as they are traditionally understood.

Opening up White's legacy in this manner invites scholars to be less reactive to White's critiques of Christianity and to instead be more proactive in their exploration of alternative understandings of the relationship between religious ideas and environmental attitudes and action (see chapter 5). Additionally, reading beyond "Historical Roots" and bringing White's unique theological voice to the forefront also introduces creative space for research on the relations of Christianity, ecology, and animals to flourish. Pioneers in the study of Christianity and animals such as Laura Hobgood-Oster and Paul Waldau have already noted the strong linkages between religious attitudes toward animals and religious attitudes toward the environment. Further exploration of White's theology can only strengthen this connection.

Perhaps most important, rethinking White's legacy brings a new framework to light for meaningful Christian engagement in human-animal, human-Earth, and human-God relationships. White acknowledged that he was not suggesting "that many contemporary Americans who are concerned about our ecologic crisis will be either able

or willing to counsel with wolves or exhort birds” as Saint Francis did.⁵³⁸ He insisted, however, that any theological answer to the environmental crisis needs to reconsider animal subjectivity. It needs to view all creatures as active participants in a great spiritual democracy in order to create a viable, desirable, and necessary ecotheological vision for the future. Rather than viewing other creatures as lower in a hierarchy, Christians, White maintained, must be increasingly compassionate, courteous, democratic, and open to the spiritual autonomy of all creatures and all the messy overlap that exists between the living and nonliving parts of nature. For White this was not just an ecological problem; it was a theological, ethical, and ontological problem. If humanity is to stem the tide of the ecological crisis, White asserted, Christians must be like Saint Francis who “worshipped a God who was the God both of squirrels and of men.”⁵³⁹

⁵³⁸ White, “Historical Roots,” 1207.

⁵³⁹ White, “Continuing the Conversation,” 61. In 1971, White also stated: “Saint Francis was preaching a religion for man *and* squirrels because he believed that squirrels should praise God, their creator, in exactly the same mood as the men should praise God. And he believed that a part of our praising god lay in our rejoicing with our fellow creatures in the praise of God.” White and Watts, “Ecological Crisis.”

Chapter 4—Lynn White’s Weberian Roots

At the heart of Lynn White, jr.’s scholarship is a deeply Weberian problem: What, if any, is the relationship between religion and social change? Or, put differently, how do changes in religious ideas and values influence large-scale changes in the material factors of society such as agriculture, science, technology, and attitudes towards labor, property, and ecology, and vice versa?

Six decades before White wrote “Historical Roots,” Max Weber, a key figure in the early development of the sociology of religion, published the texts that scholars now know as *The Protestant Ethic and the “Spirit” of Capitalism* (1904/05).⁵⁴⁰ There, he argued that modern, investment capitalism emerged in relation to ascetic Calvinism. Shaking Marx’s historical materialism to its core, Weber’s bold assertions sent scholars clamoring to debate whether or not changes in material culture were precipitated by economic and material impulses or were rooted in religious ideas and values. The dust

⁵⁴⁰ To scholars in the field of Religion and Ecology, Weber’s scholarship is sometimes viewed as an early and important study of humanity’s relationship to the nonhuman world. Whitney Bauman, for instance, describes Weber’s work in *The Protestant Ethic* as a “seminal work” in what he describes as “religious environmental history.” Weber, he argues, demonstrated “how religious values, concepts, and traditions materialize and shape the landscapes around us.” Whitney A. Bauman, “Opening the Language of Religion and Ecology: Viable Spaces for Transformative Politics,” In *Inherited Land: The Changing Grounds of Religion and Ecology*, ed. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (Eugene, OR: Wipf and Stock, 2011), 94. Outside of the field of Religion and Ecology, Weber’s argument in *The Protestant Ethic* text was a major shaper of the sociology of religion. Daniel Pals writes: “Few scholarly books have made their authors more of an intellectual celebrity or led to a more sustained and spirited discussion than this striking effort in cultural analysis, which Weber first published as a pair of articles in the *Archive* just after becoming one of its new editors. Debate over its famous argument, known almost everywhere as ‘the Weber thesis,’ has continued for a full century, with little reason to think it will not go on for another. At its core is a startlingly bold but fundamentally simple thesis. Weber claims there is a close connection between religion, the rise of economic capitalism, and the birth of modern civilization in Western Europe.” Daniel L. Pals, *Eight Theories of Religion*, 2nd Edition (New York: Oxford University Press, 2006), 160.

still has not settled from the debate stirred by Weber's theorizing. Indeed, more than sixty years later, Lynn White set an equally vociferous storm of debate in motion when he suggested that the "roots" of the environmental crisis primarily lay in religious ideas, particularly the religious worldviews of Latinized medieval Christianity rather than material factors or secular values. In this chapter, I attempt to address what has been identified as one of the major critiques of "Historical Roots." In the words of Marangudakis, "[t]he main defect of [White's] article is its inability to clarify the relationship between ideas and social practice."⁵⁴¹ In answer to this critique, I argue that by uncovering White's Weberian tendencies, scholars in the field of religion and ecology can develop a more nuanced and accurate understanding of White's ideas in "Historical Roots."

In this chapter, therefore, I wish to propose that a Weberian approach is necessary for understanding how White viewed the connection between religion and the environment. I argue that the themes present in White's argument began with, and continued to be shaped and guided by, Weber's theories regarding the relationship between religion and society. While scholars such as Whitney and historian George Ovitt, Jr.⁵⁴² have commented briefly on the similarity between Weber's observation that religion has had a profound impact on the development of modern-day capitalism and White's assertion that religious ideas and values laid the foundation for the current ecological

⁵⁴¹ Marangudakis, "Medieval Roots," 259.

⁵⁴² George Ovitt, *The Restoration of Perfection: Labor and Technology in Medieval Culture* (New Brunswick: Rutgers University Press, 1987), 106 and 138; Whitney, "Lynn White," 165; and Whitney, "Changing Concepts," 30–33.

crisis,⁵⁴³ the relationship between White and Weber remains largely unexplored. By looking more closely at White's use of Weber, I hope to illuminate the complex ways in which White borrowed from, and built upon, the work of Weber.

More specifically, I make four broad claims regarding White's use of Weber: First, I trace White's emphasis on ideas and values, particularly religious ones, as motivating and shaping factors in society back to Weber. White and Weber both adopt this *ideo-centric* position in their analyses of historical change. They both, in other words, see religious ideas—and not just material factors, but both operating alongside one another—as being key precipitators of broad-scale historical social change. They posit that there is, to use Weber's term, an “elective affinity” (*Wahlverwandtschaft*) between religious ideas and interests and material practices.⁵⁴⁴ Continuing this line of thought, I argue that White borrowed Weber's nuanced understanding of religion as an important—but not a necessary—factor in social change. Religious ideas and values, in other words, are seen as a *primary* factor in affecting change in particular historical instances, but religion is *not a necessary* factor as material and other causes may too play a part. In this sense, White's understanding of social change is closely affiliated with *ideo-centrism* but it also takes into account *materialistic* factors. I refer to this middle-ground as *ideo-centric materialism*.

⁵⁴³ Dean R. Hoge, “Judeo-Christian Values and the Ecological Crisis,” in *The Place of the Person in Social Life*, eds. Paul Peachey, John Kromkowski, and George F. McLean (Washington, DC: Council for Research in Values and Philosophy, 1991), 273–74; Whitney, “Changing Concepts,” 30–31, 33, and 41; Whitney, “White, Lynn,” 1735; and Whitney, “Lynn White,” 165.

⁵⁴⁴ Max Weber, “The Social Psychology of the World Religions,” in *From Max Weber: Essays in Sociology*, ed. and trans. H. H. Gerth and C. Wright Mills (London: Routledge, 1991), 284. For additional discussion of this concept, see H. H. Gerth and C. Wright Mills, ed. and trans., *From Max Weber: Essays in Sociology* (London: Routledge, 1991), 62–63.

Second, I explore the ways in which Weber and White underscore the importance and complexity of the process of “rationalization” and the way in which the religious roots of social structures may become hidden over time. Rationalization can mean different things, so a word of caution is in order.⁵⁴⁵ In its simplest manifestation, it seems clear that for Weber rationalization is converse to the position of historical materialism strictly understood.⁵⁴⁶ Rationalization in Weber’s thought, simply put, is the process through which individuals reorganize and streamline their lives in an effort to put their day-to-day lived experiences in line with the ideological and theological expectations of religious beliefs and doctrines. As Weber describes it, it is a “*systematic* regimentation of one’s own life.”⁵⁴⁷

In this chapter, I argue that although Weber and White both maintained that ideas and values can often play a primary role in shaping history, they view this process as multi-causal and bi-directional so that material and ideal causal factors are engaged in an ever-shifting interplay of influence.⁵⁴⁸ In this sense, rationalization can be construed as a multi-causal and multidirectional process. White, therefore, maintained consistency with Weber in his understanding of rationalization not, as is so often claimed, as a “one-way” flow of influence flowing from ideas and values to society, but rather as a dialectical process that shifts between ideal and material causation.

⁵⁴⁵ According to Weber, “Rationalism is an historical concept which covers a whole world of different things.”

Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. Talcott Parsons (Mineola, NY: Dover Publications, [1958] 2003), 78. For additional explanation, see Weber, “Social Psychology,” 293.

⁵⁴⁶ For additional information, see, Weber, *Protestant Ethic*, 55–56.

⁵⁴⁷ *Ibid.*, 86.

⁵⁴⁸ It should be noted that White and Weber both understood these changes as operating at the social, or structural level, rather than at the individual level.

Third, I argue that White and Weber both shared a sensitivity to the ways in which religious ideas became secularized over time through the process of rationalization. In this sense, I suggest that White borrowed Weber's assertion that when religious ideas are reformed and subsumed into material practices and secular worldviews that they then take on a secular character and appear to have no direct link to the religious ideas from which they emerged. That is, the seemingly secular practices that arise from religious ideas and values adopt an internal logic of their own so that the religious roots of the new social systems are obscured over time.

Fourth, the resulting social systems and secularized material practices that emerge from the rationalization of religious ideas and values are often unintended and unforeseen. This relates to a concern, shared by both White and Weber, over whether or not ideas and values can be shaped to create a desirable future. White, for instance, grappled with the tension between the notion, on the one hand, that the ecological crisis is an unintended and unforeseeable consequence of medieval religious ideas and values, and, on the other hand, with the belief that humanity must attempt to choose better religious ideas and values in order to shape a more ecologically flourishing future. If changing ideas and values had unforeseen and unintended consequences, he worried, then is it possible to change them to obtain desired results?⁵⁴⁹ By attempting to discern White's link to Weber, I hope, some clarity on this conundrum might come to light.

⁵⁴⁹ Speaking of stewardship, for example, White stated that "having been reared a Calvinist," that he knows "how sinful my own heart is fundamentally and how sinful most human hearts are and I know what extraordinary capacities we have for developing reasons for doing what we want to do anyway." He also believed that in the process of adopting ecologically favorable theological attitudes or by developing new technologies that "we may be running into booby traps which may be much worse" than the present ecological crisis. "[W]e've gotten out of bad situations," he observed, "but that doesn't mean that we are going to get out of this one." White et al., "Ecology and Religion."

These key concepts make up the central components of what I will refer to as a “Weberian argument” or as “Weberian themes” in White’s scholarship. In this chapter, I contend that the elements present in White’s argument began with, and continued to be shaped and guided by, Weber’s analysis of the relationship between religion and society. I suggest that attention must be paid to the Weberian framework that is utilized by White in order to understand the nuances and complexity that is often overlooked within his argument.

Linking White and Weber—From Correlation to Concrete Ties

Perhaps the best way to attempt a recovery of White’s deep Weberian roots, and to make sense of exactly how White understood the intersection between religion and the environment, is to seek out instances where White describes the impact of Weber on the growth of his own thought and on his own scholarship. White, as I argued earlier in chapter 2, revolutionized the study of the history of technology through his insistence that religion was a deciding factor in shaping the technological landscape of Western, medieval Europe. White believed that his contemporaries, and the historians who preceded him, had focused too intently on materialistic interpretations of history, that is, interpretations that assigned primary causality to economic, agricultural, technological, and political factors.

White extended his focus on the religious roots of technological change in his writings on religion and ecology. White explained that he never would have made the connection between religion and technology, or religion and the environment for that

matter, were it not for a chance reading of Max Weber. Recounting his observation of the road-building in Ceylon in 1926, White noted that, in contrast to construction projects in his native United States, the workers relied on human labor rather than power machinery to dig the roads and to move soil (see chapter 3). The wheelbarrow, he observed in astonishment, was the most advanced technology in use by the local laborers.⁵⁵⁰

More importantly, he observed that the local workers had left a number of snake nests undisturbed in the otherwise level roadways. This reverential attitude towards the snakes by the Buddhist workers, White noted with curiosity, differed from the attitudes that he imagined their Scottish overseers might have had. At the time, White did not make the connection that these differences in attitudes towards technology, labor, and non-humans had any significance.⁵⁵¹ Looking back in retrospect, however, he reported that these distinct differences in attitudes towards both non-human creatures and towards technology were due to the fact that the workers were Buddhist and that their religious ideas and values gave them a profoundly different set of worldviews and practices than their Presbyterian overseers had.

He described these observations as *the* pivotal moment in which he first gained awareness that there was a link between religious ideas, values, and environmental attitudes and actions. More to the point, and critical to the argument in this chapter, White stated that it was Weber's work that led him to his famous conclusion. "Only later, *after* I had read Max Weber," wrote White in retrospect, "did I begin to wonder whether

⁵⁵⁰ White and Watts, "Ecological Crisis."

⁵⁵¹ Ibid.

autonomous Buddhist Singhalese would ever have laid out those tea plantations and consequently built those roads.”⁵⁵²

Reading Weber, in other words, was a critical moment in changing how White thought about the relationship between religion, technology, labor practices and culture. In particular it was revolutionary in how he thought about the relationship between religion and the environment as it unfolded over time. White’s reading of Weber as well as his self-described attribution of his thought to Weber’s influence, I argue, signal the necessity to explore White’s connection to Weber.

This connection to Weber is an aspect of White’s thought that is both deeply illuminating for understanding White’s work and transformative for how scholars in religion and ecology can interpret his thought. Though this connection has not previously been explored in any depth, as noted earlier, I am not the first to recognize the similarity between White’s thought and that of Weber. On several occasions, scholars have noted the similarity of White’s argument to Weber’s social theory. Whitney, for example, describes White as a “follower of Weber”⁵⁵³ and claimed that White was engaged in an “updating of Weber’s thesis.”⁵⁵⁴ White’s role in this Weberian lineage, Whitney avers, was that of a refiner who elaborated on the specifics of their arguments concerning the Christian tradition, Western monasticism, labor, and technology.⁵⁵⁵

Hall and Macleod, in their article, “Technology, Ecology and Religion: Thoughts on the Views of Lynn White,” which is perhaps one of the most exhaustive overviews of

⁵⁵² White, “Continuing the Conversation,” 55 (emphasis mine).

⁵⁵³ Whitney, “Changing Concepts,” 41.

⁵⁵⁴ Ibid., 31.

⁵⁵⁵ See also, Whitney, “White, Lynn,” 1735.

White's work to date, link White and Weber explicitly: "White's essay, of course, was not the first attempt to weave religion into the fabric of intellectual debate over technology and culture." "Max Weber's 1904 *The Protestant Ethic and the Spirit of Capitalism* had attempted to link the Protestant faith with modern styles of economic production."⁵⁵⁶

Hall, Macleod, and Whitney are not alone in their observation that White and Weber are making similar connections.⁵⁵⁷ In a chapter published in *Spirit and Nature*, a seminal text on religion and ecology that emerged out of the groundbreaking Middlebury conferences of the same name, Ismar Schorsch observes that White was "writing in the shadow of Max Weber."⁵⁵⁸ Bron Taylor, in the "Introduction" to the exhaustive *Encyclopedia of Religion and Nature*, discusses White's argument that changes in religious ideas and values can lead to changes in material culture. "From those acquainted to such arguments, there was often hearty agreement," he writes.⁵⁵⁹ Arguments such as Weber's *The Protestant Ethic* had already established similar interpretations of history, he notes.

Two important elements, however, are missing in all of these brief observations:

First, while many have compared the work of White to that of Weber, White's self-

⁵⁵⁶ Hall and Macleod, "Technology, Ecology and Religion," 154.

⁵⁵⁷ In addition to those discussed here in this chapter, others have also linked White and Weber in this way. Wilhelm E. Fudpucker, for example, says that the "over-riding focus of White's [historical] research," in which he worked "to document and explore the interrelationship between Christian culture and technology" directly "extended and vindicated" Weber's argument. Wilhelm E. Fudpucker, "Through Christian Technology to Technological Christianity," in *Theology and Technology: Essays in Christian Analysis and Exegesis*, ed. Carl Mitcham and Jim Grote (Lanham, MD: University Press of America, 1984), 55. Hopper, in a similar fashion, claims that "there are some aspects of White's [of the relationship between religion and changing attitudes towards technology] that are similar to Max Weber's argument regarding Calvinism and the rise of capitalism." Hopper, *Idea of Progress*, 82. See also, Moncrief, "Cultural Basis," 512.

⁵⁵⁸ Schorsch, "Learning to Live," 27.

⁵⁵⁹ Taylor, "Introduction," xv.

admitted intellectual indebtedness to Weber remains largely undocumented by scholars in the field of religion and ecology. Second and perhaps more importantly, although the line of reasoning contained in “Historical Roots” has been compared to Weber’s argument in *The Protestant Ethic and the Spirit of Capitalism*, it remains a loose thread in the existing scholarship. To date, no in-depth exploration following this thread of connection has yet been attempted by scholars in the field of religion and ecology. This chapter grasps at that thread and attempts to discern how it is woven into the rich tapestry of White’s thought. Identifying this loose thread is important because the connections White saw between religious ideas, values, and social change remain a touchstone for scholarship in religion and ecology.

Religion and Social Change—Ideo-Centric Materialism in White and Weber’s Work

Broadly speaking, both White and Weber were profoundly interested in the relationship between religion and social, material, and cultural changes in society. In this chapter, I situate White and Weber’s understanding of social change at the middle ground between *materialism* on the one hand, and *ideo-centrism* on the other. *Materialism*, as understood in social theory, is the belief that social change is driven largely by changes in material culture, whether they are economic, technological, or environmental changes. Karl Marx and Friedrich Engel’s *historical materialism* is a prime example of materialism. *Ideo-centrism*, in contrast, is the belief that broad-scale social changes are precipitated by changes in religious, philosophical, or scientific ideas. For the purposes of this dissertation, I will refer to this proposed middle ground as *ideo-centric materialism*.

White and Weber, I argue, both can be categorized as ideo-centrists since they view religious ideas and values as important drivers of historical change. While I identify White and Weber as ideo-centrists, I do not wish to suggest that they discount material explanations of social change. Although both are well known for advancing an ideo-centrist reading of history, neither White nor Weber suggest that all social change must be driven by ideas and values. The flow of influence, as they understood it, is more than a unilateral, single-cause process. This nuance is important and should not be effaced. However, for the purposes of this dissertation, I focus on their ideo-centrism for the sake of developing a fuller understanding of White's scholarship since his conclusions regarding the connection between religious ideas and values and environmental attitudes and practices occupies a central and controversial position in the field of religion and ecology.

The complexity of Weber's ideo-centrism might not be immediately apparent to readers of *The Protestant Ethic*. However, as Weber himself stated, *The Protestant Ethic* was a thought experiment that he deliberately designed to be one-sided in this regard. In that text, he explained:

Here we have only attempted to trace the fact and the direction of its influence to their motives in one, though a very important point. But it would also further be necessary to investigate how Protestant Asceticism was in turn influenced in its development and its character by the totality of social conditions, especially economic⁵⁶⁰

But, as this passage reveals, he was attempting to accomplish more than a system of interpretation guided by rigid, orthodox ideo-centrism. "[I]t is, of course, not my aim to substitute for a one-sided materialistic an equally one-sided spiritualistic causal

⁵⁶⁰ Weber, *Protestant Ethic*, 183.

interpretation of culture and of history,” he wrote. “Each is equally possible, but each, if it does not serve as the preparation, but as the conclusion of an investigation, accomplished equally little in the interest of historical truth.”⁵⁶¹ What is important to note here, I suggest, is Weber’s multi-directional and plural understanding of the flow between religious ideas, values, and material culture. The flow of influence need not be fixed or unchanging.

Acknowledgements of Weber’s attempt to complexify his ideo-centric stance are common. As historian and religious studies scholar Daniel Pals points out, Weber’s theory of social change emphasized a give and take between materialistic and ideo-centric interpretations of history. Weber “takes it as his mission to follow a distinctively nonreductionist trail of complexity in social causation,” writes Pals. “Religion is neither always cause nor always effect; it may be either or both as only specific facts and changing circumstances ultimately determine.”⁵⁶²

Furthermore, Weber understood religion as capable of being both the subject of, and as the source of, influence in society. “For Weber,” Pals observes, “[d]ifferent forms of human social activity routinely converge and interact. Causal trains do not run on one-way tracks; they often circle, and sometimes the route reverses.”⁵⁶³ Weber, in other words, rejected the notion that social change was always influenced by single factors. Instead, he developed a flexible and dynamic approach to understanding historical change in which any number of causes could be of primary or even of secondary importance. The

⁵⁶¹ Ibid. For further explanation regarding his deliberate one-sidedness in his argument and for his acknowledgments of the shortcomings of such an approach, see Weber, *Protestant Ethic*, 283–84 n. 118.

⁵⁶² Pals, “Eight Theories,” 150.

⁵⁶³ Ibid., 150.

efficacy of any particular mode of thought, whether material or ideo-centric, is dependent upon historical and social context and it was up to the researcher to let evidence bring one or the other to the foreground of interpretation.⁵⁶⁴

Weber's ideo-centric position was created in conversation with, and to a certain extent in reaction to, Marx and Engel's historical materialism.⁵⁶⁵ According to Parsons, the central problem that Weber addressed "seemed to concern the balance between 'ideal' and 'material' factors in historical change. This trend was partly invited by Weber himself speaking of 'one side of the causal chain' and by the intellectual temper of the time."⁵⁶⁶ Or, as sociologists H. H. Gerth and C. Wright Mills explain, "Weber does not squarely oppose historical materialism as altogether wrong; he merely takes exception to its claim of establishing a single and universal causal sequence."⁵⁶⁷ Thus, what Weber was trying to establish was not a monocausal answer to materialism. By stressing the importance of ideas and values, Weber instead attempted to highlight the importance of both ideas and values *and* material factors in social action.⁵⁶⁸ Moreover, Weber added an

⁵⁶⁴ Here, I draw upon Kalberg and Turner to indicate the prevalence of such interpretations of Weber in contemporary social theory. Stephen Kalberg, *Max Weber's Comparative-Historical Sociology* (Chicago: University of Chicago Press, 1994), 144; and Bryan S. Turner, "Preface," in *From Max Weber: Essays in Sociology*, ed. and trans. H. H. Gerth and C. Wright Mills (London: Routledge, 1991), xxii.

⁵⁶⁵ Not only was Weber writing in response to Marx, but he is also said to have thought of his work as a response to Friedrich Nietzsche. See, for example, Richard Swedberg, *The Max Weber Dictionary: Key Words and Central Concepts* (Stanford, CA: Stanford University Press, 2005), 157. White, it is interesting to note, has also been said to have been writing in response to Nietzsche. Max O. Hallman, "Nietzsche, Friedrich (1844–1900)," in *The Encyclopedia of Religion and Nature*, vol. 2, ed. Bron Taylor (New York: Continuum, 2008), 1203. While the present dissertation does not grant me the space to examine this connection between Marx, Weber, Nietzsche, and White further, I suggest that such an exploration merits future consideration.

⁵⁶⁶ Talcott Parsons, "Preface to the New Edition," in Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. Talcott Parsons (Mineola, NY: Dover Publications, [1905/1958] 2003), xiv.

⁵⁶⁷ Gerth and Mills, *From Max Weber*, 47.

⁵⁶⁸ Philip S. Gorski, "The Little Divergence: The Protestant Reformation and Economic Hegemony in Early Modern Europe," in *The Protestant Ethic Turns 100: Essays on the Centenary of the Weber Thesis*, ed. William H. Swatos, Jr. and Lutz Kaelber (Boulder, CO: Paradigm Publishers, 2005), 189.

additional layer to his analysis when he went beyond asking whether or not ideas and values influenced changes in material culture to ask, in the words of Parsons, “*how* they influence them and in turn are influenced by other variables in the situation.”⁵⁶⁹ I highlight this complexity and dialectic flow of influence between material and ideal factors both to emphasize the nuance in Weber’s thought and also to provide content for my argument against “single cause” readings of White which I discuss later in this chapter.

White and Weber’s Ideo-Centric Materialism—Reflecting on “Needham’s Question”

If scholars are to understand White’s scholarship within the context of ideocentrism, then it is helpful to first identify the questions that White was trying to answer in his work as a historian. For the better part of his life, White was preoccupied with what I will call “Needham’s Question.” Posed by the students of historian Joseph Needham in 1937, Needham’s Question begins with the observation that other cultures, such as China, were scientifically and technologically advanced before Western Europe. However, in the Middle Ages and in the centuries that followed, Western Europe became the birthplace of modern scientific thought and technological advance. Needham’s Question asks, in light of this puzzling historical development: “Why did the scientific revolution not begin in China?”⁵⁷⁰

⁵⁶⁹ Talcott Parsons, “Preface,” xvii.

⁵⁷⁰ White and Spence. “Science and Civilisation [sic],” 175.

Building upon Needham's research, particularly that formulated in *Science and Civilization in China*, White explained that most of the technology that defined and revolutionized the culture, economy, and intellectual landscape of Western Europe in the Middle Ages was borrowed from other cultures. From this observation, White set out on a quest to explore the technological dynamism of the Middle Ages. Why, he asked, did Western Europe, a culture that was technologically and scientifically stagnating prior to the Middle Ages, adopt the technology of other cultures with an unparalleled enthusiasm and voracity? And, more importantly, why did Western Europe then become the epicenter of technological advance and the hotbed of the scientific revolution while other, more technologically or scientifically advanced cultures did not?

This question is the focus of White's book, *Medieval Religion and Technology*, and it remained an axis around which most of his historical research revolved. "I was led to conclude," wrote White as he reflected on Needham's Question and his own work as a historian, "that the chief, but not the sole, element in the answer [...] is that in Western Europe during the Middle Ages, technology became more closely integrated with the dominant faith, that is, the Latin version of Christianity, than has been the case in any other culture."⁵⁷¹ The ideas and values of Latinized, medieval Christianity, in his view, were the determining factor in Western Europe's technological dynamism, while other cultures lacked the religious ideas and values needed to enrich and support such advances.⁵⁷²

⁵⁷¹ Ibid., 176.

⁵⁷² As a counterpoint, he observes: "The most curious aspect of this answer is that Greek Christianity, in absolute contrast to its nonidentical Latin twin, was and remains suspicious of technological advance." Ibid., 176).

Needham's problem both provided the fuel for White's quest for understanding history and ignited the spark of White's imagination as he explored how religious ideas and values shaped technological advancement and human attitudes towards the nonhuman world. Expanding upon the work of Needham and, much like Weber, emphasizing the importance of religious ideas and values in shaping culture, White wrote:

[t]he artifacts of a society, including its political, social and economic patterns, are shaped primarily by what the mass of individuals in that society believe, at the sub-verbal level, about who they are, about their relation to other people and to the natural environment, and about their destiny. Every culture, whether it is overtly religious or not, is shaped primarily by its religion.⁵⁷³

This emphasis on the power of religious ideas and values to shape culture is clearly evidenced in "Historical Roots." It is most accurately understood, I argue, as an expansion upon his answer to Needham's Question and as developed in the framework of Weber's social theory. "Since both our technological and our scientific movements got their start, acquired their character, and achieved world dominance in the Middle Ages," averred White in "Historical Roots," "it would seem that we cannot understand their nature or their present impact upon ecology without examining fundamental medieval assumptions and developments."⁵⁷⁴ Thus if scholars are to understand the origins and driving impulses of the environmental crisis, White maintained, they have to understand

⁵⁷³ White, "Continuing the Conversation," 57.

⁵⁷⁴ White, "Historical Roots," 1204–05. Elsewhere, in "Historical Roots," he stated: "One thing is so certain that it seems stupid to verbalize it: both modern technology and modern science are distinctively Occidental. Our technology has absorbed elements from all over the world, notably from China; yet everywhere today, whether in Japan or in Nigeria, successful technology is Western. Our science is the heir to all the sciences of the past, especially perhaps to the work of the great Islamic scientists of the Middle Ages." White, "Historical Roots," 1204.

the theological ideas of the Middle Ages which birthed exploitative attitudes towards nature and the patterns of scientific and technological development that accompany them. White's attempt to understand one set of cultural phenomena—in this case the role of religion in the development and fusing together of science and technology, especially as related to the present environmental crisis—is similar, I argue, to the way in which Weber sought to understand the relationship between religion and the particular development of capitalism more than half a century earlier in *The Protestant Ethic and the 'Spirit' of Capitalism*.

Weber and *The Protestant Ethic*

Since its inception, the sociology of religion has to come to terms with ideocentrism as a general concept. Weber, who was writing in partial response to Marx and Engels's historical materialism, is well known for his emphasis on the importance of religion and religious ideas and values in social change. Marx and Engels, on the one hand, insisted that religious ideas and values could only be properly understood as reflections of the interests of those in economic or political power (at best) or as tools designed to coerce and control the lower classes (at worst). Religion and religious ideas and values, they observed, were reflections of material reality, a set of constructed ideas and values that preserve and support the status quo.⁵⁷⁵

Weber, on the other hand, understood ideas and values as subtle, long-term shapers of culture and economics. While he maintained that “ideal and material” interests

⁵⁷⁵ Karl Marx and Frederick Engels, “The German Ideology,” 1845–46, in *On Religion* (Moscow: Progress Publishers, 1975), 65–6.

were often determining factors in the short-term, Weber was also acutely aware of the way in which religious ideas and values molded these changes and gave them a framework in which to be understood and translated into practice. Talcott Parsons, in the introduction to Weber's *The Sociology of Religion*, highlights this difference between the thought of Weber and the thought of Marx and Engels. He states, "Weber's primary interest is in religion as a source of the dynamics of social change, not religion as a reinforcement of the stability of societies."⁵⁷⁶

In *The Protestant Ethic*, Weber described the way in which ascetic Calvinism brought about the rationalization of modern, industrial capitalism. In this case, the desire for a "proof" of predestination amongst ascetic Calvinists, in tandem with the idea that one was spiritually engaged in a calling in life (*Beruf*) developed within and alongside a nascent form of capitalism to form the kind of investment-driven, industrialized capitalism that exists today in the U.S. (Weber terms this "rational bourgeois capitalism").⁵⁷⁷ As part of a complex milieu of influencing factors, Weber contended that religious ideas and values, particularly those of ascetic Calvinism, shaped culture, economics, and aspects of material culture.⁵⁷⁸ *The Protestant Ethic* displays one of several attempts made by Weber to understand what drove social change and what role religion had to play in the process.

The Switchman Metaphor

⁵⁷⁶ Talcott Parsons, "Introduction," in Max Weber, *The Protestant Ethic and the "Spirit" of Capitalism*, ed. Peter Baehr (New York: Penguin, 2002), xl.

⁵⁷⁷ For more analysis of Weber's position in *The Protestant Ethic*, see: Talcott Parsons, "On 'De-Parsonizing' Weber," *American Sociological Review* 40, no. 5 (October 1975): 666; and Ann Swidler, "Culture in Action: Symbols and Strategies," *American Sociological Review* 51, no. 2. (April 1986): 275–76.

⁵⁷⁸ See, for instance, Gorski, "Little Divergence," 168.

Although Weber understands religious ideas and values as driving forces in social change, ideas and values must be understood alongside what he calls “ideal interests.” Weber artfully encapsulates the relationship between ideas and ideal and material interests in his famous “switchman” metaphor. “Not ideas, but material and ideal interests, directly govern men’s conduct,” wrote Weber. “Yet very frequently the ‘world images’ that have been created by ‘ideas’ have, like switchmen, determined the tracks along which action has been pushed by the dynamic of interest.”⁵⁷⁹ From this rather enigmatic metaphor, it is clear that Weber understood interests as instrumental in shaping and channeling behavior. As sociologist Ann Swidler explains, “Interests are the engine of action, pushing it along, but ideas define the destinations human beings seek to reach [...] and the means for getting there.”⁵⁸⁰ Similarly, Parsons, argues that “[t]he function of religious ideas is, in relation to the interest in salvation, to ‘define the situation.’” Thus, to an extent, interests, such as economic interests or an individual’s personal interest in religious salvation, guide and shape religion. But, behind those interests and actions are ideas that determine the flow and character of those interests and actions. “[T]he content of the religious ideas,” in the work of Weber, “is a significant variable in the determination of the concrete course of action.”⁵⁸¹

Some ambiguity remains in any interpretation of the switchman metaphor due to the unfortunate fact that Weber never clearly defined what he meant by “ideal interests”

⁵⁷⁹ Weber, “Social Psychology,” 280.

⁵⁸⁰ Swidler, “Culture in Action,” 274.

⁵⁸¹ Talcott Parsons, “The Role of Ideas in Social Action,” *American Sociological Review* 3, no. 5 (1938): 660.

or by “ideas.”⁵⁸² Ideal interests have generally been understood by Weber’s interpreters to indicate anything from political or class interests, interest in salvation, or even sexual or emotional interests.⁵⁸³ Limiting the interpretation of “ideal interests” to any one of these terms, such as interest in salvation, would most likely, as Talcott Parsons points out, be “far too restricted a formulation of the concept of interest.”⁵⁸⁴ What is essential to the present discussion is to recognize that although interests are driving forces in social change, that it is the power of “ideas,” in the form of religion or worldviews that determine which interests are given precedent and in determining the path by which actions are carried out.

Religious ideas, in Weber’s view, inform and exist alongside religious values.⁵⁸⁵ But not all ideas or values in a religious system are accorded similar influence. Some ideas or values may supersede or reshape others. He reminded his readers in “The Protestant Sects and the Spirit of Capitalism” that “it is not the ethical *doctrine* of a religion, but that form of ethical conduct upon which *premiums* are placed that matters.” These premiums, such as the emphasis placed on salvation by Protestants, laid out “a certain methodical, rational way of life” that “paved the way for the ‘spirit’ of modern capitalism.”⁵⁸⁶

⁵⁸² Stephen Kalberg, “The Role of Ideal Interests in Max Weber’s Comparative Historical Sociology,” in *A Weber-Marx Dialogue*, ed. Robert J. Antonio and Ronald M. Glassman (Lawrence, KS: University Press of Kansas, 1985), 46.

⁵⁸³ For discussions and commentary on the various interpretations of “ideal interests” in Weber’s texts, see: Parsons, “Role of Ideas,” 659; Parsons, “‘De-Parsonizing’ Weber,” 668; Richard Swedberg, “The Changing Picture of Max Weber’s Sociology,” *The Annual Review of Sociology* 29 (2003): 291; and Swedberg, *Weber Dictionary*, 128–29.

⁵⁸⁴ Parsons, “‘De-Parsonizing’ Weber,” 668.

⁵⁸⁵ Weber, “Social Psychology,” 280.

⁵⁸⁶ Max Weber, “The Protestant Sects and the Spirit of Capitalism,” in *From Max Weber: Essays in Sociology*, ed. and trans. H. H. Gerth and C. Wright Mills (London: Routledge, 1991), 321.

Such a rationalized “conduct” or ethos” is “determined by the ability and disposition of men to adopt certain types of rational conduct,” he explained.⁵⁸⁷ These “dispositions” to follow a certain ethos, Weber argued, were dependent upon the religious ideas present in the surrounding culture. Wherever a certain way of life, or ethos, has “been obstructed by spiritual obstacles, the development of rational economic conduct has also met serious inner resistance.”⁵⁸⁸ Ideas, therefore, become routinized in the daily life of those living in that society and they valorize and make possible the adoption of certain economic or material activities rather than others. The investment and accumulation of wealth in modern capitalism, for instance, might be a more tenable set of activities in a culture that places a premium upon “proving” one’s chosen status of salvation to one’s peers by means of the attainment of financial stability.

Even though it is common practice to refer to Weber’s thought as ideo-centrist, it is necessary to qualify such a statement. Ideas and values, in his view, do not always influence action or social change. “Instead,” writes sociologist Anne Swidler, “he tries to understand *variation* in the influence of ideas or action.”⁵⁸⁹ Ideas and values, while they can play a primary role in shaping actions and interests, are not isolated, or even required, influencing factors. Sociologist Richard Swedberg explains the ideo-centric interpretation of Weber as follows:

The main point of this theory is that an action is not motivated by either ideas or by interests, but by both ideas and interests. While ideas ‘define the situation,’ interests ‘motivate actors to implement implications of this definition of the situation.’ Hans Gerth and C. Wright Mills, however,

⁵⁸⁷ Weber, “Protestant Sects,” 321; and Weber, *Protestant Ethic*, 26.

⁵⁸⁸ Weber, *Protestant Ethic*, 26–27.

⁵⁸⁹ Ann Swidler, “Foreword,” in Max Weber, *The Sociology of Religion*, trans. Ephraim Fischhoff (Boston: Beacon Press, 1993), xi.

have a different view of the way that Weber handles the relationship between ideas and interests; they claim that *elective affinity* is ‘the decisive conception by which Weber relates ideas and interests.’ Finally, Stephen Kalberg cautions the reader apropos the use of the term ‘ideas’ in Weber’s work: ‘despite its centrality in the secondary literature, Weber employs it only sparingly and less so in his writings after *The Protestant Ethic and the Spirit of Capitalism*.’⁵⁹⁰

Although Weber stressed the importance of ideas and values in social change, these quotes make it equally clear that Weber struck an ever-shifting balance, or interplay, between emphasizing the interplay between materialist and ideo-centric factors. “No economic ethic has ever been determined solely by religion,” he wrote in “The Social Psychology of the World Religions.” “Of course,” he continued, “the religiously determined way of life is itself profoundly influenced by economic and political factors operating within given geographical, political, social, and national boundaries.”⁵⁹¹ For the purposes of this study, however, Weber’s ideo-centric materialist interpretation of history will be my main point of reference as I discuss White and Weber.

Before White struggled with Needham’s Question when he attempted to determine what caused the technological dynamism of Western Europe, Weber was occupied with answering a similar question regarding the adoption of modern capitalism. Why, asked Weber, did such radically different economic systems develop in other parts of the world when capitalism was gaining ascendancy in the West? And, furthermore,

⁵⁹⁰ Swedberg, *Weber Dictionary*, 121–22. For more, see, Stephen Kalberg, “Should the ‘Dynamic Autonomy’ of Ideas Matter to Sociologists?: Max Weber on the Origin of Other-Worldly Salvation Religions and the Constitution of Groups in American Society Today” *Journal of Classical Sociology* 1, no. 3 (2001): 291–327. I share Kalberg’s awareness that the term “ideas” is used infrequently by Weber. Despite concerns regarding Weber’s sparse use of the term itself, I feel that the underlying concept and framework of thought is prevalent enough in Weber’s writing to warrant the claim that it is an essential aspect of his social theory.

⁵⁹¹ Weber, “Social Psychology,” 268. For a discussion of the balance struck by Weber between materialist and ideo-centric positions, see, Kalberg, *Weber’s Comparative-Historical Sociology*, 53.

why did some cultures readily adopt capitalism while others rejected it after its introduction to those cultures?

Weber's exploration of the relationship between religious ideas and values and their consequent impact on material culture (e.g. economics, work ethics, etc.) is a theme that is threaded throughout his larger body of work. After completing *The Protestant Ethic*, Weber remained preoccupied with these questions. In a herculean attempt to understand and explain these differences, Weber launched an extensive research project in 1911, which he called *The Economic Ethics of the World Religions* (Die Wirtschaftsethik der Weltreligionen). He was unable to complete the project; nonetheless, it was published in 1920–21 and is today available in the form of three books, *Ancient Judaism*, *The Religion of China: Confucianism and Taoism*, and *The Religion of India: The Sociology of Hinduism and Buddhism*. In these texts, Weber examines the relationship between religious ideas and values and the development of economic systems in the Middle East, China, and India. His basic goal was to reinforce his argument that Protestantism gave rise to capitalism in the West “by showing that an equivalent ethos of ‘world mastery’ was not to be found outside the West.”⁵⁹² Weber continued to explore similar themes in texts such as *The Sociology of Religion* where he argued that Islam and other religions demonstrate different attitudes towards the

⁵⁹² Gorski, “Little Divergence,” 165. See also, Kalberg, *Weber's Comparative-Historical Sociology*, 53. Weber's interest in ideas is not limited only to his work in *The Protestant Ethic*. Writing of his work for the journal, *Archiv für Sozialwissenschaft und Sozialpolitik*, for instance, Weber described the centrality of ideas to the study of society: “The historical power of ideas for the development of social life has been, and remains so today, so massive that our journal [*Archiv für Sozialwissenschaft und Sozialpolitik*] can never evade the task of their exploration. On the contrary, attention to their importance must be counted among its most central obligations.” Max Weber, “‘Objectivity’ in Social Science and Social Policy,” in *The Methodology of the Social Sciences*, eds. Edward A Shills and Henry A. Finch (New York: The Free Press [1920] 1973), 151.

accumulation and use of wealth, attitudes that would have stymied the development of economic systems similar to those in the West.⁵⁹³

This brief survey of Weber's works, especially as they pertain to the relationship between religious ideas and the development of capitalism, points towards the general ideo-centric nature of Weber's social theory. As Weber outlined his goals in *The Protestant Ethic*, he succinctly described the text as "a contribution to the understanding of the manner in which ideas [can] become effective forces in history."⁵⁹⁴ Religious ideas, in this regard, are related to the influence of values and interests as they shape the day-to-day economic decisions of individuals living in particular cultures in particular times. Ideas, like switchmen working on a railway, can steer the values and interests of individuals and groups in novel directions.⁵⁹⁵ What Weber accomplishes in *The Protestant Ethic* and in *The Economic Ethics of the World Religions*, is a demonstration of the ways in which fundamental ideas influence the interests and behavior of individuals in subtle and profoundly diverse ways.

As a scholar familiar with Weber's thought, White also interpreted the relationship between religious ideas and values and material culture and interests in much the same way that Weber did before him. White, whose historical work was so closely tied to answering Needham's Question, spent decades attempting to find an explanation for why differences in religious worldviews led different cultures, historically speaking, to adopt diverse attitudes towards science and technology. Much like Weber, he is best

⁵⁹³ Max Weber, *The Sociology of Religion*, trans. Ephraim Fischhoff (Boston: Beacon Press, [1922] 1993), 263.

⁵⁹⁴ Weber, *Protestant Ethic*, 90.

⁵⁹⁵ Weber, "Social Psychology," 280.

known for his attempts to understand developments in the Christian West. But, like Weber in his work after *The Protestant Ethic*, White also branched out repeatedly (as I demonstrated in chapters 2 and 3) to nuance his assessment and to develop counter examples by looking at variations in Buddhist, Islamic, and other cultures with differing religious cultures than those found in Western Europe.

Ideo-Centric Materialism in White's Scholarship: Social Change, Religion, and Technology

More often than not, White placed his own attempts to understand the relationship between religious ideas, values, and social change directly in conversation with the work of Weber. One of the more significant examples of Weber's influence on his thought can be found in White's 1969 article, "The Iconography of *Temperantia* and the Virtuousness of Technology." There, White discussed "[t]he academic 'Thirty Years War' which started in 1905 with the publication of Weber's *Die Protestantische Ethik und der Geist des Kapitalismus*," and commented on the "considerable" influence of Weber on the study of history. Although he noted that "[t]here is little agreement" on the conclusions reached by Weber and by those who followed in his footsteps, he did feel that "the increment of this [Weberian] controversy to our historical thinking is considerable. Economic history has become part of cultural history: this is now a platitude as it once was not."⁵⁹⁶ In other words, White saw Weber's work as highly influential on the work of historians. Although he took issue with the conclusions reached by Weber, the questions that Weber raised remained influential.

⁵⁹⁶ White, "Iconography of *Temperantia*," 181.

White's continued discussion of Weberian ideas and conclusions, while not always referencing Weber explicitly, is often discernable in the similarities of their arguments and in White's use of citations. "There is a consensus that, when one part of life changes, all the other parts tend to adjust," White wrote. "Specifically, a shift in economic methods and attitudes will probably affect religion, and either change or stasis in patterns of religious thought or emotion may well be felt in economics." While attempts have been made to export American and European "forms of organization, agriculture, and industrial production," he observed, it soon "became clear that local attitudes toward labor, thrift, diet, mobility, or the desirability of surplus production were critical to the workability of a new economic or technological device."⁵⁹⁷ Here, the connection between White and Weber that other scholars have hypothesized is confirmed by his echoing of Weber's conclusions. And, additionally, by citing texts such as Weber's *Archiv für Sozialwissenschaft und Sozialpolitik* and at least three other historiographic studies by Weber, White informs his readers that he was familiar with specific works of Weber.⁵⁹⁸

However influential Weber was on his historical scholarship, it should be noted, those close to White insist that he would most likely balk at being called a Weberian thinker.⁵⁹⁹ In fact, in the "*Temperantia*" article, White refers to the "dull legacy of the debate over Weber's historical sociology," suggesting that he himself found the

⁵⁹⁷ Ibid., 181–82.

⁵⁹⁸ See, for example, *ibid.*, 181 n. 3.

⁵⁹⁹ Lynn Townsend White, III, the son of Lynn T. White, jr. stated that he "has a great hunch that [his] father would be amused (not offended) by the linkage to Weber" and that White and Weber "both had spiritual interests, and they both engaged in kinds of causal arguments, from mind and religion as well as matter." Lynn T. White, III to author, no date. During an interview, Hall also noted that White was "more Weberian than he wanted to admit." Hall interview by Riley, June 28, 2014.

conclusions drawn by Weber and his commentators lacking. Despite this “dull legacy” of debate that his fellow historians developed in response to Weber’s thought, White did acknowledge the importance of the kinds of questions Weber was asking. “Our historical thinking thus has been forced back, not to Weber’s solution, but rather to Weber’s problem: what general cultural factors, including perhaps the religious, account for the remarkably productive Western economic system which we usually call capitalism?” Just as he did so often in his other historical work, White found these questions and conversations to be interesting not only for their intellectual value in understanding history, but also for “the humanistic problem of understanding contrasting value patterns” as it relates to such problems as alleviating suffering in impoverished nations.⁶⁰⁰

The “Ecology of Ideas”—Religion as a Motivator of Changes in Attitudes Towards the Environment

Following Weber’s lead, White devoted a great deal of energy to unraveling what I am calling, “the ecology of ideas,” that is, the cultural and material matrix in which ideas and values arise and their resulting impact on material aspects of society such as economics, agriculture, and most importantly, the environment. In “Historical Roots,” White brought this mode of thinking to fruition when he argued that changes in medieval religious ideas and values, namely the biblical notion of dominion and anthropocentric modes of thought, eventually gave rise to ecologically exploitative attitudes and actions

⁶⁰⁰ White, “Iconography of *Temperantia*,” 182.

in the present. “What we do about ecology,” he wrote, “depends on our *ideas* of the man-nature relationship.”⁶⁰¹

Throughout “Historical Roots,” White reiterated his assertion that ideas matter. For example, when White recommended Francis of Assisi as the patron saint of ecologists, he highlighted the importance of ideas. Francis, he argued, “tried to substitute the *idea* of the equality of all creatures, including man, for the *idea* of man’s limitless rule of creation.” In addition, he posited that the first step in looking at the ecological crisis was to look “in some historical depth, at the *presuppositions* that underlie modern technology and science.”⁶⁰² To bolster this claim, he briefly provided a number of examples where changes in medieval technology or changes in depictions of human relations to nature seem to hint at changing patterns in religious ideas. For example, he argued that changes in plow technology and differences in depictions of human-nature relationships in the artwork of calendars points to a “ruthlessness towards nature.” While it could be said that these changing practices were adopted for the economic and material advantages they confer, White felt that material explanations were insufficient to explain such sweeping changes.

It is significant, he argued, that these changes in technology and economic patterns also appeared to be “in harmony with larger *intellectual* patterns” of the surrounding culture.⁶⁰³ “What people do about their ecology,” he explained, is about more than economic or personal gain. Instead, the relationship between individuals and nature also “depends on what they *think* about themselves in relation to things around them.”

⁶⁰¹ White, “Historical Roots,” 1206 (emphasis mine).

⁶⁰² Ibid., 1207 and 1204 (emphasis mine).

⁶⁰³ Ibid., 1205 (emphasis mine).

This led him to conclude that if humanity is to overcome the ecological crisis, then we must “*rethink our axioms*.” Or, put differently, the underlying problem of the environmental crisis is for humanity to ultimately “*rethink* and refeel our nature and destiny.” The solution, if ideas and values hold so strong a sway over material culture, White controversially suggested, is to “find a new religion, or *rethink* our old one.”⁶⁰⁴

This focus on the “ecology of ideas” in “Historical Roots” is not an isolated trend in White’s scholarship. Much of his earlier historical work is predicated upon the ideocentric assumption that religion is a motivating and shaping force in social change. Deeply Weberian in this sense, White viewed religious ideology in the Middle Ages as having a profound impact on human interests, social organization, technological development, human attitudes towards the non-human world, and the formation of economic and political institutions. This can be found in a variety of White’s texts, such as in his 1940 “Technology and Invention in the Middle Ages.” There, he challenged the predominant notion that changes in medieval technology could be explained by economic interests alone. In his words:

The study of medieval technology is therefore far more than an aspect of economic history: it reveals a chapter in the conquest of freedom. More than that, it is a part of the history of religion. The humanitarian technology which our modern world has inherited from the Middle Ages was not rooted in economic necessity; for this ‘necessity’ is inherent in every society, yet has found inventive expression only in the Occident, nurtured in the activist or voluntarist tradition of Western theology. It is *ideas* which make necessity conscious.⁶⁰⁵

Advances in medieval technology, he went on to explain, were closely tied to religious ideas about the value of human dignity and labor. In his words:

⁶⁰⁴ Ibid., 1204–07 (emphasis mine).

⁶⁰⁵ White, “Technology and Invention,” 22 (emphasis mine).

The labor-saving power-machines of the later Middle Ages were produced by the implicit theological assumption of the infinite worth of even the most degraded human personality, by an instinctive repugnance towards subjecting any man to a monotonous drudgery which seems less than human in that it requires the exercise neither of intelligence nor of choice. It has often been remarked that the Latin Middle Ages first discovered the dignity and spiritual value of labor—that to labor is to pray. But the Middle Ages went further: they gradually and very slowly began to explore the practical implications of an essentially Christian paradox: that just as the Heavenly Jerusalem contains no temple, so the goal of labor is to end labor.⁶⁰⁶

What this quote reveals is that labor saving technology, in White's view, was developed with more than a concern for creating economic advantages. It was also related to a particular set of religious ideas that posited both the innate spiritual value of human life as well as a certain attitude towards the spiritual value of labor. And, although he does not cite Weber directly in this argument, it is interesting to note, for the purposes of this chapter, that he seems to be echoing Weber's assertion that purely economic, political, or technological explanations of history cannot be fully explanatory of material changes in culture.

There is a Weberian theme in White's thought that seeks balance in the tension that exists between the uplifting of the autonomy and rights of individuals on the one hand, and the threat that exists to individual rights and autonomy through the homogenizing power of democratic culture. Just as White seems to have drawn upon Dewey to emphasize the importance of the individual in relation to promoting a common good and sustaining a core set of democratic values, White also appears to draw similar concepts from Weber's discussion of labor.

⁶⁰⁶ White, "Technology and Invention," 22.

The democratization of labor, in Weber's eyes, presents two competing problems. On the surface, the value of the individual appears to be heightened in modern labor practices and in the pursuit of wealth. Here, Weber looks to the writings of Benjamin Franklin to highlight the ways in which the hoarding of wealth through industrious labor appears to be nothing more than self-serving gain. The values behind this, in Weber's words, "are only in so far virtues as they are actually useful to the individual." Yet, conversely, there is a hidden set of ideas and values, a sort of moral framing, undergirding this utilitarian attempt to accumulate wealth that aims towards the common good. Specialization in production and the accumulation of capital through democratized labor practices is always balanced with the question of whether or not "it is useful to the common good or one's own, and not injurious to anyone." Work, then, is always viewed "in moral terms," which must be understood "in terms of the importance of the goods produced in it for the community" as well as in terms of individual benefit.⁶⁰⁷ Just as Weber saw this as contested moral ground in labor practices, White also understood labor and the technology that enhances it as a balancing act between both individual improvement and contribution to the culture of democracy at large. For White, the democratization of labor and technology is, in other words, beneficial not only to the individual but also to the common good of society.

After the publication of "Historical Roots," White continued to think in Weberian terms as he explored the relationship between religion and the environment. In "Continuing the Conversation," he explained that there is a school of thought, which includes Marxism, that assumes "that the economic-social-political component of human

⁶⁰⁷ Weber, *Protestant Ethic*, 52 and 162.

relationships is basic to all the rest of what a society does and produces: its art, religion, literature, science, technology and so on.” But, just as Weber argued more than half a century before him, “[t]his does not explain why changes in economic-social-political relationships take place.”⁶⁰⁸

Echoing Weber’s discussion of “interests,” White explained that technology is nothing more than a way to shape nature according to human “wishes” during his presentation with Watts on religion and the environment:

But what people in any given society wish obviously depends on what they think about their own destiny and what they think about the nature of nature and how they think their destiny is related to the nature of nature. In other words, what we do, what anybody does [...] is an aspect of religion whether we call it that or not.⁶⁰⁹

“Wishes,” the term that White used in this example, can therefore be understood in much the same way as “interests” in Weber’s switchman metaphor. Humans shape nature, adopt technology, and build economic systems according to their wishes, or interests. A person might, for instance, wish to harvest more grain or exert more economic influence in their local community, for example. But, whatever their desires might be, White contends that these wishes only emerge out of the context of ideas inhabited by those individuals. Ideas and values, then, are the ultimate determining factor in many situations.

However strongly White appears to have presented an ideo-centric interpretation of history, it should be noted that he repeatedly nuanced his argument by pointing out that religious ideas and values *were* a primary factor in motivating social change in certain

⁶⁰⁸ Continuing his analysis of Marxism, he argues that a closer study of the history of Marxism reveals that despite its initial claims, it too eventually comes full circle to point out the importance of ideas. In his words, “The history of Marxism demonstrates that what can only be called religious values are fundamental in the dynamics of cultural and social change.” White, “Continuing the Conversation,” 57.

⁶⁰⁹ White and Watts, “Ecological Crisis,” 1971.

historical situations, but that religious ideas and values were not the only causal factors. In this sense, he is much like Weber in his thought process. Whereas he agreed that politics, economics, and other material factors influence the values and technology of a society,⁶¹⁰ he felt strongly that in *particular social contexts*, namely Western Europe during the medieval period, religion often played a dominant role in shaping values and influencing attitudes towards technology, science, and the natural world. Thus in White's view, religion was a powerful driver of social change, but it needed to be considered alongside other material factors.

Some critics of White have suggested that White was a "technical determinist," that is, one who argues that the adoption of certain technological artifacts and attitudes locks society in to a particular course of technological and economic development.⁶¹¹ Despite this "pernicious myth,"⁶¹² as White called it, I posit that White's ideo-centric position is starkly opposite that of a technological determinist. Others have defended White on this point as well. As Hall and Macleod explain:

He was, when all is said and done, no technological determinist. Recall his essay's final prescription: 'More science and more technology are not going to get us out of the present ecological crisis until we find a new religion, or rethink our old one.' He always emphasized the necessity of spiritual approaches.⁶¹³

⁶¹⁰ White, "Continuing the Conversation," 57.

⁶¹¹ P.H. Sawyer and R.H. Hilton, "Technical Determinism: The Stirrup and the Plough," *Past & Present* 24 (April 1963): 90-100. Commenting on this allegation, Whitney writes, "[i]nsofar as the inevitability of White's account ascribes a causal role to religious values, there may be some justification in finding here a form of cultural determinism in White, parallel to the technical determinism alleged by Hilton and Sawyer." Attfield, "Social History," 46.

⁶¹² White, "Transfers and Spinoffs."

⁶¹³ Hall and Macleod, "Technology, Ecology and Religion," 161-62. In a 2014 interview, Bert Hall reiterated this point. In his words, "He was never a technological determinist. [...] Even if he came very close to that position in specific instances, specific arguments about specific issues, he didn't believe it. He did not believe it as a generic position." Hall interview by Riley, June 28, 2014.

Indeed, White himself addressed this accusation in his 1971 talk with Alan Watts.

“[L]et me assure you that there is no predestination in technology,” he told his audience.

“Technology like any other aspect of any culture is a symptom and expression of value structures. I repeat, value structures so generally accepted that often they aren’t really put into words.”⁶¹⁴ Again, in 1975–76, he reiterated his stance when he stated that

“technological change is not inevitable and human behavior in relation to it is not predictable. People have differing and complex structures of value.”⁶¹⁵ Even though technology shapes society, in other words, White insisted that the opposite held true: technology was also influenced by societal factors such as religion, or more generally, an ethos whose roots lie in religion. Technology can influence the development of culture, but ideas and values, in White’s view, were a stronger shaping force in particular circumstances.

In this section, then, I have attempted to show White’s predilection to explain historical change in ideo-centric terms.⁶¹⁶ I am not the first to make such a claim,⁶¹⁷ nor am I the only scholar who has observed a connection between White and Weber in this way. Marangudakis, for example, describes White’s thought as operating under an “idealist assumption” in much the same vein as Weber.⁶¹⁸ And, although White stressed the causal importance of ideas and values in his texts, he cautioned that he was hesitant to

⁶¹⁴ White and Watts, “Ecological Crisis.”

⁶¹⁵ Lynn Townsend White, jr., “Tools and Civilization,” *Perspectives in Defense Management* 24 (Winter 1975-1976): 37.

⁶¹⁶ In Hall’s words: “Lynn’s view of these things was ‘idealistic.’ [...] At least in the Germanic sense where everything is either materialistic or idealistic—*Materialismus* or *Idealismus*. He’s an idealist. He believes. [...] But I think that is central to trying to grasp something about Lynn White.” Hall interview by Riley, June 28, 2014.

⁶¹⁷ See, for example, Sponsel, *Spiritual Ecology*, 76.

⁶¹⁸ Marangudakis. “Medieval Roots,” 244–45.

use the word “cause.” Replying to some of his critics in “Continuing the Conversation,” he explained:

Professional historians, delving into the complexity of the human past, seldom use the word *cause*. The search for causes is like peeling the proverbial onion: there is always a deeper cause. What is more, it seems that for any change of great magnitude there is usually more than one cause. It is this sense of pluralism, and the various strata of historical ‘causation,’ that leads me to prefer the metaphor of *roots*. As I have peeled onions and grubbed for roots, I have more and more converged upon religion, including crypto-religion, as a source for historical explanations.⁶¹⁹

If an ideo-centric theme could be said to persist throughout White’s work, therefore, it would be the argument that the “roots” of economic, technological, or ecological behavior are to be found, whether explicitly stated or not, in the religious ideas and values of particular societies.⁶²⁰ This Weberian undergirding, I argue, not only informed his work, but it is also what gave it the resonance and verve that stuck such a strong chord in his readers.

The Process of Rationalization—The Transformation of Ideas and Values in Weber and White’s Thought

If ideas and values are the fuel for social change in White and Weber’s thought, then rationalization is the transformative combustion from which new actions, practices, and ways of being blaze forth. Rationalization is a highly contested and central concept employed by Weber to explain the way in which religious ideas and impulses shapes the

⁶¹⁹ White, “Continuing the Conversation,” 57.

⁶²⁰ In “Continuing the Conversation,” he sums up his view as follows: “The artifacts of a society, including its political, social and economic patterns, are shaped primarily by what the mass of individuals in that society believe, at the sub-verbal level, about who they are, about their relation to other people and to the natural environment, and about their destiny. Every culture, whether it is overtly religious or not, is shaped primarily by its religion.” Ibid.

attitudes, actions, and daily lives of individuals. “For Weber,” writes Swidler, “rationalization gives ideas their power, because rationalization intensifies and deepens the meaning of inherently non-rational, and ultimately *non-rationalizable*, aspects of human experience.”⁶²¹ For the purposes of this chapter, I highlight aspects of this power of rationalization in Weber’s scholarship and attempt to demonstrate their presence in White’s thought.

In *The Protestant Ethic*, Weber explained the process of rationalization by which Protestant ideas and values gave rise to values and patterns of behavior that became modern bourgeois capitalism. In that text, he theorized that work has been historically viewed as a necessity to be suffered. Work, in some cultures, was merely a means of earning enough for one to subsist upon. Other aspects of life such as family, leisure time, and spirituality were given a high priority over work and one’s energy and resources were dedicated to enjoying them.⁶²² As individuals searched for proof of their predestination in a *Beruf*, or a calling, work took on a new value. One could dedicate time, money, resources, and energy to one’s occupation as a way of ensuring that one had the correct standing before God and to seek out signs of one’s status as one of the elect, or people chosen by God for salvation. This resulted in an increased valuation of labor. This rationalization was inspired by religious interests and resulted in a change in attitudes towards money and work. These individual ideological and economic actions and attitudes then shaped the social sphere until the by-product, in this case industrial capitalism, becomes institutionalized on a societal level.

⁶²¹ Swidler, “Foreword,” xv.

⁶²² Weber, *Protestant Ethic*, 16 and 19–23.

When combined with asceticism's renunciation of worldly pleasures, this created a situation in which individuals began to reorganize their lives around these notions. Weber, in reference to this rationalization of work, wrote that a "state of grace"

was only possible by proof in a specific type of conduct unmistakably different from the way of life of the natural man. From that followed for the individual an incentive methodically to supervise his own state of grace in his own conduct, and thus to penetrate it with asceticism. But, as we have seen, this ascetic conduct meant a rational planning of the whole of one's life in accordance with God's will. And this asceticism was no longer and *opus supererogationis*, but something which could be required of everyone who would be certain of salvation. [...] This rationalization of conduct within this world, but for the sake of the world beyond, was the consequence of the concept of calling of ascetic Protestantism.⁶²³

Thus, increased labor, efficiency, saving, and investment were rationalized alongside a decreased expenditure in wealth and time on non-lucrative ventures. Slowly, life reorganized itself so that energy, time, and money were invested in more work and more capital rather than in leisure and other pursuits. Those elements of life that could be subordinated to the goals set forth by religious ideas and values were transformed, while everything else that could not be subordinated was either eliminated or minimalized. Oddly, Weber commented, "the fulfillment of duty in worldly affairs" became the "highest form which the moral activity of the individual could assume."⁶²⁴

Through time, as it manifested itself socially and culturally, the religious motivations that shaped capitalism disappeared and became a *stahlhartes Gehäuse* [a steel cage] in which participation is virtually obligatory. Weber painted a grim portrait of the rationalized, capitalistic world: "Since asceticism undertook to remodel the world and to work out its ideals in the world, material goods have gained an increasing and finally

⁶²³ Ibid., 153–54.

⁶²⁴ Ibid., 80.

an inexorable power over the lives of men as at no previous period in history.”⁶²⁵

Once locked into this steel cage of capitalism as brought about by the rationalization of Calvinistic ideas and values, it would seem that there is little hope for escape.

This is a complex and compelling aspect of Weberian thought that also has bearing on how White’s work can be interpreted. A once highly religious set of ideas and values reorganizes society through a process of rationalization, Weber argued, yet through time, the religious rationale and coherence is lost. To give but one example, he described the erasure of the religious roots of capitalistic work ethics: “[T]he fulfillment of the calling,” he wrote, “cannot directly be related to the highest spiritual and cultural values.” He observed that in the United States, where industrial capitalism is most unbridled, the “pursuit of wealth, stripped of its religious and ethical meaning, tends to become associated with purely mundane passions, which often give it the character of sport.”⁶²⁶ Society, it would appear, divested itself of its religious underpinnings as the process of rationalization ran its course.

One of the central aspects of Weber’s argument in *The Protestant Ethic* is the development of industrial capitalism out of an inner-worldly Protestant asceticism (behavior oriented towards salvation in the context of the everyday world). Yet, this argument seems highly unlikely when the religious ideas and values are examined on their own. The development of such an unlikely system is owed to the complex and unexpected interweaving of a variety of ideological, material, and historical factors that

⁶²⁵ Ibid., 181.

⁶²⁶ Ibid., 182.

created outcomes that were both *unintentional* and *unpredictable*. In reference to the development of investment capitalism out of Calvinistic asceticism, Weber observed that

it is just that which seems to the pre-capitalistic man so incomprehensible and mysterious, so unworthy and contemptible. That anyone should be able to make it the sole purpose of his life-work, to sink into the grave weighed down with a great material load of money and goods, seems to him explicable only as the product of a perverse instinct.”⁶²⁷

The rationalization of religion, in other words, was something that Weber viewed as giving rise to unexpected outcomes. This unpredictability, and the unintended results that followed, is an aspect of Weber’s thought that can also be traced in the work of White.

White and Rationalization

White followed in Weber’s footsteps by describing human attitudes towards nature as occurring through a process of rationalization. Just as Weber traced the development and rationalization of the Calvinistic through the idea of *Beruf*, or calling, within Protestantism, White noted the influence of medieval Christianity on society in terms of endorsing the use and moral goodness of technology as a means of interacting with other humans and the natural world. Two converging patterns were evident to White: First, he argued that “[t]he victory of Christianity over paganism was the greatest psychic revolution in the history of our culture.”⁶²⁸ The destruction of animistic, “pagan” religions opened the door to technological and economic advance in ways that were previously morally inconceivable. The material world, divested of its spiritual value,⁶²⁹ or “disenchanted,” to use Weber’s term, was ripe for economic use. In the words of White,

⁶²⁷ Ibid., 71–72.

⁶²⁸ White, “Historical Roots,” 1205.

⁶²⁹ See, for example, Ibid.; and Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (New York: Harper Collins, 1983).

“[m]an’s effective monopoly on the spirit in this world was confirmed, and the old inhibitions to the exploitation of nature crumbled.”⁶³⁰

Second, White hypothesized that Christianity developed a strong moral approval of technology. In order to emphasize his point, he gave several examples ranging from drawings of righteous, Christian armies using rotary grindstones while foreign, non-Christian armies sharpened their swords inefficiently by hand to the gargantuan shift in resources and daily church life that coincided with the incorporation of the first mechanical clocks and pipe organs in church buildings.⁶³¹ To give another example in further detail, White described a form of mid-fifteenth century iconography depicting the seven Virtues. In these depictions, Temperance wore a mechanical clock upon her head, she held eyeglasses in her right hand and spurs on her heels, and she stood on the tower of a windmill. According to White, “[t]he message could scarcely be more emphatic: technological advance is superlatively virtuous.”⁶³² The convergence of these two vectors—the obliteration of pre-Christian paganism in Western Europe and the moral endorsement of technology by the church—led to new patterns of unprecedented technological advance and utilization of the earth’s resources that continues to this day.⁶³³ Life in the medieval period, due to the reorganization of society and morality around technological advances, underwent the process of rationalization in which religious ideas and values dramatically transformed economic aspects of culture and daily life.⁶³⁴

⁶³⁰ White, “Historical Roots,” 1205.

⁶³¹ White, “Continuing the Conversation,” 58-9.

⁶³² *Ibid.*, 59.

⁶³³ *Ibid.*, 59–60.

⁶³⁴ White acknowledged that there were other material and environmental forces at work in shaping medieval life as well. For example, he frequently discussed the bubonic plague and the restructuring of environmental practices.

Rationalization, in both the works of White and Weber, is a process by which ideas and values become routinized and incorporated into the day-to-day patterns of behavior of individuals in society. Changes in economic or other material aspects of culture, in their view, are arrived at through a long process of rationalization that is instigated by dilemmas between the *is* of material and social reality and the *ought* of ideology, interests, and religion. In sum, Weber and White claim that religious ideas and values result in material and social outcomes that are, more often than not, consistent with the religious ideas and values which shape them.

Rationalization is not a simple, straightforward translation of chosen ideas and values into desired, predictable forms of action. No one living in medieval Europe, for instance, could have predicted that something so simple as the concept of dominion would lead to behaviors that would cause planetary-wide climate change or the mass-extinction of species. And, it would be difficult to argue that Protestant Christianity is a necessary cause of capitalism or that religious systems are left unaffected by the social systems in which they exist. Paying attention to these nuances in Weber and White's work, subtle as they may be, could redefine how critics respond to White's arguments in "Historical Roots." In the following sections, I discuss the secularization of religious ideas and values in White and Weber's thought, their interpretation of rationalization as

Lynn Townsend White, jr., "Substitutes for Human Muscle: Past Crises," in *Energy and the Way We Live*, article booklet, "Twelfth Course by Newspaper," Courses by Newspaper (San Francisco: Boyd and Fraser Publishing, 1980), 12–14; and White et al., "Ecology and Religion." He also discussed the Bubonic Plague's power to shape psychology and religion of medieval culture in Western Europe. Lynn Townsend White, jr., "Death and the Devil," in *The Darker Vision of the Renaissance: Beyond the Fields of Reason*, ed. Robert S. Kinsman (Berkeley: University of California Press, 1974).

multi-causal and multi-directional, and their understanding of rationalization as producing results that are unpredictable.

The “Secularization” of Religious Ideas and Values

The core argument of White’s “Historical Roots” may seem counterintuitive to some readers. On the one hand, he agreed with the commonly held critique of science and technology held by the environmentalists of his time. He espoused the view that the environmental crisis, to a large degree, is the result of the wide-scale destruction and exploitation of non-human nature that is only possible through modern science and technology. Without these tools and practices, and the accompanying attitude that nature consists of mere objects that can be manipulated and controlled for human ends, it would be difficult to imagine the possibility of an ecological crisis.

On the other hand, he posited that science and technology were themselves the by-products of Christian ideas and values. To those reading “Historical Roots,” this may seem to be an odd, or even counterintuitive argument. At the time in which White was writing, it was not uncommon to view science and technology as an aspect of culture and intellectual life entirely separate from religion. Some would even argue that science and technology could be viewed as the antithesis of the values and ideas contained in Christianity. How, then, did White view the relationship between these arguably contending sets of ideas, values, and practices? In this section, I argue that White, in parallel with Weber, believed that religious ideas and values became obscured and hidden (i.e. secularized) over time through the process of rationalization.

This transformation and secularization of ideas and values over time is a hallmark of Weber's thought in *The Protestant Ethic*, and I argue that White's thought parallels Weber in this regard. Weber theorized that capitalism had become so rationalized and routinized in the lives and worldviews of those living in capitalistic societies that not only did they not think of it as being the result of religious ideas and values, they might even find the very suggestion of such an argument to be absurd.⁶³⁵

However absurd it might seem to the casual observer, Weber argued that the religious roots of certain aspects of culture, such as the behaviors and mindset underlying capitalism, had become obscured and secularized over time. They become so deeply enmeshed in interests and worldviews that they become a cultural given and are virtually "unverbalized," to borrow White's term.⁶³⁶ But why, one might ask, do practices and ethos outlast religious ideas and values in the process of rationalization?⁶³⁷

Religious ideas and values, Weber explained, can come together for a discrete moment in history and give rise to autonomous, self-supporting aspects of culture. The "spirit of capitalism," an impulse rooted in ascetic Calvinism, then became a worldview and way of life unto itself, distinct and independent of the religious ideas and values that steered it along its early tracks. "Since asceticism undertook to remodel the world and to work out its ideals in the world, material goods have gained an increasing and finally an inexorable power over the lives of men as at no previous period in history," wrote Weber.

⁶³⁵ See, for instance, Weber, *Protestant Ethic*, 70.

⁶³⁶ *Ibid.*, 70–72.

⁶³⁷ Swidler, "Culture in Action," 276.

“But victorious capitalism, since it rests on mechanical foundations, needs its support no longer.”⁶³⁸

What is relevant in this discussion of Weber is the fact that religious ideas and values (e.g. self-denying asceticism, the belief that salvation could be proved through this-worldly success, and the notion that to work in a “calling” is morally good), particular to a time and a people, played a key role, like a switchman, in determining the path by which interests (e.g. an impulse to accumulate rather than to spend capital, desire for “proof” of salvation, and a belief in the value of hard work in fulfilling a “calling”) would become rationalized into practice (e.g. the investment and accumulation of resources and the development of an unwavering work ethic). The particulars of Weber’s argument, however, are not as important as the underlying mechanism of rationalization by which the religious ideas and values give rise to practices and values which appear, on the surface, to be entirely divorced from the religious ideas and values from which they sprang. Moreover, the interests and practices which are birthed in this process take on their vitality and self-supporting reinforcements that then begin to shape religious ideas and values in return. Those living in that society, for better or for worse, have no memory or even awareness of the underlying religious motives that historically steered their practices and worldviews.

The Gap Between Words and Deeds—White and the Secularization of Ideas and Values

White, much like Weber, also developed an understanding of history whereby religious ideas and values became obscured, or secularized, over time. In his examination

⁶³⁸ Weber, *Protestant Ethic*, 181–82.

of the relationship between religion and the environmental crisis, White mirrored Weber when he observed that those who have inherited ecologically exploitative worldviews from medieval Western Europe were unaware of the “roots” of their inheritance. Like Weber, White imagined religion as a deeply rooted cultural and psychological wellspring from which the products and traits of society flow. The shaping power of religion is not overt. Rather, religion operates at the “nonverbal” level and its consequences are often unforeseen.

In “The Iconography of *Temperantia* and the Virtuousness of Technology,” White described the response of historians to Weber’s theories in terms of an “academic ‘Thirty Years War.’” Referencing this long, drawn out attempt by historians to come to terms with Weber’s understanding of the role of ideas and values in social change, White put forth the assertion that historians had to examine non-textual evidence to understand the roots of certain aspects of culture. He explained:

If we are to refresh the aridity which sterilized discussions [following Weber’s ideo-centric interpretation of historical social change], we must discover new reservoirs of insight; we must plow adjacent fields still uncultivated. Historians traditionally deal with texts, but, since the mutual accommodations between different activities within a culture (for example, religion and economics) seem often to be subliminal rather than intentional, texts may not be our most profitable sources. We must explore nonverbal symbols.⁶³⁹

Nonverbal symbols, he maintained, contained clues as to the underlying religious ideas and values that had become transformed into secular ideas and practices.

Indeed, White situated his methodology squarely in Weberian terms. And, as I mentioned before, while he valued Weber’s methods, White simultaneously disagreed

⁶³⁹ White, “Iconography of *Temperantia*,” 182.

with his conclusions. “Sometimes visual symbols can tell us the meaning of ambiguous words. The spiritual value of hard work was not, as Weber implied, a Calvinist discovery,” he wrote. “[O]n the contrary, it was integral to the Christian ascetic tradition going back through the monks to Jewish roots.”⁶⁴⁰

This Weberian assertion, drawn from his “*Temperantia*” article, is an argument which White repeated often. In “*Continuing the Conversation*,” he explained how he understood the role of religious values in shaping ecological attitudes and economic practices in various cultures:

Scholars who rummage into the reasons for these remarkable variations talk about contrasting ‘value structures’ that presumably guide the priorities of groups of people. The study of value structures, however, is slippery business because a society’s own verbal formulations of its values may be unconsciously deceptive for two reasons. First, assumptions universally held may be so axiomatic that everybody forgets to mention them [...] The understanding of a society’s value structure must be based less on what that society says about itself than on what it actually does, and on what it expresses in pictures and other symbols less involved in formal education than words are.⁶⁴¹

He maintained that for individuals living in the contemporary West, these values and ideas were primarily Christian in origin, even though they might not appear to be so. “It has become fashionable today to say that, for better or worse, we live in ‘the post-Christian age,’” he wrote in “*Historical Roots*.” “Certainly the forms of our thinking and language have largely ceased to be Christian, but to my eye the substance often remains amazingly akin to that of the past.”⁶⁴² The fact that Christian axioms inherited from the past continue to drive decisions and to comprise the core structures of the worldviews of

⁶⁴⁰ Ibid., 182–83.

⁶⁴¹ White, “*Continuing the Conversation*,” 56.

⁶⁴² White, “*Historical Roots*,” 1205.

many Westerners, White argued, is a fact that is dangerous to ignore. In “Continuing the Conversation,” he wrote:

The gap between our words and our deeds is not hypocrisy. It is something more dangerous: self-deception. We shall not cope with our ecologic crisis until scores of millions of us learn to understand more clearly what our real values are, and determine to change our priorities so that we not only wish but are also able to cope effectively with all aspects of pollution⁶⁴³

To truly understand the ecological crisis, or to understand other political or economic problems for that matter, White insisted that it was essential to look at underlying value patterns. Not only was White making a tenuous claim that religious ideas and values shaped the past, but he was also exercising a great deal of interpretive creativity to support his claims. This background is what gave substance to White’s interest in the “silent majority” of society and his interpretation of religious art and architecture. It is also what frustrated and stymied his critics to such a degree.⁶⁴⁴

In this section, I have argued that White followed Weber’s mode of thought when he concluded that historians must pay attention to “nonverbal symbols” such as artwork and religious iconography in the study of social change.⁶⁴⁵ This methodology was essential, White reiterated, because, as societies are influenced by religion and other value structures to adopt technology and to change their attitudes towards nature, those

⁶⁴³ White, “Continuing the Conversation,” 56.

⁶⁴⁴ According to Hall and Macleod, “White’s method of using resources was always controversial; iconography, manuscript illuminations, homiletic tropes and images, artifacts and the like.” Hall and Macleod, “Technology, Ecology and Religion,” 157. In White’s words: “The second reason why historians are often gun-shy of the sociology of knowledge is that, in order to validate their generalizations, our professional colleagues love to fill footnotes with clear and unambiguous quotations from primary sources. The sociology of knowledge, however, is an area of research in which any high level of self awareness among past writers is rare. People are seldom very analytical about habitual activities and thoughts.” Lynn Townsend White, jr., “Medieval Engineering and the Sociology of Knowledge,” in *Medieval Religion and Technology: Collected Essays* (Berkeley: University of California Press, 1978), 318.

⁶⁴⁵ White, “Iconography of *Temperantia*,” 182.

very same values become obscured and hidden over time. This insight and the methodology that White developed to explore this conundrum is key to understanding White's scholarship. As Whitney explains:

White's ideas on the relationship of Christian values, technological dynamism and environmental decline can only be properly understood within the context of his overall approach to the study of history. White believed that religion was perhaps the most important force shaping human societies and, furthermore, that religious values often operated below the level of conscious expression yet had direct effects on human behavior.⁶⁴⁶

I agree with this observation that this is key to understanding White. But, I add to Whitney's assertion by suggesting that highlighting, and making clear, White's explicit connection to Weber where he makes these claims adds an additional layer of depth and nuance to how scholars might understand his work.

The Flow of Ideas and Values into Practice—Multi-Causal and Multi-Directional Change

Whitney, in "Christianity and Changing Concepts of Nature: An Historical Perspective," charged that White held a "single-cause" understanding of the flow of causation between religion and social change (e.g. changes in worldviews, economic structures, agriculture, science and technology, and more were a result of the rationalization of religious ideas and values).⁶⁴⁷ There, she claims that White identified Latin Christianity as "the single and only cause of medieval technological dynamism."

⁶⁴⁶ Whitney, "White, Lynn," 1735–36.

⁶⁴⁷ Whitney, "Changing Concepts," 34. See also, Whitney, "Lynn White," 167. For a discussion of Whitney's "single-cause" analysis as well as a parallel critique of the "technological determinism" argument which has been aimed at White, see Attfield, "Social History," 31; and Moncrief, "Cultural Basis," 508–12.

Like Whitney, many of those approaching White from a theological or historical perspective often present his findings in “Historical Roots” as if he argued that the flow of influence operated unilaterally between religious ideas, on the one hand, and the values, actions, and material conditions of a society on the other. Joseph Edward De Steiguer, for instance, makes a similar claim in his book *The Origins of Modern Environmental Thought* that White ignored other causal factors and believed that “Christianity alone had caused our ecological crisis.”⁶⁴⁸

In this section, I argue that these are inaccurate portrayals of White and that he viewed the relationship between religion and social change as multi-causal and multi-directional. In what follows, therefore, I compare and contrast White and Weber’s understanding of the relationship between religion and social change. To demonstrate the nuance and depth of White’s thought on this matter, I also draw attention to White and Weber’s engagement with the historical materialism of Marx and Engels.

White and Marx—The Argument Against “Single-Cause” Interpretations of White

Since White played a critical role in nuancing material understandings of ecological change and was instrumental in bringing ideas and values to the forefront of environmental thought in the 1960s (see chapter 1), I argue that he, much like Weber, responded to materialist explanations of history, particularly that of Marx and Engels. The importance of such an argument is twofold: First, it invites scholars to look for instances in which White positioned himself not only in response to Weber, but also in response to Marx as well. Secondly, rather than viewing White as a standalone scholar

⁶⁴⁸ De Steiguer, *The Age of Environmentalism*, 75.

whose work is driven by its own inner-logic, looking for connections to Weber and Marx in this manner provides a layer of intellectual depth that situates White in a larger intellectual conversation. This, in turn, provides not only a better understanding of White, but it also provides scholars with more specific tools for analyzing his contributions to religion and ecology.

Although an ideo-centrist in the Weberian sense, White is acutely sensitive to the importance of material factors in social change. As he explained in “Continuing the Conversation”:

There has long been a tendency—of which Marxist theory is only one of the manifestations—to assume that the economic-social-political component of human relationships is basic to all the rest of what a society does and produces: its art, religion, literature, science, technology and so on. This does not explain why changes in economic-social-political relationships take place.⁶⁴⁹

What this quote demonstrates, I argue, is that it first shows that White was aware of the tension between materialist and ideo-centric interpretations of history when he was writing about religion and ecology. Secondly, it is also evidence that White was engaged with social theorists, and apropos to the present argument, that he was specifically positioning his work in dialogue with—and in partial opposition to—Marx’s historical materialism.

To a degree, much of White’s relationship to Marx’s scholarship reflects a mentality common in the Cold War era. White often framed his discussions of democratic ideas and values in contrast to and in conversation with the communism and socialism of the Soviet Union. White, for instance, holds up the individualism and pluralistic

⁶⁴⁹ White, “Continuing the Conversation,” 57.

tendencies of American culture in speeches like “What Can the Humanities Contribute to World Peace?” and “The American Subversion” and compares and contrasts them to communism and socialism.⁶⁵⁰ The criticism leveled at White also belies the politicization of the responses to White as well, for example the accusation that he was “in the Kremlin’s pay” for suggesting that Christianity was to blame for the environmental crisis.⁶⁵¹ Indeed, White’s references to Marx, as well as some of the responses to White’s arguments appear to be charged with political innuendo and Cold War undertones.

Although White agreed with this materialist view of history in a general sense, he also observed that there was a fundamental tension in Marx’s historical materialism. He observed that Marxism also operated as a sort of religious idea, or as he called it a “faith.” The success of Marx’s ideas, when analyzed historically, highlighted just how important ideas and values could be in generating social change; “The history of Marxism demonstrates,” White wrote, “that what can only be called religious values are fundamental in the dynamics of cultural and social change.”⁶⁵²

White’s positioning of his thought in conversation with, and in contrast to, Marx can be found in a number of other publications. In a 1975 article called “Medieval Engineering and the Sociology of Knowledge,” to give but one example, White attempted to “use some of the methods of the sociology of knowledge to explore certain aspects of the development of medieval technology.”⁶⁵³ There, White explained that many historians

⁶⁵⁰ White, “World Peace.”

⁶⁵¹ White, “Continuing the Conversation,” 60.

⁶⁵² Ibid., 57.

⁶⁵³ White, “Sociology of Knowledge,” 318.

were suspicious of the sociology of knowledge because Marx “used it so brilliantly for polemical purposes.”⁶⁵⁴ Here again, the Cold War political tensions rise to the surface. Like he did in “Continuing the Conversation,” White again observed the tension between ideo-centric and materialist interpretations of history, this time making the link to Marx more evident:

The Marxian contention that all ideas are rationalizations of social status and self-interest is increasingly counterbalanced or supplemented by observations of cases where ideas and attitudes seem to have reshaped social and economic relationships. Pluralism and feedback are basic to the sociology of knowledge as it is developing in contemporary America.⁶⁵⁵

What White was arguing in this passage, it seems clear, is that there was a need for pluralistic and balanced approaches to understanding the link between ideo-centric and materialist theories of historical social change.

Like Weber, White saw the flow of influence between religion and social change as multi-causal and pluralistic. And, like Weber, he nuanced this understanding by describing the process of rationalization as being specific to a particular period of history and to a particular culture. While religious ideas and values might be the primary shapers of one aspect of a particular society, such as attitudes towards technology in the Middle Ages, in other cultures and time periods religion might be a secondary shaper of society in comparison to material factors. Both Weber and White, in other words, understood the relationship between ideas, values, and material factors to be always in flux.

White, similarly, thought of causation as tidal, that is, not as a single stream of causation that crashes relentlessly down the slopes of time like a mountain stream.

⁶⁵⁴ Ibid., 317.

⁶⁵⁵ Ibid., 318.

Rather, he saw the interchange between ideas, values, and material factors as a give and take of causations that was multidirectional and perpetually shifting. Yet, at the same time, he sensed a lacuna not only in the study of the history of medieval technology, but also in the study of environmental issues as well. Hence, while there could be prime movers in the tidal ebb and flow of causation, much like the gravitational pull of the moon on the ocean's tides, he maintained that ideas and values were not the only, nor even necessary, factors in causing shifts in society.

Far too often, simplistic readings of White have led to elementary misunderstandings of how he understood the relationship between religion and ecology. White did not, for example, argue that Christianity created the ecological crisis. Rather, he argued that a complex mix of religious ideas and values had created fertile soil in which technological and scientific dynamism could thrive in medieval Western Europe. Together, a multitude of factors combined with certain religious values, such as the belief that nature had no purpose but to serve humanity, which were then transformed (i.e. rationalized) over time to become a complex set of behaviors, worldviews, and values which made the present ecological crisis *possible*.

White was careful to point out that while religion has been the primary motivating factor in the development of technology and exploitative attitudes towards nature in the West, that this argument must be understood as a contextual one. Much like Weber, he cautioned his readers not to look for one cause or to assume that that cause would always yield the same results. Weber, as demonstrated earlier, argued that the spirit of capitalism was derived from Protestant ideas and ethics while maintaining that it was *only* the

unique *blend* of Calvinistic asceticism alongside a number of other factors that led to the unforeseen consequence of capitalism. As history demonstrates, capitalism developed in different locales based on different motivations independent of Calvinism.

Similarly, and this quote bears repeating for the purposes of this argument, White stated that “it seems that for any change of great magnitude there is usually more than one cause” and it is this plurality and depth of causes that led him “to prefer the metaphor of *roots*.” “No sensible person,” surmised White, “could maintain that all ecologic damage is, or has been, rooted in religious attitudes.” He was well aware of the dynamic advance of technology in the Hellenistic-Roman world and in China, and he concluded from this that Christianity is not the only source of sweeping technological advance. But, he maintained that Christianity provided, in the Western, Christian context of medieval Europe, “a set of presuppositions remarkably favorable to technological thrust.”⁶⁵⁶ The results, in short, were highly specific to a particular culture in a particular time.

White also observed that technology could have impacts on religion just as easily as religion could impact technology; the relationship is, in other words, a two-way street. He traced these trends in his book, *Medieval Technology and Social Change*. Pre-medieval agriculture employed the ox as the primary locomotive farm animal and pre-medieval warfare was conducted mainly with large bodies of soldiers on foot, White informed his readers. But, the import of equine technology from the Near and Far East and the simultaneous endorsement of technology by the church led to a rapid

⁶⁵⁶ White, “Continuing the Conversation,” 57 and 58.

transformation in medieval social structures, warfare, and religion.⁶⁵⁷ Particularly, the utilization of horseshoes and the horse collar, when combined with changes in plow technology, allowed for the highly efficient plowing of fields. The horse, being more expensive to feed, maintain, and use than the ox, forced the peasantry to combine resources and to own horses communally. White suggested that this forced cooperation caused populations to migrate into towns and cities. This process of urbanization, in his words:

laid the foundation for the change in focus of Occidental culture from country to city which has been so conspicuous in recent centuries. It gave the peasantry of northern Europe psychological preparation for that great shift and perhaps enabled them to build up attitudes and spiritual antibodies which reduced the social shock of subsequent developments.⁶⁵⁸

White was aware, just as Weber was aware in *The Protestant Ethic* in his argument regarding capitalism, that religion was not a required factor in creating particular patterns of behavior such as environmentally harmful behaviors. “It is doubtful,” White wrote in “Continuing the Conversation,” “whether the dinosaurs had even a crypto-religion; nevertheless a disastrous crumbling of their ecology reduced them to token survival.”⁶⁵⁹ Even in ancient Greece, White argued, religion had some impact on ecology. Yet, he argued, deforestation at that time could “scarcely be blamed in any direct way on the cult of Athene.” Despite the inability of ideo-centric interpretations to

⁶⁵⁷ Lynn Townsend White, jr., *Medieval Technology and Social Change* (Oxford: Clarendon Press, 1962),

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⁶⁵⁸ Ibid.

⁶⁵⁹ White, “Continuing the Conversation,” 57–58.

explain all phenomena, however, White wrote that “in the end one returns to value structures.”⁶⁶⁰

To sum up, I contend that White is much more savvy in his use of Weber and Marx’s social theory than has been previously acknowledged. If one pays careful attention to the ways in which White borrows from Weber, this popular “single-cause” analysis quickly loses its cogency. White is careful to point out that while certain ideas and values within Christianity have been the *primary* motivating factors in the development of technology and exploitative attitudes towards nature in the West, that *religion is not the only source of change in society, nor is it a necessary one.*

The Unforeseen and Unintended Consequences of the Rationalization of Religious Ideas and Values

White and Weber shared an assertion that changes in religious ideas and values can lead to unforeseen and unintended consequences in other aspects of social life. Weber observed that even when the actor has carefully thought through the consequences, the translation of ideas and values into action often leads to paradoxical results (*Paradoxie der Folgen*). How could Protestants, for example, have predicted that their brand of ascetic Calvinism would lead to the development of a new kind of capitalism? Historian Arthur Mitzman explains that transformation of ideas and ideals into material practices in Weber’s work is “similar to that of Hegel and others, of a complex ‘cunning of reason’ by which people may intend one thing and attain something entirely different.”⁶⁶¹

⁶⁶⁰ Ibid., 58.

⁶⁶¹ Arthur Mitzman, *The Iron Cage: An Historical Interpretation of Max Weber* (New York: Alfred A. Knopf, 1970), 183.

Although this example is particular to *The Protestant Ethic*, this theme extends throughout Weber's entire oeuvre of sociological work. In *The Religion of China*, for instance, he referred to "the paradox of unintended consequences: i.e., the relation of man and fate, of what he intended by his acts and what actually came of them."⁶⁶²

Weber predicted a future, already nascent in his own time, of a "disenchanted" world, a system set in motion by religious ideas and values and yet inexorable and completely detached from the religion which gave birth to it.⁶⁶³ His misgivings and his uncertainty about modernity, about the import of capitalism run amok, led him to imagine that the future for humanity, both materially and spiritually, was fearsomely grim. Although he knew nothing of the ecological crisis as it exists today, his prophetic words on the future of capitalism in the final pages of *The Protestant Ethic and the Spirit of Capitalism* still resonate as strongly as they did then, more than one hundred years ago:

The Puritan wanted to work in a calling; we are forced to do so. For when asceticism was carried out of monastic cells into everyday life, and began to dominate worldly morality, it did its part in building the tremendous cosmos of the modern economic order. This order is now bound to the technical and economic conditions of machine production which to-day determine the lives of all the individuals who are born into this mechanism, not only those directly concerned with economic acquisition, with irresistible force. Perhaps it will so determine them until the last ton of fossilized coal is burnt. In Baxter's view the care for external goods should only lie on the shoulders of the 'saint like a light cloak, which can be thrown aside at any moment.' But fate decreed that the cloak should become an iron cage.⁶⁶⁴

Weber, as this passage suggests, feared that the "irresistible force" of capitalism, accompanied by its technology, machine-production, and asceticism would

⁶⁶² Max Weber, *The Religion of China: Confucianism and Taoism*, trans. and ed. Hans H. Gerth (New York: The Free Press, [1920] 1951), 238.

⁶⁶³ Weber, *Protestant Ethic*, 181–82.

⁶⁶⁴ *Ibid.*, 181.

become an “iron cage” that might continue forward inexorably, swallowing up every last bit of fossil fuel, with humanity unable to change its course.⁶⁶⁵

Despite his pessimism, Weber also allowed some hope that the bonds of this cage might be broken. “No one knows who will live in this cage in the future,” he wrote, “or whether at the end of this tremendous development entirely new prophets will arise, or there will be such a great rebirth of old ideas and ideals.”⁶⁶⁶ In what follows, I want to explore the idea that such prophetic thinking might lay forgotten in the writings of White, the intellectual legatee of Weber, who suggested that humanity must “find a new religion, or rethink our old one.”⁶⁶⁷

Shaping the Future—White and the Transformation of Religious Ideas and Values

White was a true believer in the transformative power of ideas and values, but as I think his writings suggest, he was agnostic in his belief that an ecologically flourishing future was possible for humanity. In his view, a dual barrier to creating a better future is imposed upon humanity: On the one hand, his Weberian ideo-centrism, hints at the predicament that even if religious ideas could be changed, for example replacing the biblical idea of dominion with a more ecologically-friendly reading of the Bible, that the results would be difficult to predict. Since he understands the consequences of the

⁶⁶⁵ Ibid. Weber also professed unqualified doubt regarding humanity’s ability to use religious ideas to steer the course of society. As Swedberg explains: “Weber was also much interested in the unintended consequences of ideas. When one attempts to realize certain ideas, something else may happen, as *The Protestant Ethic* shows. At one point Weber even speaks of ‘a universal ‘Tragedy’ ... that dooms every attempt to realize ideas in reality.’ What this tragedy consists of, it turns out, is that an organization usually comes into being as a result of an attempt to realize ideas; and this organization soon develops its own interests and becomes ruled by careerists. Weber sees this process as a necessary part of the ‘objectification’ of ideas.” Swedberg, *Weber Dictionary*, 121.

⁶⁶⁶ Weber, *Protestant Ethic*, 182.

⁶⁶⁷ White, “Historical Roots,” 1206.

rationalization of ideas and values to be both unintended and unpredictable, in other words, deliberately replacing one idea or value with another might not yield the desired results.

On the other hand, even if it were possible to achieve desired results, any hope that White might have had for the future was tempered, as the last chapter demonstrated, by a deeply seated Calvinistic belief in the inherent sinfulness of humanity. Whatever good intentions humanity might have, argued White, humanity's own inability to act selflessly would hinder any attempt to improve life at the societal level. But as difficult as it might be, and despite these dual oppositions, White ultimately believed that it is humanity's duty to attempt to create a better world.

The power of White's arguments is that they alerted scholars to the potential religious roots of the ecological problem while simultaneously suggesting that religion has the power to change human worldviews and actions. Whereas Weber saw the world as being locked into its steel cage of capitalism, White departed from a Weberian course by suggesting that the key to escaping the cage lies in becoming cognizant of the religious roots of the ecological crisis and the way in which this crisis is an unintended consequence of religious ideas and values. In doing so, posited White, society can alter or do away with harmful religious ideas and values and bring about more positive attitudes. This suggestion that society could reclaim its course and shape its future has sparked considerable scholarship, activism, and controversy.

The further he delved into the labyrinth of history, the more deeply White began to feel that there was no clear escape that could be read in the patterns of the past.

“History can be extremely valuable as long as you remember that it offers suggestive insights rather than simplistic lessons,” he stated. Like a maze, the path that lay behind offered no clear prediction of what lay ahead. Describing the “uniquely widespread and urgent” nature of the ecological crisis, White troubled over his belief that “since the roots of our trouble are buried in religious dogma, the remedy must also be essentially religious.” Trapped in this religious dilemma, White argued, the study of history is not able to “foretell the future.” What it can do, he wrote, is that “it can free us to be contemporary.”⁶⁶⁸ The challenge, therefore, is to plod forward and to gather lessons for navigating what lies ahead.

In his writings, it is clear that White thought that deliberately changing religious values and ideas could lead to a more ecologically responsible society. By suggesting that Christians “rethink their religion,” and by offering Francis as the patron saint of ecologists in “Historical Roots,” it seems clear that White thought change was at least possible. In his other writings on religion and ecology, White maintained this hopeful stance. In “Continuing the Conversation,” for instance, he gives the example of slavery to illustrate the point that deliberate, thoughtful changes in religious ideas and values could lead to positive change. If slavery was generally accepted as morally acceptable by the majority of Christians, and if it was still practiced just two hundred years before the time in which he was writing, then perhaps a similarly wide scale change was possible in ecological terms.⁶⁶⁹

⁶⁶⁸ Davidson, “New History,” 3.

⁶⁶⁹ White, “Continuing the Conversation,” 61.

When it came to directing the future development of science and technology, especially insofar as the environmental crisis was concerned, White offered additional clarification as to his stance on the issue in a 1975–76 article called “Tools and Civilization.” Published in *Perspectives in Defense Management*, a venue that seems like an unlikely place for such an argument, White worried over the ecological impact of commercialism. He wrote that he was “nauseated” by the culture of consumption that he found himself to be a part of. “This is destroying us spiritually, and as the materials crisis deepens it will destroy us physically unless we change our dominant values.” Describing the urgency of changing attitudes towards the environment, he stressed the importance of deliberate, directed change. “I think it is essential,” he wrote, “that within the next two or three decades we try, very consciously, not to let external forces shape our society but rather to mold it ourselves.” Humanity must, he continued, “build a society, and we must build our own lives, in such a way that we consume much less.”⁶⁷⁰

Whether or not humanity will remain locked in the “iron cage” created from the rationalization of religious ideas and values as Weber predicted remains to be seen. Although they worried that shaping a better future might not be possible through deliberate changes in religious ideas and values, neither White nor Weber remained wholly pessimistic. White, in particular, seems to have harbored hope that the ecological crisis might be reversed. “In the long run,” White claimed in his talk with Watts, “a people gets the ecology it deserves and wants.” Those living in society today “build [their] ecology in terms of [their] prime values.”⁶⁷¹ If those values can be changed, he

⁶⁷⁰ White, “Tools and Civilization,” 42.

⁶⁷¹ White and Watts, “Ecological Crisis.”

suggested, a more ecological way of life may be created. It would likely be an overstatement to suggest that White could be considered to be one of the “new prophets” predicted by Weber, yet White did imagine that a better future lay, to borrow Weber’s phrasing, in “a great rebirth of old ideas and ideals” that White advocated in “Historical Roots.”

Conclusion

The impact of Max Weber’s work on Lynn White is an unaddressed issue in the current scholarship. This chapter has traced the Weberian threads woven into White’s work and traced them through his scholarship both as they relate to the study of history and as they pertain to his scholarship on religion and the environment. Rather than allowing these connections to remain unexplored, as has been the case in the past, I argue that scholars in the field of religion and ecology must pay careful attention to the previously overlooked Weberian themes present within White’s work.

It can be said that White, like Weber, followed a percipient impulse to investigate the impact of religion in areas where other scholars had not yet looked. While White is not a sociologist, his treatment of Western society follows Weber’s lead in four critical ways: First, White takes the stance of what I have termed an “ideo-centric materialism.” He understood religion and the ideas and values generated within it as being the wellspring from which economic systems, political structures, class hierarchies, economic attitudes, and the actions of individuals and societies towards the non-human

world bubble up. These wellsprings must also be assessed alongside and in process with material explanations of social change.

Second, White follows the historical process of rationalization throughout the medieval period as societies reorganized themselves around the Christian endorsement of technology and dominating attitudes towards nature. Much like Weber, he held to the view that religion acts as a catalyst in shaping society and that the flow of influence between ideas, values, and social change was, more often than not, multi-causal and multi-directional. He suggested, in other words, that this flow of ideas and values from religion to society does not occlude the flow of influence in a reverse direction. Rather than understanding White as advocating for a “single-cause” explanation of the ecological crisis, and looking merely to theological ideas and religious values, I argue that it is better to search out ways in which White nuanced his argument in order to highlight the pluralistic and culturally specific ways in which religion shapes society.

Third, like Weber, White was sensitive to the ways in which religious ideas and values became secularized over time through the process of rationalization. Although White believed that the present ecological crisis was, in fact, the result of the exploitative tools and mindsets afforded by science and technology, he firmly maintained that the dual development of science and technology was itself rooted in religious ideas and values that were no longer recognized. Once rationalized, these developments then became self-propagating systems that appeared, on the surface, to be independent from, and oftentimes at direct odds with, the religious roots from which they sprang.

Lastly, White and Weber shared the conclusion that while religious ideas and values give rise to complicated social systems and material practices, changes in religious ideas and values led to unforeseen and unintended consequences. White was adamant on the point, it should be noted, that Christianity is not a necessary source for ecologically negative views nor is religion a necessary motivator for social change broadly considered. Indeed, he highlighted other potential Christian sources in the figure of Francis. In the case of the current ecological crisis, however, White did argue that since the roots of the issue appear to be religious, then any proposed solution must involve a change in religious ideas and values. In regards to whether or not those can be directed towards positive ecological change, White remained a hopeful agnostic in that regard. This final notion, the hopeful suggestion that society can become aware of its roots and attempt change is what pushes the religious response to the ecological crisis forward. The underlying assumption that religious values operate below the conscious level within social structures suggests that in order to alter these deeply situated convictions much work must be done.

Chapter 5—Conclusion: From Iconoclast to Ideo-Centric Materialist

“What shall we do? No one yet knows.”

—Lynn Townsend White, jr., “The Historical Roots of Our Ecologic Crisis”

This is a project of rehabilitation, not one of deconstruction. The field of religion and ecology, by and large, operates under the assumption that ideas matter. Reassessing the work of Lynn White is important in discussing this grounding concept not only because most scholars in the field of religion and ecology use White’s “Historic Roots” article to support that claim, but also because an in-depth examination of White’s scholarship points towards a deeper and multifaceted theoretical grounding. Developing an awareness of this deeper theoretical grounding can then be used to discuss, analyze, and possibly even reform how scholars approach the relationship between religious ideas and values and environmental attitudes and actions.

In this concluding chapter, then, my purpose is not to determine exactly what the “Lynn White thesis” was and how it should be used, but rather my intent is to uncover new ways of reading White and new interpretations of his work that have gone unnoticed. In doing so, I highlight White’s historical methodology (as discussed in chapter 2) and his additional writings on the relationship between religion and the environment to argue that White’s scholarship invites scholars to broaden their understandings of White and to expand the way in which White’s work is used to explore the relationship between religious ideas and values and environmental attitudes and action.

In response to White's "personal theology of ecology," most notably his "spiritual democracy of all God's creatures" (as described in chapter 3), I also call attention to the ways in which White narrates a constructive ecotheological platform that invites scholars and religious practitioners to move beyond the dominion-stewardship debate towards more radically inclusive theological positions. In this discussion I contextualize White's theology as an outgrowth of mainstream liberal Protestantism in the tradition of Niebuhr and draw White into conversation with theological voices like Thomas Berry, Larry Rasmussen, and the recent call for "integral ecology" made by Pope Francis in his encyclical, *Laudato Si'*. White's ecotheological approach, as I attempted to demonstrate, also has pedagogical implications for those who teach religion and ecology as well as practical value for those who are involved in the "greening" of Christianity. Throughout this exploration, I have asserted that framing White as a mere critic of religion is an inadequate portrayal of White for those who wish to move beyond the criticisms present in "Historical Roots." Rather, it is important to recognize that he was writing from a faith perspective and attempting to articulate a constructive theological position.

Lastly, after discussing White's Weberian grounding in chapter 4, I offer his work as a middle ground between ideo-centric and materialistic approaches to religion and ecology. This reading of White, I contend, places White in tension with recent calls for pragmatism in Christian theology and ethics. It also combats simplistic, reductionist understandings of the flow of influence between religious ideas and values and changes in environmental attitudes and action that is common in current scholarship.

Rehabilitating White's legacy and developing a broader understanding of his thought is important because most readings of White are premised upon simplistic and highly selective interpretations of his work that obscure and distort the depth and breadth of his scholarship. This is evidenced in the near-universal usage of the phrase the "Lynn White thesis" to describe one or several aspects of White's argument in "Historical Roots." In the five decades of responses to White, the "Lynn White thesis" has been defined as the assertion that dominion theology is to blame for the environmental crisis, it has been labeled as an argument for Christian stewardship of the environment, it has been used to describe White's perceived dismissal of Christianity as a viable "green" religion, and it has been understood in a variety of other ways ranging from a critique of anthropocentric worldviews to the general assertion that Christians should look to more radically inclusive ways of thinking about the relationship between humans and non-human others as found in the stories and teachings of St. Francis.

In contrast to these portrayals of White, I suggest that the "Lynn White thesis" does not exist, at least not in a singular, reductionistic sense. The "Lynn White thesis" is a construct or an abstraction that reveals more about the ways in which "Historical Roots" has been *read* or interpreted by scholars than it represents what White actually *said* about the relationship between religion and the environment. It is more useful, then, to think about White's work as a pluralistic, evolving whole that is more constructive, complex, and considered than cursory readings allow. In this sense, rather than continuing to rely upon simplistic interpretations of his work and using White and the "Lynn White thesis" as a "straw man" which can easily be knocked down, I suggest that

scholars should engage in “constructive borrowing” from White’s larger body of work so that new insights may be found and old conversations may be given new life.⁶⁷²

Beyond the Lynn White Debate—Constructive Borrowing

White’s work on religion and the environment has become something of a literary leviathan: forbidding, dangerous, and mysterious. At just five pages in length, “Historical Roots” is so complex and full of pithy insights that it still manages to exasperate readers and inspire new thought after nearly five decades of debate and controversy. Since the publication of “Historical Roots” in 1967 there has been an unflagging interest in White and what has been dubbed the “Lynn White thesis.”⁶⁷³ In the words of Elspeth Whitney, “White’s powerful and original reading of history, which has shaped a generation of scholarship, remains the touchstone for current and future discussion.”⁶⁷⁴ Yet, despite the usefulness of White’s ideas for scholars interested in the intersection of religion and environmental attitudes and action, the field of religion and ecology does not appear to have come to a scholarly consensus about the consequence or meaning of his work.

⁶⁷² For examples of those who have used White in simplistic or reductionistic ways, see, Calvin B. DeWitt, “The Scientist and the Shepherd: The Emergence of Evangelical Environmentalism,” in *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb (New York: Oxford University Press, 2006); Margaret A. Farley, “Religious Meanings for Nature and Humanity,” in *The Good in Nature and Humanity: Connecting Science, Religion, and Spirituality with the Natural World*, eds. Stephen R. Kellert and Timothy J. Farnham (Washington, D.C.: Island Press, 2002); McFague, “Ecological Christology”; Lisa Sideris, “Religion, Environmentalism, and the Meaning of Ecology,” in *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb (New York: Oxford University Press, 2006); Tirosh-Samuelson, “Sources of Judaism”; and Yaffe, “Introduction.”

⁶⁷³ See, for example, Bauman et al., “Territory Ahead”; and Ernst Conradie, ed., “The Journey of Doing Christian Ecotheology: A Collective Mapping of the Terrain,” *Theology* 116, no.1 (2013): 4–17.

⁶⁷⁴ Whitney, “White, Lynn,” 1736.

To a certain extent, the response to White has been defensive and reductionistic. From the beginning, many scholars have bemoaned the ways in which White has shaped the study of religion and the environment. Perhaps the most telling of these statements comes from an early response by Eugene Hargrove, a prominent environmental philosopher and current editor of the journal *Environmental Ethics*. In his 1986 preface to *Religion and Environmental Crisis*, titled “Religion and Environmental Ethics: Beyond the Lynn White Debate,” Hargrove reflects upon the defensive nature of the response to White. Although more recent examples could be employed to make a similar point, and other responses to White have been far more influential, I highlight Hargrove here because he draws attention not to White’s argument itself, but rather to the ensuing debate and controversy over White’s work. Hargrove, in contrast to so many of the recent responses to White, eloquently points out what I believe to be the root of the debate and controversy surrounding White’s scholarship on religion and ecology: it is the debate itself, the scholarly responses to White, that are in most need of reform, not White’s arguments themselves.

In that 1986 text, Hargrove argues that the direction taken by scholarship on the intersection of religion and the environment in the wake of “Historical Roots” is counterproductive to developing adequate religious responses to the ecological crisis. This defensive and unproductive state of affairs, Hargrove laments, could have been avoided had White never written “Historical Roots.” In his words:

In retrospect, it would probably have been better if the Lynn White debate had never occurred. Had the discussion of the relation of religion and environmental ethics not been focused on the Christian blame or on the effectiveness of Eastern religions and philosophies as environmental

replacements for Christianity, then we might have seen a period of fruitful comparative study of world religions aimed not at finding the best religion for everyone to adopt, but rather at finding ways for major religions to respond to the environmental crisis. In such a context, the emphasis would not have been on blame or replacement, but on *constructive borrowing*.⁶⁷⁵

Since the debate itself has proved to be less fruitful than some might have desired,

Hargrove seems to be suggesting, serious reform or rethinking of White's legacy and the debate surrounding it is in order:

We cannot travel the same circular road forever. If there was a final and correct resolution to the Lynn White debate, we would have found it long ago. We must, therefore, following Wittgenstein's recommendations, both early and late, dissolve rather than solve this issue and move on to new ones where progress can be made. *The way out of this fly bottle is the way we came in [...]* When we finally move beyond the Lynn White debate, it will then be possible for a rich period of comparative study to begin. For it to be a truly fruitful period, however, we must leave behind much of the baggage acquired during the Lynn White debate.⁶⁷⁶

Although I disagree with the core of Hargrove's conclusion that "it probably would have been better if the Lynn White debate had never occurred," he raises several points which have become perennial questions in the ongoing discussion of White and serve as reference points for the discussion that follows.

Most notably, Hargrove observes that discussions of religion and ecology largely exist in the shadow of the Lynn White debate. Indeed, at times scholars have simultaneously acknowledged both the threadbare nature of the ongoing discussions surrounding White's work as well as the unavoidable appeal of his writings. Whether for

⁶⁷⁵ Eugene C. Hargrove, "Preface: Religion and Environmental Ethics: Beyond the Lynn White Debate," in *Religion and Environmental Crisis*, ed. Eugene C. Hargrove (Athens, GA: The University of Georgia Press, 1986), xvii (emphasis mine).

⁶⁷⁶ Ibid.

good or ill, White's arguments remain a central organizing principle that scholars must continue to grapple with.

With article titles like "Beyond the Lynn White Thesis"⁶⁷⁷ and "After Lynn White,"⁶⁷⁸ recent attempts to rethink the Lynn White debate also seem to suggest, whether intentionally or not, that scholarship needs to move out of the long shadow cast by "Historical Roots."⁶⁷⁹ While Hargrove's early rebuke of "Historical Roots" takes a more radical approach that wants to erase White's voice completely, I recommend an alternative route to approaching the discussion of White's ideas. In order to "move beyond the Lynn White debate," I argue that what is needed is not the excising of White's thought in its entirety as Hargrove seems to want, but rather to rethink the way in which the debate itself is unfolding. As Hargrove says, the problem lies not in White's argument itself, but rather to find a way to "*leave behind much of the baggage acquired during the Lynn White debate.*"⁶⁸⁰ The ways in which scholars respond to White, in other words, is in need of reform. If White's ideas and arguments are "the way in" to the bottle in which many scholars feel they are trapped, to borrow Hargrove's metaphor, then perhaps rethinking the very way that the Lynn White debate is framed is "the way out" through that problematic bottleneck.

There is merit in Hargrove's endorsement of moving beyond "Christian blame" and the critical aspects of White's thought and focusing instead upon "constructive borrowing." However, in addition to the comparative religions approach that Hargrove

⁶⁷⁷ Djupé and Hunt, "Beyond the Lynn White Thesis."

⁶⁷⁸ Jenkins, "After Lynn White."

⁶⁷⁹ Ibid.

⁶⁸⁰ Hargrove, "Preface," xvii (emphasis mine).

highlights, I would add that scholars can also engage in “constructive borrowing” from White’s scholarship as well. White’s use of Weber, his Niebuhrian theology, and his “spiritual democracy of all God’s creatures” seem to be particularly ripe with potential. Since “Historical Roots” is a common reference point, and a contested one at that, it is worth pursuing a deeper understanding by not only reading White more closely, but also with an eye to the aspects of White’s thought which might be useful to “borrow.”

In proposing an alternative—and arguably more inclusive—reading of White, it is my hope that the findings presented in this dissertation will open up a flourishing conversation, or as Hargrove describes it, a “truly fruitful period” of scholarship. My goal therefore, is not to suggest the interpretations of White in this dissertation are the only correct readings of White or that his work cannot be useful unless considered as a whole. Indeed, it would be a mistake to be dismissive of the ideas and debates that have sprouted from the many readings—and misreadings—of White’s work. Instead, this dissertation is an invitation to rethink White and to engage with a wider range of his ideas and publications.

Reading Beyond Roots—White’s Historical Methodology and Interdisciplinarity

No greater error could be committed than to think of “Historical Roots” as having developed in an intellectual and religious vacuum. Like members of an ecosystem, shaped by evolutionary pressures and forged in the crucible of time, ideas are also the result of a complex history of difficult to discern flows of influence and expressions of creativity. This “ecosystem” thinking informs this study of White in many ways.

On the one hand, it entails treating White's statements on religion and the environment like organisms and species existing not as isolated, stand-alone entities, which many have done, but instead as distinct expressions of thought existing in a system of interconnected, deeply intertwined relationships. White's argument in "Historical Roots," for instance, is as equally dependent upon his nascent interest in religion as a primary motivator for social change, expressed in his 1938 dissertation *Latin Monasticism in Norman Sicily*, as it is upon the idea that Christian attitudes toward human well-being and labor altered and sped up the course of technological development in the Middle Ages that he described in his 1940 article, "Technology and Invention in the Middle Ages."

On the other hand, and very closely related, not only do these distinct expressions of White's thought exist alongside one another like species or organisms in an ecosystem, but they also can be thought of as existing along an evolutionary spectrum. Each piece of White's scholarship is connected to the other, in varying degrees, in that they share insights, they interweave methodology and theory, and they share a common body of background knowledge and historical data. To give but one example, White's research on the medieval heavy plow is like a strand of DNA passed on from publication to publication. As shown in chapter 2 of this dissertation, White described the way in which the adoption of the heavy plow led to humanity becoming the "exploiter" of nature in his 1954 article "The Changing Past,"⁶⁸¹ a finding which he would use to craft his argument in "Historical Roots"⁶⁸² and which also appears in later works such as his 1978 book,

⁶⁸¹ White, "The Changing Past," 32.

⁶⁸² White, "Historical Roots," 1205.

Medieval Religion and Technology. While his discussion of the heavy plow as a historical artifact mutates almost imperceptibly as White's research deepens over time, and is used by White to express different ideas and conclusions, it is an element of White's thought—like many others—that can be traced back and followed through its evolutionary lineage leading up to, and beyond, his claims in "Historical Roots."

Not only can White's work be understood as an evolution of ideas, but White as a scholar can, and should, be conceived of as a dynamic and changing thinker. As a scholar, White reinvented himself many times, transforming his ideas as he incorporated new historical data, methods, and insights. His scholarship on the history of medieval technology was shaped and guided by the work of a number of other scholars. From Kroeber's anthropological methods to des Noëttes' work on the history of the use of horsepower, the list of thinkers, methods, and ideas White lists as influential on his thought is extensive.

White's longstanding and variegated interest in social issues is equally wide-ranging. From the affinity for psychology and theology instilled in him by his father, to the social and theological teachings of Reinhold Niebuhr, to his role as President at Mills College which steered him towards feminism and a concern over gender inequality in education, White's broad interest in issues related to individual and societal wellbeing changed over time and adapted to the social concerns of his day. White, in short, was a product of his time and should be read as such.

The Lynn White who wrote "The Crisis in Democratic Leadership" under the shadow of World War II in 1944, for instance, is not the same Lynn White who wrote

“The Future of Compassion” in 1978 shortly after the emergence of the mainstream environmental movement in the early 1970s. In this sense, there is value in reading White as a commentator on, and a product of, the political and cultural context in which he wrote. Frequently, White was forced to change the focus and methods of his research in response to political circumstances. In the early 1920s, for instance, he had to turn away from his desire to be a “Chinese archaeologist”⁶⁸³ and instead decided to study medieval history. Again, in 1933 while working on his dissertation research, he felt compelled to leave Italy due to increasing upheaval in the wake of the burning of the Reichstag.

Contextualizing White’s early work in the political and social context of his time raises questions, for example, about the relationship between White’s staunch support of democracy and democratic ideas beginning in the World War II era and continuing up to his ecotheological thought. White often contextualized his work on democracy in relation to fascism and as a response to violence and in support of humanistic and egalitarian values in world politics.⁶⁸⁴ But how, one wonders, does this advocacy for democracy change in the 1970s and 1980s when White published most of his existing work on ecology? Undoubtedly, as I demonstrated in chapter 2, there is some connection between his support of democratic thought and his ideas about the democratization of labor and the emergence of science and technology as well as his theological support of the notion of a “spiritual democracy of all God’s creatures.” Yet, this particular dissertation does not

⁶⁸³ White to People’s Republic, “Biography and Statement.”

⁶⁸⁴ See, for example, White, “Crisis in Democratic Leadership”; White, “American Subversion”; and Lynn Townsend White, jr., “The Universities and the Problem of Religion Literacy,” speech, unknown location, 15 index cards, Coll. 1541, Box 16, Bibliographies, n.d., General, The Lynn Townsend White Papers, 1937–1985, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.

explore this connection in full, and other research on White does not explore this notion at all. This is a potential avenue for future research for those interested in such connections.

Or, similarly, one might also ask how White's later work on ecology reflects the values and politicization of ideas in the Cold War era. It's no coincidence that White's critics accused him of being paid by the Kremlin, or that he not only mentions "Communists" and "Marxism" in "Historical Roots"⁶⁸⁵ but that he also discussed Marxism in "Continuing the Conversation" to prove his point that "religious values are fundamental in the dynamics of cultural and social change."⁶⁸⁶ If Cold War politics shaded his understanding of ecology, or perhaps more importantly if they informed his affinity with Weber and guided his tentative dismissal of Marx's materialism, then one might ask how an alternative interpretation of White's work might look today. While I have no answer to that question here, it does bear further research by those inclined to do so.

Taken together, these many threads—among others discussed in chapter 2—reveal White to be more than solely a historian of medieval technology, but also a figure deeply concerned about the human condition in both the physical and the spiritual sense. More importantly, when considered together in their intertwined, complex whole, these various strands of White's intellectual development show the many ways in which his argument in "Historical Roots" emerged.

⁶⁸⁵ White, "Historical Roots," 1205.

⁶⁸⁶ White, "Continuing the Conversation," 57.

Scholars can find in White's historical scholarship and early life the loose pieces which can fill in the gaps in the methodological and theoretical underpinnings of White's argument in "Historical Roots." For instance, White has occasionally been faulted for his apparent failure to use direct, textual evidence in "Historical Roots." This has flummoxed his critics, as I mentioned in chapter 1. Yet, this need not be so since White drew substantially from a rich and diverse body of previously existing scholarship.⁶⁸⁷ Indeed, the influences on White are oftentimes as diverse as they are surprising. Informed by his friendships and collaboration with ecological thinkers such as Alan Watts and Aldous Huxley, for example, White leapt into the environmental conversation of the 1960s in a way that both seemed sudden and surprising, but that also can be explained as a gradual and ongoing emergence and confluence of ideas and events that extends back decades into his past.

This reframing and reshaping of White's thought on religion and the environment requires scholars to reread White, and for many to read White's other work for the first time with an eye to the larger methodological framework and set of interpretive lenses which White was employing. By building a larger narrative that accounts not just for the scholarly production of White's ideas and conclusions but also for his personal religious life and theological creativity, my hope is that "Historical Roots" can be read as but one chapter amongst many in White's evolving attempt to account for the role of religion in sustaining ecologically friendly worldviews and actions. Framing "Historical Roots" as one entry amongst many is helpful, in part, because it mirrors White's own method of scholarly inquiry. As an "article man," as Hall describes him, White favored breaking

⁶⁸⁷ For more, see, Schumaker, "Delimiting the Debate," 8.

new ground and exploratory engagement with new ideas over the careful recounting and documenting of foregone conclusions. Never one to backtrack and to argue defensively, White allowed his ideas to develop over time and at his own pace. In much the same way, this dissertation can be read alongside other complimentary attempts to paint a larger portrait of White such as that of Machen and Nash and to rethink White's legacy.

Interdisciplinarity in White's Scholarship

There is a temptation to read a classic text such as "Historical Roots" in ways that obscure important nuances and patterns of thought. After all, White's argument in "Historical Roots," much like White himself, defies easy categorization and, therefore, is elusive and difficult to pin down. It is difficult to define who White was or what methodology he was using and this, understandably, has frustrated efforts to understand his argument. He is not just a historian, nor is he just a theological thinker, just a social theorist, or just an ethicist, but yet, by sheer force of intellect and creativity, he manages to incorporate all of these disparate pieces into his arguments. To describe White solely as a historian of medieval technology would limit our understanding of his passionate concern for contemporary social issues; to frame him as an ecological thinker would occlude five decades of celebrated and groundbreaking historical studies; and to speak only of his scholarship erases a rich religious life, an aspect of his daily existence that he connected openly and without pretense in his scholarly and personal life. This interdisciplinary approach has stymied his critics, inspired entire fields of study, and has provoked debates that have already spanned half a century.

Critical engagement with White, considered in this broader context, acknowledges and highlights White's hybridized thinking both across academic disciplines as well as across the fullest range of his writings on the topic of religion and ecological issues. More to the point, White's arguments in "Historical Roots" are interdisciplinary at their core, blending together and overlapping methodologies and theories about the relationship between religion and the environment in ways that transcend the methods of history, theology, sociology, and environmental ethics. As Attfield explains in "Social History, Religion, and Technology: An Interdisciplinary Investigation into Lynn White's 'Roots,'" it is critical that scholars not "lose sight of the importance of multidimensional explanations to explain both how ecological problems have arisen and how they can be overcome."⁶⁸⁸ If White's thought is to be fully understood, scholars must follow in White's footsteps and recognize that interdisciplinarity is essential not just to the study of religion and ecology, but also to understanding White's arguments themselves.

There is merit in suggesting that better understandings can be brought to fruition if scholars account for the interdisciplinarity and depth of White's scholarship. A historian, for instance, might fully appreciate the depth and nuance of his writings on medieval technology without reading "Historical Roots." Similarly, a scholar interested in discussing the relationship between theology and the present ecological crisis might not find it useful to understand White's historical account of changes in the medieval plow. Yet, bridging the gap between the various disciplines that White was working within will undoubtedly strengthen and expand the fruitfulness and diversity of White's

⁶⁸⁸ Attfield, "Social History," 49.

potential contributions to future scholarship in both arenas. The discussion of White in this dissertation reaffirms the interdisciplinarity of religion and ecology and celebrates the potential fruitfulness that such interdisciplinary interpretations of White can bring.

Just as White drew upon a diverse set of resources, such as Kroeber's anthropology, Weber's social theory, and Niebuhr's theology to draw forth new historical insights, so too can scholars of religion and ecology explore his ideas using a multitude of resources and methodologies. What insights into ecotheology, one might ask, are to be found by exploring White's connection to other theologians such as Tillich or further developing an assessment of his usage and critique of Marx's social theory? Or, what can be learned by exploring White's interest in psychology while looking more critically at his claim in "Historical Roots" that "[t]he victory of Christianity over paganism was the greatest psychic revolution in the history of our culture"?⁶⁸⁹

Similarly, White's interest in a broad range of social issues also invites interdisciplinary study. Scholars might find parallel connections between his growing feminist perspectives or his promotion of the liberal arts in the public sphere and his argument in "Historical Roots." Whether attempting to bridge the gap between academia and public discourse on issues ranging from the role of religion in promoting cultural pluralism to his interest in the power of the humanities in promoting world peace, there remains significant room for research on these connections.⁶⁹⁰ By following these interdisciplinary pathways in White's thought, and exploring them from a myriad of

⁶⁸⁹ White, "Historical Roots," 1205.

⁶⁹⁰ See, for example, White, "Jewish Option"; and White, "World Peace."

disciplines in scholarly assessments of White's work, new insights into the relationship between religion and ecology will surely develop.

There are also lessons to be learned from the methodology employed by White in his study of Christian attitudes towards nature. While many ecotheological responses to White focus on ideas of dominion and stewardship in Christian theology and scripture, White directed his attention to the way in which these ideas played out in Christian art and iconography. Similar efforts to look beyond textual and theological sources are currently gaining traction in the field of religion and ecology and its related field, religion and animals. Take, for example, Laura Hobgood-Oster's examination of animals in Christian artwork and architecture in her book *Holy Dogs and Asses: Animals in the Christian Tradition*. Just as White believed that societies often express unspoken ideas through non-verbal symbols and that examining them can lead to revealing insights about a society's deeper values, Hobgood-Oster calls attention to the forgotten significance of animals in the Christian tradition and their presence in iconography.

Other new approaches to uncovering and transmitting "green" Christian values are emerging elsewhere. Richard Bohannon's investigation into the relationship between religion and urban landscapes,⁶⁹¹ Paul Santmire's recent forays into "green" elements of Christian liturgy and the practice of prayer, and Sarah McFarland Taylor's account of the lived experience of Catholic nuns as they attempt to live out and embody Earth-healing faith all point towards the ways that ecotheological ideas and values are expressed in non-

⁶⁹¹ Richard Bohannon, *Public Religion and the Urban Environment: Constructing a River Town* (New York: Continuum, 2012).

verbal ways.⁶⁹² These kinds of alternative approaches are helpful, if viewed through White's assertion that the ideas and values transmitted through theological texts and historical documents reveal a "gap between our words and deeds" that takes religious practitioners and theologians dangerously close to "self-deception." For him, it is essential that non-verbal symbols and other ways of expressing environmental ideas and values are examined so that we can "understand more clearly what our real values are" in order to create a more efficacious way of relating to the Earth.⁶⁹³ Taking a cue from White's historical methodology, in this sense, can be supportive of further explorations and transmissions of Christian environmental ideas and values that go beyond textual interpretation and discussion to uncover other truths and other ideas that might yet be unexplored.

White's Contribution to Ecotheology—The Power of Ideas and White's Spiritual Democracy of All God's Creatures

In the third chapter of this dissertation, I attempted to weave together the many strands of White's theological thought in a way that demonstrates the growth and emergence of White's "spiritual democracy of all God's creatures."⁶⁹⁴ My methods were twofold: First, I drew attention to White's theological training and self-identification as a Christian. Second, I examined the breadth and depth of White's larger body of

⁶⁹² H. Paul Santmire, *Ritualizing Nature: Renewed Christian Liturgy in a Time of Crisis* (Minneapolis: Fortress Press, 2008); H. Paul Santmire, *Before Nature: A Christian Spirituality* (Minneapolis: Fortress Press, 2014); and Sarah McFarland Taylor, *Green Sisters: A Spiritual Ecology* (Cambridge, MA: Harvard University Press, 2007).

⁶⁹³ White, "Continuing the Conversation," 56.

⁶⁹⁴ White, "Snake Nests," 37.

theologically oriented scholarship. Through that exploration, I argued that White built his arguments using his historical research, that he drew upon his own personal faith life and theological training to craft his arguments, and that he should be regarded as a constructive Christian voice rather than merely a critic of religion. Each publication and event in his religious life and intellectual development, I believe, is a thread closely interwoven in an evolving tapestry of thought, each complimenting and supporting the other to create a larger whole.

Digging deeply into the Christian tradition, White argued, could enable humanity to recover its “perception of the spirituality of all creatures and to demote modern man from absolute monarchy over nature.”⁶⁹⁵ To this end, White advocated a third biblical position beyond dominion and stewardship, that of a “spiritual democracy of all God’s creatures.” This radically inclusive position was one that White put forth in nearly all his published works on religion and ecology. White framed this position using scriptural support and in concert with the teachings and life of St. Francis of Assisi in a way that embraced all “creatures”—which he defined as including both living and non-living parts of nature—as part of a vast cosmic community of co-praisers of God. The proper relationship between humans and other creatures, White explained, could be expressed as “Christian compassion” that would compel humanity to “defend the continued existence” of other creatures.⁶⁹⁶

⁶⁹⁵ *Ibid.*

⁶⁹⁶ White, “The Future of Compassion,” 108–09.

White as Iconoclast—Rethinking White the Critic

White's expansive ecotheological position, as well as his own personal religiosity and theological training have been largely overlooked in the existing ecotheological scholarship. He was suggesting something more innovative and more daring, I argue, than most readings allow. In the existing ecotheological scholarship, there are at least three different ways in which the "Lynn White thesis" has been defined and utilized as an avenue of critique: It has been labeled an "attack" on Christianity and used to debate and defend the ecological viability of Christian practice and tradition;⁶⁹⁷ it has been read as a dismissal of Western religions and viewed as an endorsement of non-Western religion and new ecological philosophies;⁶⁹⁸ and it has been portrayed as an assertion that religion is both a potential solution to, and source of, the ecological crisis that can be tested sociologically or explored through the disciplines of ethics or theology.⁶⁹⁹ All of these overlook the constructive potential of White's work.

Many scholars, as discussed in chapter 1 of this dissertation, have argued that White's influence on ecotheology and on environmental ethics has been largely counterproductive. Put differently, some have felt that White's "Historical Roots" serves not as a conversation starter, but rather as a roadblock to developing an adequate ecotheological response to the environmental crisis.⁷⁰⁰ As Les Sponsel points out, White

⁶⁹⁷ See, for example, DeWitt, "The Scientist," 577; and Farley, "Religious Meanings," 106–07. As Peacock explains, "The article has been widely quoted and its argument accepted by those who are only too eager to find yet another stick with which to beat Christianity." Peacocke, "On 'The Historical Roots,'" 155. For further discussion of the ways in which White has been featured in the dominion-stewardship debate, see, Kearns, "Saving the Creation."

⁶⁹⁸ See, for example, Passmore, *Man's Responsibility*.

⁶⁹⁹ See, for example, Shaiko, "Religion"; and Eckberg and Blocker, "Varieties."

⁷⁰⁰ According to Hargrove, for instance: "Although the debate over the Lynn White thesis appeared at the time to be therapeutic, cleansing, and basically healthy, in retrospect it was not. Since almost no one was

is “largely remembered, although unfairly, for only placing the blame on Christianity for the environmental crisis.”⁷⁰¹ Like Sponsel, I regard the reception of “Historical Roots” as too reliant upon engagement with the critical aspects of White’s argument. These iconoclastic depictions of White as primarily a critic of Christianity, I argue, are problematic in that they both misrepresent White’s intentions and they also lead to the very same dominion-stewardship debates which White himself was urging scholars to move beyond.

John Passmore’s groundbreaking response to White in *Man’s Responsibility for Nature*, for instance, sets the stage for the dominion-stewardship debate that would characterize most of the responses to White in the decades that followed. There, Passmore grapples with “Historical Roots” and sets up Biblical stewardship in contrast to the “despotic” dominion-based view, an argument that would be repeated and revised often in ecotheological texts. Passmore lists a litany of critiques made against Christianity by White ending with the observation that White “writes with some approval of the ‘beatniks’ [...] and of the [sic] Zen Buddhism.”⁷⁰² Absent are any mentions of White’s endorsement of Francis as the patron saint of ecologists, White’s status as a practicing Christian, or mentions of White’s other work where he outlines his theological views such as “Continuing the Conversation.”

The practice of reading “Historical Roots” isolated from the context of the larger body of work and downplaying White’s constructive suggestions are also common not

willing to accept either of his alternatives, the general response to White’s position was overwhelmingly defensive, if not reactionary.” Continuing, Hargrove claims that “White had unwittingly shaped the debate in a way that ensured that there would be no useful outcome from it.” Hargrove, “Preface,” xiv and xvi.

⁷⁰¹ Sponsel, *Spiritual Ecology*, 81.

⁷⁰² Passmore, *Man’s Responsibility*, 4.

only in the earliest responses to White but also in the work of those who have been central to shaping ecotheology in more recent decades. For instance, in the introduction to the landmark text, *Christianity and Ecology: Seeking Well-Being of Earth and Humans*, one of the twelve volumes in the Harvard Series on Religion and Ecology, Dieter T. Hessel and Rosemary Radford Ruether refrain from mentioning the way in which White frames Christianity in positive terms and instead only mention White's highlighting of the "disastrous assumptions underlying [...] religious thought."⁷⁰³ In doing so, they make note of White's thought as one of the "challenges to the Christian tradition" that brought the discussion of dominion to the forefront of ecotheological scholarship.⁷⁰⁴

Thus by highlighting the problem of dominion and White's critiques, rather than working with White's constructive ecotheological suggestions, they set the stage for discussion in a way that inordinately begins in defensive terms. As Ruether explained again six years later in "Religious Ecofeminism: Healing the Ecological Crisis," White's article "became the foundation for the debate about the negative impact of Christianity on ecology."⁷⁰⁵ As a result, she avers, "Christian theologians and especially biblical scholars" were sent "scrambling to defend their tradition from what seemed like an unequivocal condemnation."⁷⁰⁶

⁷⁰³ Dieter T. Hessel and Rosemary Radford Ruether, "Introduction: Current Thought on Christianity and Ecology," in *Christianity and Ecology: Seeking Well-Being of Earth and Humans*, ed. Dieter T. Hessel and Rosemary Radford Ruether (Cambridge, MA: Harvard University Press, 2000), xxxiv.

⁷⁰⁴ Ibid., xlii.

⁷⁰⁵ Ruether, "Religious Ecofeminism," 363.

⁷⁰⁶ Ibid. Others have also argued in this fashion. For instance, in his discussion of ecological hermeneutics and the attempt by scholars to rethink the ecological potential of the Christian bible, Ernst Conradie refers to White as a "secular" thinker and then only describes White's criticisms of Christianity and the response to them. Conradie, "Ecological Hermeneutics," 295.

Bron Taylor, in his “Foreword” to Sponsel’s *Spiritual Ecology*, outlines White’s work in similarly negative terms. Arguing in the same vein as Ruether, Taylor also calls attention to the defensiveness of the debate that emerged out of White’s criticisms. “The debate was on,” writes Taylor, “and it fostered three typical responses by religious people and the scholars who study them.” Some, he observes, “defended their traditions, contending [...] that the proper priority of religion is the *spiritual* well-being of human beings” while others “found the criticism of the world’s predominant religions compelling and turned away from them” and sought out other frameworks for framing their environmental concern such as in pagan or animistic worldviews. The third group, he concludes, “sought to explicate environmentally friendly themes in one or more of the of the world’s predominant religions.”⁷⁰⁷ All three forms of responses, it should be noted, are categorized by Taylor as defensive reactions to the perceived criticisms raised by White rather than constructive attempts to build upon White’s ecotheological suggestions.

This trend of focusing on White’s critiques has led to a number of accusations against White, most notably those contending that White led others astray by misinterpreting Genesis and downplaying other ecological themes in the biblical texts. Evangelical scientist Cal DeWitt, the co-founder of the Evangelical Environmental Network and longtime Executive Director of the Au Sable Institute of Environmental Studies, casts White’s argument in “Historical Roots” in a negative light by focusing solely on the way in which White “laid the blame” on Christianity for the ecological

⁷⁰⁷ Bron Taylor, “Foreword,” in Leslie E. Sponsel, *Spiritual Ecology: A Quiet Revolution* (Denver: Praeger, 2012), ix–x.

crisis. From this critical framing of White, DeWitt then questions White's focus on dominion and goes on to suggest that the critical nature of "Historical Roots" is due to a "failure" on White's part to read the Genesis text in "its broader biblical stewardship context."⁷⁰⁸ In a parallel fashion, Christian ethicist Margaret Farley describes "Historical Roots" as a "scathing critique of Christianity's role in the environmental crisis."⁷⁰⁹ In her response to White's critique of the dominion notion, which she calls a "despotic interpretation" much as Passmore did, she suggests that there may be multiple interpretations of the biblical texts. This implies, tacitly, that White himself offered no alternative ways of approaching the texts.⁷¹⁰

These negative portrayals of White are not limited to Christian theologians alone. Scholars of Judaism have also repeated and ramified this negative reading of "Historical Roots."⁷¹¹ In the opening paragraphs of her article, "Nature in the Sources of Judaism," Hava Tirosh-Samuelson describes "[t]he Jewish response to White's charges" and the way in which White "indicted" Judaism and Christianity.⁷¹² Similarly, in the introduction

⁷⁰⁸ DeWitt, "The Scientist," 577.

⁷⁰⁹ Farley, "Religious Meanings," 106–07.

⁷¹⁰ Ibid., 107. Others have portrayed White in a similarly negative fashion and have also suggested that White turned a blind eye to ecological themes in the bible. George Rupp, for instance, claims that "[w]here White falls short is in failing to notice how other elements in the structure of biblical religion in effect counterbalance the invitation to exercise human sovereignty over nature." George Rupp, "Religion, Modern Secular Culture, and Ecology," *Daedalus: Journal of the American Academy of Arts and Sciences* 130, no. 4 (Fall 2001): 23. Ecofeminist theologian Sallie McFague renders her descriptions of White in purely critical terms, framing White's argument in "Historical Roots" as an accusatory argument. "Lynn White's oft-quoted 1967 essay laid the blame for environmental deterioration at the feet of religion, specifically Christianity," she wrote in 2001. Then, in 2003 she referred to "Historical Roots" as an "indictment" and observed that White "accused Christianity of being ecologically bankrupt," suggesting, as it were, that White found nothing of ecological value in the Christian tradition. Sallie McFague, "New House Rules: Christianity, Economics, and Planetary Living," *Daedalus: Journal of the American Academy of Arts and Sciences* 130, no. 4 (Fall 2001): 125; and McFague, "An Ecological Christology," 334.

⁷¹¹ See, for example, Jeanne Kay, "Concepts of Nature in the Hebrew Bible," in *Judaism and Environmental Ethics: A Reader*, ed. Martin D. Yaffe (New York: Lexington Books, 2001).

⁷¹² Tirosh-Samuelson, "Sources of Judaism," 99. This particular simplification of White's thesis is particularly interesting in that while Tirosh-Samuelson only frames White as a critic and only utilizes

to *Judaism and Environmental Ethics: A Reader*, Martin D. Yaffe casts White solely in the role of a critic. As part of his argument, he claims that White's article is "dubious" and alleges that White fails to offer "adequate scholarly evidence to support his far-reaching insinuations about the Bible's complicity in today's crisis." White, along with historian Arnold Toynbee, he claims, are "unhistorical" in that they "have no way of knowing whether the meaning they ascribe to it [the Genesis text] is historically correct or not." Yaffe's reading of "Historical Roots" is particularly interesting in that he also cites another chapter from White's book *Machina ex Deo*, therefore showing at least a surface attempt to incorporate White's historical scholarship into his assessment.⁷¹³

Those writing from the perspective of environmental ethics and religious studies have also sometimes framed White in negative terms as well. As a case in point, environmental ethicist Holmes Rolston III eschews any mention of White's constructive ideas and instead utilizes White to discuss the concept of biblical dominion in his 2006 book chapter "Science and Religion in the Face of the Environmental Crisis." In doing so, he frames "Historical Roots" as an "attack" on religion. He states that "Lynn White laid much of the blame for the ecological crisis on Christianity, an attack published in *Science*."⁷¹⁴

Alongside Rolston, religious studies scholar Lisa Sideris also stakes out the parameters of White's argument in critical terms and suggests that as a result of its

"Historical Roots," she also shows some awareness of Nash's argument. She cites Nash's chapter in the first edition of *This Sacred Earth*, a text which I have identified as perhaps the most in-depth and generous reading of White to date. Tirosch-Samuelson, "Sources of Judaism," 119 n. 2.

⁷¹³ Yaffe, "Introduction," 7, 9, and 66 n. 22. In addition to framing White as a critic and arguing that White does not support his argument with historical evidence, it is interesting to note that Yaffe does mention White's endorsement of Saint Francis, if only to dismiss Francis' animistic views as "unbiblical." Ibid., 7.

⁷¹⁴ Holmes Rolston III, "Science and Religion in the Face of the Environmental Crisis," in *The Oxford Handbook of Religion and Ecology*, ed. Roger S. Gottlieb (New York: Oxford University Press, 2006), 384.

critical tone the response to it has largely been a defensive one. “Probably no tradition has worked harder than the Christian tradition in the quest to locate—or create—positive environmental teachings,” she writes in “Religion, Environmentalism, and the Meaning of Ecology.” “In part, the Christian response was generated in the aftermath of Lynn White’s now famous critique of the tradition (or, more broadly, the Judeo-Christian tradition) decades ago.” White’s contribution to the field of religion and ecology, she continues, was that he “conferred to Christianity the dubious distinction of being the world’s most anthropocentric religion.”⁷¹⁵

Sociological studies, too, have been premised upon the critical aspects of White’s work. Janel Curry and Kathi Groenendyk, in their 2006 study “Nature Seen Through the Eyes of Faith: Understandings Among Seminarians,” position their study in relation to the negative aspect of White’s argument. “The relationship between religion and environmental attitudes has primarily been studied over the past several decades in response to Lynn White’s (1967) thesis that a Judeo-Christian belief system has a negative impact on attitudes and actions toward the environment,” state Curry and Groenendyk.⁷¹⁶ Political scientists Paul Djupe and Patrick Hunt begin their 2009 article, “Beyond the Lynn White Thesis: Congregational Effects on Environmental Concern,” with the assertion that White “theorized that Judeo-Christian religion has had an *inherently negative effect* on environmental concern.”⁷¹⁷ By framing empirical studies in

⁷¹⁵ Sideris, “Meaning of Ecology,” 446.

⁷¹⁶ Janel Curry and Kathi Groenendyk, “Nature Seen Through the Eyes of Faith: Understandings Among Seminarians,” *Worldviews: Global Religion, Culture, and Ecology* 10, no. 3 (2006): 326.

⁷¹⁷ Djupe and Hunt, “Beyond the Lynn White Thesis,” 670 (emphasis mine).

this way, I argue, much of the nuance and depth of White's argument is lost. This calls into question the validity of whether or not studies such as these fully test White's claims.

The list of those who frame White as a mere critic of Christianity while referencing only his argument in "Historical Roots" goes on and on.⁷¹⁸ These examples highlight, I argue, the cost of focusing on the critical aspects of White's thought, rather than developing a fuller understanding of his work. The notion that White's argument in "Historical Roots" is antagonistic to religion, or that there is little of value in his essay beyond his critique of Christianity, is an assumption that places an unnecessary boundary upon White's thought. This limiting runs the risk of both oversimplifying White's argument while simultaneously constricting the richness and diversity of ideas that can be explored. I might also suggest that many of the supposedly disproved, outdated, or harmful aspects of White's argument are the products of misinterpretation and a failure to read White within the context in which his thought was developing. White's thought as most scholars understand it, in other words, might be more the product of interpretation than the actual, integral parts of his argument proper. Therefore, to focus on the critical

⁷¹⁸ Michael Roberts, for instance, notes the way "Historical Roots" was instrumental in "firmly placing the blame for all environmental ills on the Judaeo-Christian faith and especially Gen. 1.28—the Biblical verse that gives mankind 'dominion'—which White argues has been interpreted in a rapacious sense by Western societies." Michael Roberts, "Evangelicals and Climate Change," in *Religion in Environmental and Climate Change: Suffering, Values, Lifestyles*, eds. Dieter Gerten and Sigurd Bergmann (New York: Continuum, 2012), 111. See also, David Kinsley, "Christianity as Ecologically Harmful," in *This Sacred Earth: Religion, Nature, Environment*, 1st edition, ed. Roger S. Gottlieb (New York: Routledge, 1996); Kyle S. Van Houtan and Stuart L. Pimm, "The Various Christian Ethics of Species Conservation," in *Religion and the New Ecology: Environmental Responsibility in a World of Flux*, ed. David M. Lodge and Christopher Hamlin (Notre Dame, IN: University of Notre Dame Press, 2006); Murray Ray, "To Render Praise: Humanity in God's World," in *Environmental Stewardship: Critical Perspectives—Past and Present*, ed. R. J. Berry (New York: T&T Clark International, 2006); and Mark C. E. Peterson "Descartes, René (1596–1650) and the Problem of Cartesian Dualism," in *The Encyclopedia of Religion and Nature*, vol. 1, ed. Bron Taylor (New York: Continuum, 2008), 473.

aspects of the “Lynn White thesis” or upon one aspect of his argument in “Historical Roots,” while provocative and important milestones in environmental discourse, is to overlook some of the most enduring and consequential aspects of his work.

If the narrow spectrum of responses to White has in turn limited the direction of development of scholarship and scope of inquiry in the field of religion and ecology, as others have suggested,⁷¹⁹ then perhaps developing a deeper, more nuanced understanding of White’s thought will allow for new theoretical insights and new modes of inquiry regarding the relationship between religious ideas and values and environmental attitudes and actions. An awareness of White’s other work, or even a closer reading of “Historical Roots,” reveals that decades earlier, White had already suggested the same and would have provided a platform for creative theological growth that could have been built upon.

Beyond the Iconoclastic View—White’s Constructive Ecotheology

Not all who have responded to White have been dismissive of his work or have focused solely on his critiques. Some, like Santmire, found White’s “spiritual democracy of all God’s creatures” to be stimulating and thoroughly possible. Santmire’s highly influential 1985 book, *The Travail of Nature*, praised White’s theological suggestions and lauded White’s influence on the emerging ecotheological conversation of that time period. Although I highlight Hargrove’s critiques of White earlier in this chapter, it is

⁷¹⁹ See, for example, Hargrove, “Preface”; Jenkins, “After Lynn White”; Kearns, “Context of Eco-Theology”; Livingstone, “The Historical Roots”; Christopher Hamlin and David M. Lodge, “Ecology and Religion for a Post Natural World,” in *Religion and the New Ecology: Environmental Responsibility in a World of Flux*, ed. David M. Lodge and Christopher Hamlin (Notre Dame, IN: University of Notre Dame Press, 2006); Ben A. Minteer and Robert E. Manning, “An Appraisal of the Critique of Anthropocentrism and Three Lesser Known Themes in Lynn White’s ‘The Historical Roots of Our Ecologic Crisis,’” *Organization and Environment* 18, no. 2 (June 2005): 163–76; and Taylor, “Introduction.”

significant to note that Santmire, who drew more upon the positive aspects of White's thought, had a more extensive impact on later ecotheology than did Hargrove even though their responses to White were published just a year apart.

There, in *The Travail of Nature*, Santmire described the radicalness of White's position that Christians take seriously not just theological ideas about God and humans, but also the liberation and inherent spirituality of nature itself. White was, in Santmire's words, "what might well be the leading edge of a theological paradigm shift."⁷²⁰ Indeed, by asking about the religious significance of nature, White is doing more than simply describing a potential interpretation of the Christian tradition, he is creating a new theological position that is, in itself, a call for reform. According to Santmire:

Although White has raised a number of sharp historical questions, few of which have been fully blunted by his critics, *the deepest significance of his thesis seems to lie not so much in what it describes as in what it prescribes or envisions*: the end of the theological legitimization of any structure of domination; the challenging of all master-slave relationships; the final inclusion of all creatures of nature within the realm of grace; the normative vindication of St. Francis and his life story; and the adoption of the Pauline theology of universal liberation that Francis so compellingly exemplified. *Thanks largely to Lynn White, the liberation of nature is now unavoidably before us as a theological theme*⁷²¹

White's theological position might not seem as radical to those familiar with ecotheology today. But to Santmire, who was writing in 1985, White's theology was, on the surface, a deep shift away from most theology of the time.

The work of David Haberman also stands as an example of scholarship that finds a more intimate appreciation for the subjectivity of non-human nature by drawing upon

⁷²⁰ H. Paul Santmire, "The Liberation of Nature: Lynn White's Challenge Anew," *Christian Century* 102 (1985): 531.

⁷²¹ Ibid., 533.

White's theological ideas from a wide array of his writings. In his 2013 book *People Trees*, for instance, Haberman sounds a clarion call for scholars of religion and ecology to renew their studies of animistic worldviews. In doing so, he invokes White's "Continuing the Conversation" and his admonition that "[t]he religious problem is to find a viable equivalent to animism."⁷²² In many ways, Haberman's work is a prime example of the ways in which a more nuanced and in-depth understanding of White can be accomplished by reading White's other works such as "Continuing the Conversation."⁷²³

Working with White—Mainstream Liberal Theology, Voices on the Margins, Animals, and Animism

White's theological outlook, as I argued in chapter 3 of this dissertation, is in need of recovery. From his deep sense of cosmological rootedness to his ethic of community, belonging, and compassion with other creatures—both organic and inorganic—White's thought is rich with resources. White's own seminary training and his connection to Niebuhr also suggest that White did not develop his ideas in a theological void. Instead, it is significant to recognize that he was working within, and building upon, a much larger, mainstream tradition of twentieth century, mainstream liberal theology.

Although White is not often regarded as having an in-depth knowledge of theology by scholars today, I have shown that White studied theology at Union Theological Seminary and was conversant not only with the theology of Niebuhr with

⁷²² Haberman, *People Trees*, 7.

⁷²³ For examples of Haberman's use of "Continuing the Conversation" in his discussions of animism and other aspects of White's thesis, see, Haberman, *River of Love*; David L. Haberman, "Faces in the Trees," *Journal for the Study of Religion, Nature and Culture* 4, no. 2 (2010): 173–90; and Haberman, *People Trees*.

whom he studied, but also with the work of a number of other theologians including Karl Barth, Rudolf Bultmann, Emil Brunner, Søren Kierkegaard, and Paul Tillich.⁷²⁴ These Niebuhrian and other theological groundings of White's thought place him squarely in the intersection of mainstream twentieth century liberal theology and the leading edge of the budding ecotheological movement of the 1960s and 1970s. In this view White's theological position is not one that exists on the fringe of contemporary theology, but should instead be understood as working from the center to speak to issues on the margins.

One of the most significant aspects of White's theological leanings, especially as it pertains to his argument for discovering a more ecologically positive religiosity in "Historical Roots," was his self-identification as a "Christian Realist." This theological position, I argue, tempered White's optimism about the ability of humanity to promote human and ecological flourishing with his belief, borrowed from Niebuhr, in the inherent sinfulness of humanity.⁷²⁵

There were, of course, others who were developing similar theological trajectories during this same time period who have been recognized for their ideas. John Cobb, who as I noted earlier was profoundly influenced by "Historical Roots," was already pondering Niebuhr's Christian Realism in relation to White's work in his highly influential 1972 book, *Is It Too Late?* In doing so, Cobb wonders whether or not changes in theology will lead to better ecological attitudes and practices. "Every attainment of

⁷²⁴ See, for example, White, *Oral History Transcript*, 28; White, "Christian Conversations, IV," 4; White, "Christian Materialism," 11; White, "Religious Illiteracy," 11–12; and White, "More Incense for Caesar," 421.

⁷²⁵ White, "Christian Materialism," 10. For additional information, see, Niebuhr, *Nature and Destiny*.

relative justice produces a situation in which new forms of injustice arise,” writes

Cobb. “There is no assurance that any amount of effort will lead to a society that is better than our own, and, even if it does, there is no assurance that the improvement will last.”⁷²⁶

Thomas Berry, much like White, was also drawing upon Christianity to formulate a new set of human-Earth relations during the 1970s and 1980s, the same time in which White’s theological ideas were coming to full fruition. Just as White saw a connection with the erasure of animistic understandings of nature, Berry also arrived at the view that a deep spiritual gulf had been formed when humanity stopped experiencing the sacred in nature.⁷²⁷ Just as White put forth the idea that humanity is part of a “spiritual democracy of all God’s creatures,” Berry envisioned the universe as a “communion of subjects,” an understanding that he thought would help humanity to rehabilitate its lost sensitivity to the spiritual presence of nature.⁷²⁸ “I would suggest,” Berry wrote in *Evening Thoughts*, that humanity is recovering the idea that humans exist in a “great community of the Earth, a comprehensive community of all living and nonliving components of the planet.”⁷²⁹ Indeed, White also shared Berry’s appreciation for comprehensive, cosmological understandings of the sacred. In 1952, on a radio program called “This I Believe,” White described his deep “sense of kinship with the power that moves the sun and other stars,” what Christians might call a “love of God.” “[E]ventually,” White

⁷²⁶ John B. Cobb, Jr., *Sustainability: Economics, Ecology, and Justice* (Maryknoll, NY: Orbis Books, 1992), 11.

⁷²⁷ Berry observes that forests and other parts of nature were once viewed as “the abode of an infinite number of spirit presences” and the ecological crisis “can be seen as a direct consequence of the loss of this capacity for human presence to and reciprocity with the nonhuman world.” Thomas Berry, “Our Way into the Future: A Communion of Subjects,” in *Evening Thoughts: Reflections on Earth as Sacred Community*, ed. Mary Evelyn Tucker (San Francisco: Sierra Club Books, 2006), 18.

⁷²⁸ *Ibid.*, 17.

⁷²⁹ Thomas Berry, “Evening Thoughts,” in *Evening Thoughts: Reflections on Earth as Sacred Community*, ed. Mary Evelyn Tucker (San Francisco: Sierra Club Books, 2006), 141.

proclaimed, a child growing up with an appreciation for the love of God might one day “[find] the same love in his larger home, the universe.”⁷³⁰

By comparing White and Berry in this way, I highlight but one out of many ways in which White’s theology parallels and predates the thought of many who have arrived at similar conclusions. Larry Rasmussen, for example rejects the “apartheid habits”⁷³¹ of Western thought that separate humans and nature in his groundbreaking 1996 book *Earth Community, Earth Ethics*. Instead, Rasmussen, like White, calls upon Weber and suggests that theology and ethics should endeavor to “reenchant the world.”⁷³² In doing so, Christians and other religious individuals, Rasmussen claims, must take seriously the inherent worth of “[a]ll creatures great and small, and inorganic matter as well” that are members in the “Community of Life.”⁷³³

Rasmussen builds upon this work in his latest book, *Earth-Honoring Faith* in a way that moves remarkably close to the theological vision of White. In that text Rasmussen mourns the fact that “all God’s creatures other than humans are bereft of moral citizenship” in Western moral philosophy.⁷³⁴ Stewardship and its attendant language, he informs his readers, is a “sovereign managerial stance” which is entirely complicit in this exclusion of creatures from their rightful moral place. Drawing upon Niebuhr’s analysis of sin—sins against nature included—he finds it problematic that

⁷³⁰ Lynn Townsend White, jr., “This I Believe,” radio statement, *This I Believe—Presenting Personal Philosophies*, 1952, Box 3, Speeches and Articles, File 14, Lynn Townsend White, jr., Special Collections, F.W. Olin Library, Mills College, 2.

⁷³¹ Larry Rasmussen. *Earth Community, Earth Ethics* (Maryknoll, NY: Orbis, 1996), 32.

⁷³² Ibid., 346. Here, Rasmussen is invoking Weber’s *The Protestant Ethic and the Spirit of Capitalism* as well as *The Sociology of Religion*. See, for example, Ibid., 346 n. 8.

⁷³³ Ibid., 345.

⁷³⁴ Larry Rasmussen, *Earth-Honoring Faith: Religious Ethics in a New Key* (New York: Oxford University Press, 2013), 91.

humans “see ourselves as a segregated species, distinctive, set apart and over” the rest of nature and suggest that this “[s]pecies arrogance can be jettisoned.”⁷³⁵ For Rasmussen, the kind of “Earth-honoring faith” that he envisions is also “an invitation to ‘sing with all the people of God and join in the hymn of all creation.’” The parallels to White’s work are remarkable, yet they come 46 years later. If scholars had been aware of White’s larger body of work sooner, I argue, then perhaps conversations such as those recently developed by Rasmussen would have been stimulated earlier.

There is also some resonance between White’s “spiritual democracy of all God’s creatures” and the work of process philosopher, Alfred North Whitehead, although they wrote independently and many years apart from one another. In his 1929 book, *Process and Reality*, Whitehead wrote that “[w]e find ourselves in a buzzing world, amid a democracy of fellow creatures.” Reality, in Whitehead’s view, is a relational experience, a world of overlapping experiences and subjectivity in which the notion that individuals are “solitary substances” is illusory and predicated upon false abstractions. This “philosophy of organism” reveals an intimate presence of every aspect of reality both within itself and in relationship to the greater whole. “[E]very actual entity,” Whitehead wrote, “*is present in every other actual entity.*”⁷³⁶ While it is unclear whether or not White was familiar with the writings of Whitehead, there seems to be both considerable overlap and difference between their two articulations of creaturely democracy.

Process theology, which builds upon the work of Whitehead, seems to be rich with potential for a further development of this overlapping democratic theme. Cobb, to

⁷³⁵ Ibid., 93.

⁷³⁶ Alfred North Whitehead, *Process and Reality: An Essay in Cosmology* (New York: Free Press, [1929] 1978), 50.

give but one example, rejects anthropocentrism in his 2001 book chapter “Process Theology and Deep Ecology” and states that he believes God “cares for all creatures” and that creatures are valued by God and have intrinsic value in their own right.⁷³⁷ To work in conversation with White’s concept of a “spiritual democracy of all God’s creatures,” I argue, could only strengthen such an argument. Indeed, Cobb does call attention in that text to White’s own status as a Protestant layman and his endorsement of St. Francis. Francis, Cobb writes, provides us with “another vision, far more suited to our needs.” Yet, Cobb stops there in his discussion of White and the other “vision” of St. Francis.

White’s theological outlook, as I argue in “A Spiritual Democracy of All God’s Creatures: Ecotheology and the Animals of Lynn White Jr.,”⁷³⁸ is also rich with resources for those interested in studying the relationship between animals, theology, and ecology. The newly emerging field of animals and religion, which is represented in the work taking place in the Animals and Religion group at the American Academy of Religion (AAR), oftentimes draws upon “Historical Roots” for insight.

To give but one example, Hobgood-Oster, a founding member of that group, calls for scholars to give more attention to the presence of animals in the Christian tradition in her book, *The Friends We Keep: Unleashing Christianity’s Compassion for Animals*. There, she cites White’s “Historical Roots” in order to demonstrate the ways in which Christianity has sometimes led to the silencing of animal voices and the ways in which

⁷³⁷ John B. Cobb, Jr., “Protestant Theology and Deep Ecology,” in *Deep Ecology and World Religions: New Essays on Sacred Grounds*, ed. David Landis Barnhill and Roger S. Gottlieb (Albany, NY: State University of New York Press, 2001), 227.

⁷³⁸ Matthew T. Riley, “A Spiritual Democracy of All God’s Creatures: Ecotheology and the Animals of Lynn White Jr.,” in *Divinanimality: Animal Theory, Creaturely Theology*, ed. Stephen Moore (New York: Fordham University Press, 2014).

dominion played a role in pushing animal-friendly theologies to the margins. In doing so, she labels White as a “secular” scholar and makes no mention of his notion of a “spiritual democracy of all God’s creatures.”⁷³⁹

How, I wonder, would Hobgood-Oster’s task been made easier if she had been aware of White’s larger body of work? Just as White called upon Christians to look to the “recessive genes” some three decades earlier in order to bring animals into theological consideration, Hobgood-Oster implores her readers to look to the “little stories” in the bible and in the Christian tradition in order to discover ways in which animals can become central to theology again. Mirroring White, she asserts that Christianity is not just about human beings, but that all life is sacred and that the circle of moral and theological concern should be extended to animals as well.⁷⁴⁰

By asking how awareness of White’s theological ideas might have enhanced her research, I do not wish to fault Hobgood-Oster or to downplay the importance of her work. To the contrary, I wish to highlight the importance of such explorations. Instead, I think that by looking to White’s prescriptive theological ideas scholars of animals and religion will find a deep well of insights to draw upon in order to enrich this lively and essential exploration of animal issues. In White’s view, adopting a theological outlook similar to that of St. Francis would not only stem the tide of the ecological crisis, but it would also instill in practicing Christians compassion for animals and a sense of community with them. Animals are at the core of his constructive theology and it would

⁷³⁹ Laura Hobgood-Oster, *The Friends We Keep: Unleashing Christianity’s Compassion for Animals* (Waco, TX: Baylor University Press, 2010), 107.

⁷⁴⁰ *Ibid.*, xvi and 168.

be useful to take this into account not only in discussions of animals and religion, but also in the study of religion and ecology.

Practical Applications: Moving Beyond Stewardship

The responses to White, both implicit and explicit, have not been entirely defensive in nature as a reading of Hargrove or others might suggest. The development since at least the early 1980s of ecotheology and the “greening” of the Christian tradition broadly considered shows that a great deal of growth has stemmed from White’s pioneering efforts. Nearly every Christian denomination has released a statement or implemented an action plan for the stewardship of creation, countless Christian leaders such as Patriarch Bartholomew I of the Greek Orthodox Church and Pope Francis have prioritized ecological care, and ecotheology has blossomed into a diverse and thriving field. If ecotheology and the “greening” of Christianity is already moving in directions that seem amenable to White’s position, then perhaps working in conversation with White, rather than reacting defensively, will further this progress.

This insight has practical implications that can be applied broadly. Consider the progress made by interfaith organizations that empower religious leaders, both in training and in their ministry, to green their institutions. GreenFaith, for instance, is a New Jersey based organization that endeavors to “inspire, educate and mobilize people of diverse religious backgrounds for environmental leadership.”⁷⁴¹ Founded in 1992, GreenFaith offers many programs and resources such as a green training and certification program

⁷⁴¹ “Mission and Areas of Focus,” *GreenFaith*, <http://www.greenfaith.org/about/mission-and-areas-of-focus> (accessed February 20, 2016).

for houses of worship and religious leaders, they educate and do advocacy on issues of environmental justice, and they provide training and assistance to help faith-based organizations cut energy costs by greening their facilities and gaining access to alternative energy sources.

The success of GreenFaith is remarkable. GreenFaith is premised upon core values of justice, spirituality, and stewardship.⁷⁴² Yet, if we are to take White seriously, this emphasis on stewardship could be a potentially problematic framing for action. Recall that just two short months after publishing “Historical Roots,” White was already expressing discomfort with Christian stewardship, calling it “enlightened despotism.”⁷⁴³ Such a view, White worried, masks an inherent anthropocentrism that always places humans above nature in a value hierarchy. GreenFaith, to their credit, tempers its model of stewardship with its additional focuses on spirituality and justice. This makes concern for nonhuman nature a priority in its own right, yet a tension could still exist.

It would be facetious to suggest that White would oppose the efforts of GreenFaith or to suggest that their work has been anything but laudable. In fact, White viewed stewardship as a necessary, but intermediate, step in the greening of Christianity towards the third theological position of a “spiritual democracy of all God’s creatures.” The theological framework provided by White suggests that there may be need for redoubled efforts to include resources and activities that move beyond a stewardship model. Rather than providing education on energy conservation and helping churches to put up solar panels, a theological grounding like White’s might point away from resource

⁷⁴² Ibid.

⁷⁴³ White, “Christian Impact,” 738.

management towards education and programs that focus openness to the praise and spiritual autonomy of other creatures. Take, for example, the rising popularity of “Blessing of the Animals” ceremonies that many churches are holding near to the Feast Day of St. Francis in October.

The possibilities for including “creatures” in Christian worship, ethics, and daily life are abundant. St. Andrews Episcopal Church in New Providence, New Jersey, to give another example, has a pet cemetery on its grounds, a practice which is becoming increasingly common. Or, consider the Faith Outreach Program of the Humane Society of the United States which launched an “Eating Mercifully” campaign dedicated to educating and empowering Christians to reform their relationship with food animals.⁷⁴⁴ White’s theological ideas invite Christians to work not only on energy conservation and stewardship ethics, but also to continue in the kinds of work listed here that expand compassion and care to include not just people, but nonhumans as well.

Converging Theologies: Pope Francis and *Laudato Si’*

Perhaps the most fitting example of the ways in which White’s endorsement of St. Francis and his creature friendly theology anticipates recent progress in ecotheology and in the “greening” of Christianity can be seen in the recent papal encyclical, *Laudato Si’: On Care for Our Common Home*. White proposed Saint Francis as the “patron saint for ecologists” in the closing line of “Historical Roots” in 1967. Twelve years later, Pope

⁷⁴⁴ Faith Outreach. “Eating Mercifully,” The Humane Society of the United States, http://video.humanesociety.org/index.php?id=0061A92DAF925275&credit=web_id96887623 (accessed February 21, 2016).

John Paul II named Saint Francis as the first patron saint of ecology. While there is no causal link connecting White's suggestion and the nomination of Francis by Pope John Paul II, the confluence of events is worth noting.⁷⁴⁵ When asked if his suggestion had reached the pope, White replied, with a jocular tone: "I'm not sure that my nomination reached the Vatican directly."⁷⁴⁶ In 1983, he also quipped:

I suppose the fact that I made the original suggestion indicates that I've had influence—although I'm not sure that the pope knew that he was following Lynn White's lead in this matter. I tend to chalk it up to the fact that the pope and I live in the same world.⁷⁴⁷

In 2013, thirty years after the canonization of Francis as the Patron Saint of Ecologists, Jorge Mario Bergoglio was elected as Pope and chose the papal name of Pope Francis, a name choice that indicates a strong sensitivity to ecological issues. In his words, "I believe that Saint Francis is the example par excellence of care for the vulnerable and of an integral ecology lived out joyfully and authentically."⁷⁴⁸ Moreover, a close reading of *Laudato Si'* reveals a deep affinity for the spirituality of creatures and humanity's kinship with them. In that document, Pope Francis praises St. Francis' role in helping humanity to work towards an "integral ecology" through his sense that "every creature was a sister" that led him to a "care for all that exists."⁷⁴⁹

⁷⁴⁵ It should be noted that White was neither the first to nominate Saint Francis, nor did he acknowledge a causal link between his suggestion in "Historical Roots" and the 1979 papal proclamation. For more information, see, Nash, *The Rights of Nature*, 93; and Nash, "Greening of Religion," 199.

⁷⁴⁶ White et al., "Ecology and Religion."

⁷⁴⁷ White, Oral History Transcript, 226–27.

⁷⁴⁸ Pope Francis I, *Laudato Si'* of the Holy Father Francis: On Care for Our Common Home, encyclical letter, 18 June 2015, paragraph 10

⁷⁴⁹ *Ibid.*, paragraph 11.

This is no trivial point of view, he states. It transforms human relationships with the non-human by critiquing anthropocentrism and instilling a non-instrumental view of nature. In his words:

Such a conviction cannot be written off as naive romanticism, for it affects the choices which determine our behaviour. If we approach nature and the environment without this openness to awe and wonder, if we no longer speak the language of fraternity and beauty in our relationship with the world, our attitude will be that of masters, consumers, ruthless exploiters, unable to set limits on their immediate needs. By contrast, if we feel intimately united with all that exists, then sobriety and care will well up spontaneously. The poverty and austerity of Saint Francis were no mere veneer of asceticism, but something much more radical: a refusal to turn reality into an object simply to be used and controlled.⁷⁵⁰

The echoes of White's "spiritual democracy of all God's creatures" reverberate loudly in this proclamation.

Like White, Pope Francis emphatically rejects the dominion of nature and anthropocentric worldviews, a position that is common in the ecotheological arguments that have emerged in the five decades since the publication of "Historical Roots."⁷⁵¹ Mirroring other recent developments in ecotheology and biblical studies, Francis also adopts a sensitivity to creatures that seems to evoke the same insights that inspired White in the 1970s and 1980s, most notably his usage of St. Francis' *Cantic of the Creatures*

⁷⁵⁰ Ibid., paragraph 11.

⁷⁵¹ Pope Francis states that Christians must "forcefully reject the notion that our being created in God's image and given dominion over the earth justifies absolute domination over other creatures." Ibid., paragraph 67. For more of Pope Francis' discussion of anthropocentrism and stewardship, see Ibid., paragraph 68, 116. For more of Pope Francis' thought on creatures as worshippers of God, see, Ibid., paragraph 72. Later in the encyclical, Pope Francis composes a "*A Christian prayer in union with creation*" which begins with the following proclamation: "Father, we praise you with all your creatures." Ibid., paragraph 246..

to make the case that “our hearts are moved [...] to worship [God] in unison” with other creatures.⁷⁵²

Since animals and other creatures also worship God in their own ways, and since each creature is important to God as beings in themselves, Pope Francis describes the need for a renewed sense of “universal communion”⁷⁵³ with all of nature. Elsewhere, he describes this in terms of a “sublime fraternity with all creation.”⁷⁵⁴ Although he does not invoke the same “spiritual democracy” language as White does, the overlap in meaning is strong and indicative of the ways that other forms of Christian ecotheology has developed as well as the kind of developments that White’s work anticipated and suggested.

There is a synchronicity between White’s “spiritual democracy of all God’s creatures” and the call of Pope Francis to worship alongside other creatures and to care for the Earth. While a case could be made linking White and *Laudato Si’*, there is little or no evidence directly linking them. Yet, Pope Francis’ call for an integral ecology captures the same sense of deep kinship, the same assertion that all creatures are praisers of God, and the same grounding for an ethic of compassion and care for other living things that White advocated for decades earlier. Pope Francis, like White, is calling Christians to do more than just to curb consumption and to find new ways of being “green.”

⁷⁵² Ibid., paragraph 87.

⁷⁵³ Ibid., paragraph 76.

⁷⁵⁴ Ibid., paragraph 221.

White and Weber—The Role of Ideas in Religion and Ecology

Scholars in the field of religion and ecology have largely organized themselves around the notion that ideas matter when it comes to environmental values and actions. Emerging alongside the ecotheological response to White's emphasis on the role of religious ideas in shaping religious attitudes and actions is a concurrent and equally voluminous response from scholars working in a variety of other fields including, but not limited to, environmental ethics, environmental philosophy, the sociology of religion, and others. For all of these areas of study, White's emphasis on the shaping power of religious ideas remains a central and polarizing point of reference.

More to the point, I argue that although a central point of inquiry, the ideo-centric nature of White's thought is often misunderstood. Indeed, as geographer and philosopher Yi-Fu Tuan argued in 1968, there has been a general lack of theorizing in this regard. "The history of environmental ideas," writes Tuan, "has been pursued as an academic discipline largely in detachment from the question of how—if at all—these ideas guide the course of action, or how they arise out of it."⁷⁵⁵ I argue, like Tuan, that a deeper theoretical look at the role of ideas is in order. To accomplish this, we must rethink White.

With the publication of "Historical Roots," and with the ensuing debate and controversy, White opened the doors of environmental scholarship to idealistic interpretations of the ecological crisis. Prior to the publication of "Historical Roots" in 1967, the environmental movement in the late 1960s was largely geared towards material

⁷⁵⁵ Yi-Fu Tuan, "Discrepancies Between Environmental Attitude and Behaviour: Examples from Europe and China," *The Canadian Geographer* 12, no. 3 (September 1968): 176.

understandings of environmental issues. Rachel Carson's *Silent Spring*, for instance, awakened society to the ecological danger of the use of pesticides, and many early environmental activists focused on the necessity of reducing pollution and protecting endangered species. In contrast, White and others were key players in opening up conversations about ideas and values which complimented the existing discussion of practices and material factors (See chapter 1). As a result, environmental philosophy, ecotheology, and the field of environmental ethics—fields that were newly emerging and which are deeply indebted to White's pioneering efforts—began to argue that ideas and values must also be assessed.

The interplay in White's writings between ideas, values, and social change, I argued in chapter 4 of this dissertation, is borrowed directly from Weber's discussion of rationalization as outlined in *The Protestant Ethic and the Spirit of Capitalism* as well as in his multi-part series *The Economic Ethics of the World Religions*. But, by characterizing White in this manner, I also argue that White's point of view exists in partial contrast to the historical materialist stance of Marx and Engels. Not only did White hold his own historical work up for comparison to Weber's writings on capitalism, but he also positioned his work in dialogue with—and in partial opposition to—Marx's historical materialism, as did Weber.

This attempt to examine White's use of Weber's social theory and how it informed and shaped his argument in "Historical Roots" is an attempt to redress critiques of White's thought, such as that by Marangudakis, which assert that White fails to provide an explanation for how he understood the relationship between religious ideas

and changes in environmental attitudes and actions.⁷⁵⁶ In order to pose a solution to that perceived problem, I argued that White's arguments are an extension of White's broader attempt to ask what the relationship is between religion and social change. When writing as a historian, for instance, White puzzled over Needham's Question, which asked why the scientific revolution began in Europe rather than in another location, such as China.

To this end, I suggested that White borrowed a number of concepts from Weber in his attempt to explain how changes in religious ideas and values influenced large-scale changes in the material factors of society such as agriculture, science, technology, and attitudes towards labor, property, and ecology. More to the point, I connected White and Weber in four ways: First, I argued that White and Weber both adopted an ideo-centric position in their assessment of history that preferences ideas while simultaneously arguing for a balance between material and ideo-centric explanations of history. Second, I demonstrated that White utilized Weber's process of rationalization to explain the bi-directional and multi-causal way in which religious ideas were transformed over time into material practices and worldviews. Third, I drew upon Weber's concept of secularization to show how White understood the transformation of religious ideas into non-religious phenomena such as the moral endorsement and growth of science and technology. And fourth, I explored White and Weber's understanding of the unforeseen and unintended consequences that stem from the rationalization of religious ideas.

By following the thread linking White to Weber, scholars can go back to White's work and begin to establish a theoretical grounding for accurately and meaningfully

⁷⁵⁶ Marangudakis, "Medieval Roots," 259.

interpreting White's thought in a way that moves beyond the miasma of conjecture and the haze of suggested correlation. I argue that White inherited a nuanced methodology and theoretical framework from Weber for assessing the flow between religious ideas and values, social change, and environmental attitudes and behaviors.

By opening up White's scholarship to an exploration of his relationship to Weber, I argue that the general understanding of White's thought on the flow of influence between religious ideas and values and social change is more complex than most readings of White have previously allowed. For sociologists of religion who favor a quantitative approach, the way in which White is interpreted tends to rest upon a direct causal understanding of religious ideas and environmental attitudes and actions. "Most social scientists," write Proctor and Berry, "translate the White thesis into their world as A (religiously based attitudes toward nature) causes B (lack of environmental concern)." This theoretical stance, Proctor and Berry argue, falls short in allowing for the complexities and multi-causal nature that seem to be at play in the lived experiences of religious practitioners today. "[T]hings are more complicated than they seem" in this model, they write "or, put less generously, White's thesis is conceptually simplistic."⁷⁵⁷

If my reading of White's connection to Weber is correct, the problem lies not in the content of White's argument itself, but rather in how scholars have come to read it and operationalize it. By and large, most attempts to interpret White's understanding of the relationship between religious ideas and values and social change are conceptually simplistic. For White, the flow of influence between religious ideas and environmental attitudes and actions is not an unyielding one-way street where influence flows in one

⁷⁵⁷ Proctor and Berry, "Social Science," 1572–73.

direction but not the other. In other words, he did not make a causal argument. White, like Weber, believed that religious ideas were simply a key shaper of history, not the sole determinant. The relationship between religious ideas and changes in behaviors and attitudes is a bi-directional, multi-causal confluence of influences.

Linking White and Weber in this way is useful, I argue because it provides tools for analysis for scholars in the field of religion and ecology. To give but a few examples, scholars might look at the various ways in which the adoption of Christian stewardship has led to both positive and negative unintended and unforeseen consequences. Many churches and places of worship have installed solar panels as an expression of their desire to be good stewards of the Earth. Yet, there are hidden ecological risks such as the introduction of heavy metals into groundwater during the disposal of photovoltaic cells.⁷⁵⁸ The creation of photovoltaic cells also produces sulphur hexafluoride, a greenhouse gas listed by the Intergovernmental Panel on Climate Change as the most potent greenhouse gas yet tested with a warming effect 23,900 times that of carbon dioxide.⁷⁵⁹ Despite the good intentions of Christian stewards, the unforeseen and unintended consequences of such actions may counterbalance or reduce the “green” benefits desired.

Scholars might also be encouraged to continue to search out the ways in which the “greening” of religions is sometimes an unintended result of religious ideas and values that, on the surface, are not explicit attempts to create environmentally friendly patterns

⁷⁵⁸ Silicon Valley Toxics Coalition, “Toward a Just and Sustainable Solar Energy Industry,” 14 January 2009, http://svtc.org/wp-content/uploads/Silicon_Valley_Toxics_Coalition_-_Toward_a_Just_and_Sust.pdf (accessed 10 March, 2016).

⁷⁵⁹ S. D. Solomon et al., eds. “Direct Global Warming Potentials,” in *Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007* (New York: Cambridge University Press, 2007), http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html (accessed 10 March, 2016).

of action. For instance, one might ask how seemingly non-green ideas and values in religions such as practices of self-sufficiency in Christian Dispensationalist ideologies could lead to “greener” or less consumptive lifestyles in surprising or unintended ways. Or, as philosopher and religious studies scholar George James observes, Hindu nationalism has led to the protection of nature in ways that run counter with the values and philosophical roots of traditional environmental movement in India. In this case, Hindu activists have organized to protect fisheries out of a desire to preserve historical sites perceived as important to national identity in ways that are exclusionary of non-Hindus; they have acted out of a desire to preserve national identity rather than out of concern for nature. Yet, despite having their origin in religious ideas and values that are nationalistic, supportive of violence and discriminatory, as well as seemingly detached from concern for nature as intrinsically valuable in and of itself, these activities have led to “green” practices and the flourishing of wildlife.⁷⁶⁰ If we look to White’s Weberian framework and to these examples, further studies exploring the ways in which religious ideas and values can lead to unforeseen and unintended consequences are warranted. It also leads to a more nuanced understanding of the role of changes in material circumstances and arrangements on ideas and vice versa.

Ideas as Shapers of Action

The connection between White’s work and contemporary Christianity is most clearly seen in responses from theologians and eco-theologians. Theologians have

⁷⁶⁰ George A. James, “Indian Hermeneutics of Nature and the Hermeneutic of Nature of Hindu Nationalism,” paper presented at the Annual Meeting of the American Academy of Religion, San Francisco, 22 November, 2011.

frequently drawn upon White's assumption that religion can act as a set of motivating ideas that have profound and oftentimes unforeseen impacts on environmental attitudes and actions. This analysis is prevalent in a variety of theologies ranging from the arguments of ecofeminists, to conservative theologians, to process theologians.

Some, however, have found fault in this ideo-centric premise. Bron Taylor, in his "Critical Perspectives on 'World Religions and Ecology'" criticizes the preferencing of ideas that predominates scholarly assessments of the relationship between religion and ecology. According to him, a potential criticism of the field of religion and ecology is that it unreflectively privileges the "idealistic (namely idea-focused) premise" rather than first asking "'Is environmental action conditioned by religious attitudes about nature?'" The focus on religious ideas, a position that Taylor locates in relationship to White's thought, perhaps somewhat wrongly, is thus potentially problematic. Specifically, Taylor questions not whether it is a useful theory for exploration, but instead whether or not it should have been adopted as a central organizing principle in the field without fully testing the concept first. He labels this problematic ideo-centric assumption as "undemonstrated idealism," and he categorizes it, alongside other criticisms as failing to be "value-neutral."⁷⁶¹

In his latest book, *The Future of Ethics*, Jenkins also questions the ideo-centric premise of the field of religion and ecology, particularly when it comes to Christian ethics. "It is almost conventional wisdom," he explains, "that unprecedented challenges require religious and ethical thinkers to narrate a new story or retrieve a forgotten moral

⁷⁶¹ Taylor, "Critical Perspectives," 1376.

vision in order to reorient humanity's moral consciousness."⁷⁶² Contra White, in other words, he contends that Christian ethics should not begin with examination of moral resources, which he identifies as values, beliefs, and worldviews. This is because "[r]eligious ethicists sometimes overestimate the practical importance of religious beliefs and cultural worldviews while underestimating the moral creativity in religious reform projects."⁷⁶³ Traditional ecological ethics done in the wake of "Historical Roots," he claims, seek to "first establish a moral vision" and then "see about applying it to particular problems."⁷⁶⁴ Here, Jenkins employs an understanding of White that is purely ideo-centric. To counterbalance this overemphasis on religious ideas and values, which he labels a "cosmological strategy,"⁷⁶⁵ he argues that environmental ethics and theological reform should begin "within traditions that are constantly being renegotiated and redeployed in order to meet new contextual demands."⁷⁶⁶ Jenkins, in short, is a pragmatist who considers top-down ideo-centric approaches to be lacking in efficacy in the face of complex, evolving problems like climate change. Instead, the adaptivity and creativity of Christian communities might be better suited to generate the kind of ethical and practical changes needed to curb environmental degradation.

I argue that the reading of White presented in this dissertation, to a certain degree, can also be understood as a call to look beyond religious ideas as Taylor and Jenkins suggest. White, I demonstrate, posited a nuanced, dialectical relationship between religious ideas and the values, material factors, and actions of society. The tensions that

⁷⁶² Jenkins, *The Future of Ethics*, 4.

⁷⁶³ *Ibid.*, 5.

⁷⁶⁴ *Ibid.*, 80.

⁷⁶⁵ *Ibid.*, 80–81.

⁷⁶⁶ *Ibid.*, 5.

Taylor believes to exist between ideo-centric and material interpretations can be viewed as less problematic when this dual accounting for these competing factors is taken into consideration.

Jenkins' pragmatic, on-the-ground approach also warrants further exploration when considered alongside White's more Weberian approach. On the one hand, White was primarily ideo-centric in how he thought ethics should be reformed. This was with good reason, White believed, for if actors failed to first rethink the "root" ideas, values, and premises of their worldviews then there was a danger of creating newer and more serious environmental problems even as old ones were being solved. Jenkins, on the other hand, finds problems in this "look before you leap" thinking because this approach to ethics "seems overwhelmed by climate change."⁷⁶⁷ In contrast to this, thinking of White in Weberian terms makes space for changing not only ideas, but for also doing this in concert with economic reform and consideration of practical strategies; indeed, as White points out, oftentimes practical action or material factors can lead to the formation of new ideas and values.⁷⁶⁸ White, in short, suggested that scholars begin by looking at ideas but he did not think that was the one and only way for religious thinkers to change environmental attitudes and behaviors.

Instead of assuming a monolithic framework for the study of the relationship between ideas and action, this dissertation suggests that rather than viewing material and ideo-centric approaches as distinct, separate methodologies, they should be viewed as complimentary, overlapping theoretical frameworks that are complexly intertwined. Ideas

⁷⁶⁷ Ibid., 16.

⁷⁶⁸ See, for example, White's discussion of the changes in religious ideas and values that arose in response to the death and upheaval caused by the Bubonic Plague. White, "Death and the Devil."

and material factors must be considered together as part of a distinct, dialectical whole, what I have called here an ideo-centric materialist approach. White, as a deeper examination of his historical texts suggest, looked at more than the ideas present in medieval Christianity and in the lives of those interpreting the biblical notion of stewardship. He also considered economic and material factors, the pressures and complexities of class issues in the feudal system, and he highlighted the impact of scientific and technological changes. He did not consider religious ideas and values alone. So too, must scholars look at economic and social factors, along with changes in technology and material conditions, as shaping forces in their assessment of theology, and worldviews. White's Weberian ideo-centrism, I believe, points a way forward for these explorations. Religious ideas, both as White and Weber demonstrated, must be understood in concert with—and filtered through—material and social forces.

One area of research that might yield particularly useful results is the exploration of the impact of landscapes, biodiversity, and ecosystems on religious beliefs and theological positions favorable to ecological concern alongside, and in conversation with, the shaping role of religious ideas and values. In 2015, a study published in the journal *Sociology of Religion* tested the influence of “natural amenities” (e.g. beautiful landscapes and pleasant weather) on religious adherence.⁷⁶⁹ The study found that those living in areas with more “natural amenities” reported lower levels of religious adherence which, the authors argue, suggests that nature itself is a spiritual resource which replaces organized religion. However, I argue that scholars can draw upon White's Weberian

⁷⁶⁹ Todd W. Ferguson and Jeffry A. Tamburello, “The Natural Environment as Spiritual Resource: A Theory of Regional Variation in Religious Adherence,” *Sociology of Religion* 76: no. 3 (October 2015): 1–20.

blending of ideo-centric and materialistic understanding of social change to do similar studies that ask not just whether or not “natural amenities” can lead individuals away from organized religion, but that instead ask how exposure to “natural amenities” can inspire or strengthen ecologically friendly theological positions. If exposure to the beauty of nature, in other words, can lead individuals away from institutional religious adherence, might it also inspire new religious ideas and modes of valuing? While the example given is not a Weberian approach in and of itself, it serves as an example of the ways in which developing a sensitivity to material factors can act as a much needed counterpart to ideo-centric methods that could supplement more explicitly Weberian studies.

The exploration of the impact of natural landscapes on religious views has been explored before. Thomas Berry, for example, famously observed that if humans live in thriving ecosystems, then their conceptions of the divine will reflect the beauty, diversity, and richness of the landscape. However, he also worried that living in devastated ecosystems, a way of living that he called a “lunar situation,” would yield bleak and blighted understanding of the divine. If humans lived on a planet that resembled “the desolate expanse of the moon,” he wrote, then “our only conception of the divine would reflect the lunar landscape, our imagination would be as bleak as the moon.”⁷⁷⁰ Living in a damaged landscape, in other words, would lead to a diminished connection with the divine. How, one might ask, would living in a thriving ecological context lead to richer, more complex theologies or ethics? By linking this kind of research into the impact of

⁷⁷⁰ Brian Swimme and Thomas Berry, *The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era - A Celebration of the Unfolding of the Cosmos* (New York: HarperCollins, 1992), 250.

“natural amenities” on religious worldviews to the work of White, such studies might be encouraged or made more central to future ecotheological or sociological studies. This warrants a more balanced approach to ideo-centric and material-centric approaches to the study of religion and ecology.

Rereading White with an eye to the Weberian themes in his argument lends theoretical power, and a systemization to White’s thought that was previously difficult to discern. This, in and of itself, is useful for reassessing the various interpretations of the “Lynn White thesis” and determining what will be of further use and what can be discarded or set aside for revision. In addition, and since White’s work occupies such a central role in environmental studies, developing a deeper Weberian understanding of White also helps to dispel potential future misreadings of White’s scholarship. By linking White to Weber, in short, alternative strategies beyond ideo-centric approaches to the study of religion and ecology can be viewed not as alternatives to the existing framework that require scholars to look beyond White, but rather as important and complimentary strategies that enhance existing frameworks.

Looking Forward: Fifty Years After “Historical Roots” and the Search for New “Reservoirs of Insight”

White’s fifty year publishing career tells an intellectual story that extends not only through the five decades of his teaching and writing, but begins with his upbringing and continues beyond through the legacy that he left behind. The fields that he helped to shape, the history of technology, environmental ethics, ecotheology, and environmental history, are rich and growing fields of thought thanks, in no small part, to his pioneering

efforts. Now, five decades after the publication of “Historical Roots,” White’s infamous claims continue to sustain and inform scholarship in the field of religion and ecology. There is no doubt that it will continue to shape the field of religion and ecology for decades to come.

What led to this continuing success? For starters, White felt that a scholar should be exploratory and forward thinking. As such, White strove to make connections, and to offer new ideas and new insights, at every turn. “More than anything else,” wrote Hall in White’s “Eloge,” “White disliked parochialism in scholarship; he regarded narrowness of vision as utterly incompatible with the life of the mind.”⁷⁷¹ Interdisciplinary, exploratory thought that invites debate and sparks the imaginations of other scholars, in other words, is a hallmark of White’s thought. He held that carefully proving and meticulously documenting an argument was secondary to being able to stimulate conversation and to open new ideas to study. “It is better for a historian to be wrong than to be timid,” he wrote in the introduction to *Medieval Religion and Technology*.⁷⁷² White regarded much of his work, Hall tells us, “as a pioneering effort in which one should not fear to be proven wrong so long as the debate would advance the cause of learning.”⁷⁷³

Not only did White attempt to be innovative and provocative, but he did so with bombast and aplomb. As Machen observes, White often introduced his premises or arguments with a captivating statement, often delivered in a quotable, charming style.⁷⁷⁴ White had a seemingly boundless talent for creating witty and controversial aphorisms.

⁷⁷¹ Hall, “Éloge,” 480.

⁷⁷² White, *Medieval Religion and Technology*, xx.

⁷⁷³ Hall, “Éloge,” 479.

⁷⁷⁴ Machen, *Cultural Values*, 23.

He also had a knack for drawing from a diverse set of disciplines to present an argument in a lively and unforgettable way to general and scholarly audiences far outside of his area of expertise. His work, especially “Historical Roots,” is both insightful and pithy, both hallmarks of classic scholarly works. Indeed, as his reputation in the field of Religion and Ecology attests, White was able to not only generate keen insights, but he was able to frame his statements in such a way as to elicit fervent debate and controversy. But where White intended to provoke, he did so with a warmth and *esprit de corps* that generally endeared him to scientists and his fellow historians. This endearment is evidenced by his many awards and accolades.⁷⁷⁵

The popularity and power of “Historical Roots” also stems from its timely publication in *Science*, a journal with a large and diverse readership. Although its appearance in *Science* is significant in and of itself, “Historical Roots” was also widely and rapidly reproduced *en masse*. White’s article, observes Callicott, was “reprinted in practically every one of the umpteen thousand anthologies on the environmental crisis published in the decade following its appearance in *Science*, thus multiplying its already large audience and magnifying its already considerable influence.”⁷⁷⁶ White’s article was, to a degree, published in a setting that was primed to receive it. “Perhaps,” the reason for

⁷⁷⁵ “Through his publications, editing, addresses, teaching, and institutional works, he has touched many minds with the force of his ideas and the warmth of his personality.” Unknown Author, front matter, in Lynn Townsend White, jr., “Medieval Technology: Transfers and Spinoffs,” lecture, *The First Annual Rolf Buchdahl Lecture on Science, Technology and Values* (Raleigh, NC: Division of University Studies, North Carolina State University, November 3, 1981), 5.

⁷⁷⁶ Callicott, *Beyond the Land Ethic*, 187. Callicott calls *Science* “the most prestigious scientific journal published in the United States,” another important factor that lent “Historical Roots” its credibility and widespread attention. Ibid. Sponsel also makes similar claims about the publication of “Historical Roots” in *Science*. In his words, “Part of the reason White’s essay attracted so much attention is the venue in which it was published, that of the American Association for the Advancement of Science, the premier scientific organization in the United States of America.” Sponsel, *Spiritual Ecology*, 75.

its tremendous success, muse Hall and Macleod, was “because it was uttered at the right time and place.”⁷⁷⁷

The environmental movement was in its infancy, with Carson’s *Silent Spring* having been published just five years prior and the first Earth Day as yet unrealized. In the midst of this environmental unrest, Christianity was also in question on a multitude of fronts. Secularization theory was on the rise as well and many were convinced that Christianity was losing its cultural and moral relevance in the face of rising religious plurality. Buddhism and other religions were gaining traction in the religious landscape of the U.S. In short, Christianity was put on the defensive.⁷⁷⁸

Yet, at this same time, while scientists and others were sounding the alarm for environmental concern, Christianity appeared to be largely silent on ecological issues and detached from activist efforts of the late 1960s. Rather than addressing his fellow historians, or a vested group of ecologically concerned theologians for that matter, one might conjecture that “Historical Roots” gained such popularity because it was addressed to the scientific community and the nonacademic readers who subscribe to *Science*. White, in this sense, spoke to the concerns of those who were primed to find a “scapegoat” in religion for the ecological crisis. While very few would disagree that the environmental crisis stems from exploitative forms of science and technology or from consumer culture and unchecked capitalism, White invited his readers to look beyond these things and to ask what the ideological and moral “roots” of the crisis are. In this sense, blame could be shifted away from practices and instead placed on the ideas and

⁷⁷⁷ Hall and Macleod, “Technology, Ecology and Religion,” 154.

⁷⁷⁸ See, for example, Peter Berger, *The Sacred Canopy: Elements of a Sociological Theory of Religion* (Garden City, NY: Doubleday, 1967).

values inherited from the past. Perhaps then, another reason why White's thought has been so popular is because many activists and scholars, at a fundamental level, want to agree with him.

There is also a sense shared by his fellow Christians and theologians that White was right in that a way forward on solving the ecological crisis lay in recognizing the truth of his arguments. Put differently, the enduring draw of White's arguments might reside in their veiled promise of a flourishing ecological future and in the suggestion that Christianity could be part of the solution. Fifty years ago, when "Historical Roots" was first published, there was a sense of immediate urgency to stem the tide of ecological disaster before it was too late. If that was true then, it is doubly true today.

Although White is often characterized more as a critic of religion than as a constructive theological voice, at the "root" of his work is a message of hope. While religion might be part of the ecological problem, White informed his readers, it could equally be said that it is part of the potential solution. Dire warnings and apocalyptic messages are not uncommon in environmental discourse. The present, for many worried about the environmental crisis, might seem to be a time in which the forces of science, technology, and economic growth persist with nearly unstoppable momentum. Contrary to Weber's worries that humanity might be forever locked in the "iron cage" of rationality and adrift in the currents of capitalism, White suggested that there might yet be hope for humanity. Religion and ecological calamities are not runaway forces, destined to bear the Earth to its ultimate demise. In White's reading of history, the future

is manageable and malleable. Here, White parted ways with Weber when he asserted that religious ideas could be called upon to guide humanity in a more desirable direction.

Returning again to Hargrove's critiques of White, I believe that there are at least two salient and overlapping points that should inform future discussions of White: First, scholarship in the field of religion and ecology still recognizes the importance of White's work in not only stimulating the growth of the field of religion and ecology, but also its role as a key shaper of ongoing scholarship. Rather than moving beyond the "Lynn White thesis," as some have called for, I argue that it would be more productive to rethink the debate itself. If scholarship is to move past the negative or restricting aspects of White's work, then by rethinking the arguments themselves, and by exploring how White arrived at his conclusions, scholars can move forward to new theories and new methodologies for studying the intersection of religion and ecology.

Second, I suggest that by engaging in "constructive borrowing" from White—to use Hargrove's language—significant growth in the field of religion and ecology can occur. Whether borrowing from White's use of Weber to better understand how religious ideas influence social change or borrowing White's concept of a "spiritual democracy of all God's creatures," scholars can add nuance and depth to future assessments of the intersection of religion and ecology. Moreover, Christians might find value in this rehabilitation of White by looking beyond only finding criticism in his work; they can instead find inspiration and energy to turn the conversation towards more constructive ends.

Whatever White's intentions might have been, to regard his thought as static or as exclusive intellectual property is to devalue the important work that has been nurtured by his critics and supporters. White's core argument in "Historical Roots" has taken on a disciplinary importance and given rise to scholarly ideas that transcend and exist apart from the context in which White was writing. Although it was insightful and inspired, White intended for "Historical Roots" to be provocative rather than definitive. It was in the exploration of ideas that White found value. Success, for him, seemed to have been measured not in awards or accomplishments, but rather in the act of thinking itself. "For himself, as for us," writes Hall, "Lynn White expected only to 'work very hard and be happy when one's errors are corrected.'"⁷⁷⁹

Whether attempting to understand the past, or to identify a better future—both socially and spiritually—for his fellow creatures (both living and nonliving), White was never content to leave new ideas and perspectives unexplored. "For White," writes Hall, "it was always sufficient to have instilled some new ideas, or to have aroused dormant thoughts, in his readers."⁷⁸⁰ Honoring this view, then, it is important to recognize that White's work is only as useful or as nuanced as the scholarly response to it allows. White's contribution to the field of religion and ecology, in other words, is more than just what White said. It is also a scholarly construct—a useful rhetorical device, or tool even—that is in a continuous state of revision. The "Lynn White thesis" is therefore just as much something that scholars "write" as it is something that they "read."

⁷⁷⁹ Hall, "Éloge," 480.

⁷⁸⁰ Hall, "Lynn White's *Medieval Technology*," 101.

My attempt in this dissertation could be considered a first pass in a necessary rethinking of White's scholarship as it is used by scholars interested in the intersection of religion and the environment. While I have attempted to be as true to White's words as possible, I have undoubtedly interpreted his words and framed his arguments in ways which may seem inaccurate to others who set out to read more deeply into his work. Indeed, excavating the sediments of such a rich body of work will inevitably miss rich veins of evidence and insight. Future explorations will unearth deeper truths. It is important to recall that "Historical Roots" originated as a speech that was intended to be exploratory and suggestive, not definitive. While White would go on to revisit the topic many times in his later writings, White never developed a full or sustained explanation of his argument in "Historical Roots." Just as White's own work scratched the surface of his thought, so to does this dissertation. There is still more to be discovered.

While this attempt to better understand White will be useful to scholars, I also wish to defend, and even to celebrate, the remarkable wealth of scholarship that has been made possible through a diversity of interpretations. The field of religion and ecology has prospered tremendously in its response to White and those who followed him, and this should neither be downplayed nor dismissed. Any work of interpretation is a delicate task and should be regarded as an evolutionary step from the works that preceded it. While I argue that more attention must be given to White's thought, the reading presented here in this dissertation is but one of many possible such interpretations. Restoring the integrity of White's work is a worthwhile task, I believe, but it is far more important to allow it to continue to provide the fuel for lively debate and to kindle the fires of informed,

impassioned scholarship. Let this dissertation, then, be regarded as more than an attempt to get White right. Instead, my hope is that it will become a source of new information and an invitation to lively debate.

For the same reasons that White's scholarship has such immense appeal, so too must the ongoing response to White continue to cross disciplinary boundaries with boldness and in a way that speaks to diverse audiences. "As heirs to White's legacy," Hall writes in his discussion of White's *Medieval Technology and Social Change*, "it is up to us to decide what to do with it. The field he pioneered has matured; our tasks are not the same as his [...]. What is important is that we build from the base he has left, that we move forward in directions we choose."⁷⁸¹ So too must scholars of religion and ecology "move forward in directions we choose" in our interpretations of White's ecological and theological legacy.

To conclude this dissertation, I offer a final thought from Lynn White: Just over forty years ago, White made a plea to his fellow historians to bring Weber's voice back into academic debates regarding the relationship between labor, capitalism, and technology in the Middle Ages. He contended that if historians "are to refresh the aridity which sterilized discussions [of Weber]," then it is up to scholars to "discover new reservoirs of insight" and to "plow adjacent fields still uncultivated."⁷⁸² Just as White hoped to revitalize a threadbare and overworked dilemma in his own academic setting by introducing Weber into the conversation, I too suggest that in the scholarly attempt to "refresh the aridity" of the debate surrounding Lynn White in the academic study of

⁷⁸¹ Ibid., 101.

⁷⁸² White, "Iconography of *Temperantia*," 182.

religion and ecology, we also look to “new reservoirs of insight” present in White’s thought. Rather than continuing to use a shallow reading of White so that he may be knocked down like a “straw man” as is so commonly done, it might be more fruitful to look more closely at what has been left “uncultivated” in the discussion of White’s scholarship and legacy.

Appendix 1: Texts that Cite White

* = An asterisk (*) indicates texts in which Lynn Townsend White, jr.'s article, "The Historical Roots of Our Ecologic Crisis" is misspelled or mis-cited in the text.

= A pound symbol (#) indicates texts that imagine themselves as a direct response to White, whether in total sum or in part, or that position themselves alongside White in order to establish their context.

*#Afrasiabi, K. L. 2003. "Toward an Islamic Ecotheology." In *Worldviews, Religion and The Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson.

#Attfield, Robin. 2009. "Social History, Religion, and Technology: An Interdisciplinary Investigation into Lynn White's 'Roots.'" *Environmental Ethics* 31, no. 1 (Spring): pp. 31-50.

*Attfield, Robin. *Environmental Philosophy: Principles and Prospects*. Aldershot, UK: Avebury, 1994.

*Attfield, Robin. 1991. *The Ethics of Environmental Concern*. 2nd Edition. Athens, GA: The University of Georgia Press.

*Atwood Lawrence, Elizabeth. "The Sacred Bee, the Filthy Pig, and the Bat Out of Hell: Animal Symbolism as Cognitive Biophilia." In *The Biophilia Hypothesis*. Eds. Stephen R. Kellert and Edward O. Wilson. Washington, D.C.: Island Press, 1993.

*#Ayers, Robert H. 1986. "Christian Realism and Environmental Ethics." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens, GA: The University of Georgia Press.

Barbour, Ian G. 1972. "Attitudes Toward Nature and Technology." In *Earth Might Be Fair: Reflections on Ethics, Religion, and Ecology*. Edited by Ian G. Barbour. Englewood Cliffs, NJ: Prentice-Hall.

Barbour, Ian G. 1972. "Introduction." In *Earth Might Be Fair: Reflections on Ethics, Religion, and Ecology*. Edited by Ian G. Barbour. Englewood Cliffs, NJ: Prentice-Hall.

Barnes, Michael Horace. "Introduction." In *An Ecology of the Spirit: Religious Reflection and Environmental Consciousness*. Edited by Michael Horace Barnes. Vol. 36. The Annual Publication of the College Theology Society. New York: University Press of America and the College Theology Society, 1994.

Barnhill, David Landis and Roger S. Gottlieb. Editors. 2001. "Deep Ecology, Ecofeminism, and the Bible." In *Deep Ecology and World Religions: New Essays on Sacred Grounds*. Albany, NY: State University of New York Press.

*#Barr, John, ed. *The Environmental Handbook: Action Guide for the UK*; London: Ballantine Books, 1971.

Barrett, Gary W. and Karen E. Mabry. 2002. "Twentieth-Century Classic Books and Benchmark Publications in Biology." *Bioscience* 52, no. 3 (March): pp. 282-285.

Barton, John. 2010. "Reading the Prophets from an Environmental Perspective." In *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T&T Clark International.

Bauman, Whitney A., Richard R. Bohannon II, and Kevin J. O'Brien. "Ecology: What is it, who gets to decide, and why does it matter?" in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*. Eds. Bauman, Whitney A., Richard R. Bohannon II, and Kevin J. O'Brien. Routledge. New York: 2011.

*#Bauman, Whitney A., Richard R. Bohannon II, and Kevin J. O'Brien. "The Tensions and Promises of Religion and Ecology's Past, Present, and Future." In *Inherited Land: The Changing Grounds of Religion and Ecology*. Edited by Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O'Brien. Wipf and Stock Publishers. Eugene, OR: 2011.

*Belovsky, Gary E. 2006. "Judeo-Christian Perceptions of Nature and Its Variability: A Foundation for Environmental Awareness?." In *Religion and the New Ecology: Environmental Responsibility in a World of Flux*. Edited by David M. Lodge and Christopher Hamlin. Notre Dame, IN: University of Notre Dame Press.

Benthall, Jonathan. *Returning to Religion: Why a Secular Age Is Haunted by Faith*. New York: I.B. Tauris, 2008.

*#Bennett, John B. 1977. "On Responding to Lynn White: Ecology and Christianity." *Ohio Journal of Religious Studies* 5, no. 1 (April).

Berry, Robert James. 2006. "Introduction: Stewardship: A Default Position?" In *Environmental Stewardship: Critical Perspectives—Past and Present*. New York: T&T Clark International.

*Berry, Robert James. "Introduction: Stewardship: A Default Position?" In *Environmental Stewardship: Critical Perspectives, Past and Present*. Edited by Robert James Berry. New York: T&T Clark International, 2006.

Berry, R. J., ed. *The Care of Creation: Focusing Concern and Action*. Leicester, UK: Inter-Varsity Press, 2000.

*Berry, Thomas. 1980. "Perspectives on Creativity: Openness to a Free Future." Written for The Theology Institute, Villanova University. (June). The Archives of the Cathedral Church of Saint John the Divine, New York.

Berthong, John. "Motifs for a New Confucian Ecological Vision." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006. (He is citing from Gottlieb's *This Sacred Earth*. (Berthong 2006)).

Bianchi, Eugene. "Psychospirituality: The Ecological Matrix." In *An Ecology of the Spirit: Religious Reflection and Environmental Consciousness*. Edited by Michael Horace Barnes. Vol. 36. The Annual Publication of the College Theology Society. New York: University Press of America and the College Theology Society, 1994.

*Blenkinsopp, Joseph. 2004. *Treasures Old and New: Essays in the Theology of the Pentateuch*. Grand Rapids, MI: Wm. B. Eerdmans Publishing Co.

*Bohannon, Richard. *Public Religion and the Urban Environment: Constructing a River Town*. New York: Continuum, 2012.

Bouma-Prediger, Steven. *The Greening of Theology: The Ecological Models of Rosemary Radford Ruether, Joseph Sittler, and Juergen Moltmann*. Atlanta, GA: Scholars Press, 1995.

*#Bratton, Susan Power. 1986. "Christian Ecotheology and the Old Testament." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens, GA: The University of Georgia Press.

*Bratton, Susan Power. "Ecology and Religion." In *The Oxford Handbook of Religion and Science*. Edited by Philip Clayton and Zachary Simpson. New York: Oxford University Press, 2006.

*Brennan, Andrew, and Yeuk-Sze Lo. "Environmental Ethics." Edited by Edward N. Zalta. *Stanford Encyclopedia of Philosophy*, Fall 2008.
<http://plato.stanford.edu/archives/fall2011/entries/ethics-environmental/>.

*Brooke, John Hedley. "Contributions from the History of Science and Religion." In *The Oxford Handbook of Religion and Science*. Edited by Philip Clayton and Zachary Simpson. New York: Oxford University Press, 2006.

*#Brueggemann, Walter. "Foreword." In *All Creation Is Groaning: An Interdisciplinary Vision for Life in a Sacred Universe*. Edited by Carol J. Dempsey and Russell A. Butkus. Collegeville, MN: Liturgical Press, 1999.

*Callicott, J. Baird. 2011. "The Worldview Concept and Aldo Leopold's Project of 'World View' Remediation." *Journal for the Study of Religion, Nature and Culture* 5, no. 4: 510–28.

*#Callicott, J. Baird. "Natural History as Natural Religion." In *The Encyclopedia of Religion and Nature*. Volume 2. Edited by Bron Taylor and Jeffry Kaplan. New York: Continuum, 2008.

Callicott, J. Baird. "The New New (Buddhist?) Ecology." *Journal for the Study of Religion, Nature and Culture* 2, no. 2 (2008): 166–182.

*Callicott, J. Baird. "Environmental Philosophy is Environmental Activism: The Most Radical and Effective Kind." In *Environmental Ethics: What Really Matters, What Really Works*. Edited by David Schmidtz and Elizabeth Willott. New York: Oxford University Press, 2002.

Callicott, J. Baird. *Beyond the Land Ethic: More Essays in Environmental Philosophy*. Albany, N.Y.: State University of New York Press, 1999.

Callicott, J. Baird. 1989. *In Defense of the Land Ethic: Essays in Environmental Philosophy*. New York: State University of New York Press.

*Cho, Hyun-Chul. "An Ecological Vision of the World: Toward a Christian Ecological Theology for Our Age." Editrice Pontificia Università Gregoriana, 2004.

*Clifford, Anne M. 1995. "Feminist Perspectives on Science: Implications for an Ecological Theology of Creation." In *Readings in Ecology and Feminist Theology*. Edited by Mary Heather MacKinnon and Moni McIntyre. Kansas City: Sheed & Ward.

*Cobb, Jr., John B. "The Making of an Earthist Christian." In *The Encyclopedia of Religion and Nature*. Volume 1. Edited by Bron Taylor and Jeffry Kaplan. New York: Continuum, 2008.

Cobb, John B., Jr. 2001. "Protestant Theology and Deep Ecology." In *Deep Ecology and World Religions: New Essays on Sacred Grounds*. Edited by David Landis Barnhill and Roger S. Gottlieb. Albany, NY: State University of New York Press.

*#Cobb, John B., Jr. 1992. *Sustainability: Economics, Ecology, and Justice*. Maryknoll, NY: Orbis Books.

- *Cobb, John B., Jr. 1972. *Is It Too Late?: A Theology of Ecology*. Beverly Hills: Bruce.
- #Cohen, Jeremy. "On Classical Judaism and Environmental Crisis." In *Judaism and Environmental Ethics: A Reader*. Edited by Martin D. Yaffe. New York: Lexington Books. 2001.
- *Cohen, Jeremy. 1989. *"Be Fertile and Increase, Fill the Earth and Master It": The Ancient and Medieval Career of a Biblical Text*. Ithaca, NY: Cornell University Press.
- *Conradie, Ernst M. 2005. *An Ecological Christian Anthropology: At Home on Earth?* Burlington, VT: Ashgate.
- *Conradie, Ernst. 2006. "Christianity and Ecological Theology: Resources for Further Research." Study Guides in Religion and Theology 11. Publications of the University of the Western Cape. Stellenbosch, South Africa: Sun Press.
- *#Conradie, Ernst, ed. 2013. "The Journey of Doing Christian Ecotheology: A Collective Mapping of the Terrain." *Theology* 116 (1): 4–17.
- *#Conradie, Ernst M. 2010. "What on Earth is an Ecological Hermeneutics? Some Broad Parameters." *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavropoulou. New York: T&T Clark International.
- *#Curry, Janel and Kathi Groenendyk. 2006. "Nature Seen Through the Eyes of Faith: Understandings Among Seminarians." *Worldviews: Environment, Culture, Religion* 10: 3.
- *Curry, Patrick. *Ecological Ethics: An Introduction*. Malden, MA: Polity, 2011.
- *Danielsen, Sabrina. 2013. "Fracturing Over Creation Care? Shifting Environmental Beliefs Among Evangelicals, 1984–2010." *Worldviews: Environment, Culture, Religion* 52: 1.
- *#De Bell, Garrett, ed. *The Environmental Handbook*. New York: Ballantine Books, 1970.
- *De Steiguer, Joseph Edward. *The Age of Environmentalism*. New York: McGraw-Hill, 1997.
- *Deane-Drummond, Celia. *A Handbook in Theology and Ecology*. London: SCM Press, 1996.

Deane-Drummond, Celia. "Theology, Ecology, and Values." In *The Oxford Handbook of Religion and Science*. Edited by Philip Clayton and Zachary Simpson. New York: Oxford University Press, 2006.

Deane-Drummond, Celia. *Eco-Theology*. London: Darton, Longman and Todd, 2008.

*#DeLashmutt, Michael W. 2011. "Church and Climate Change: An Examination of the Attitudes and Practices of Cornish Anglican Churches Regarding the Environment." *Journal for the Study of Religion, Nature and Culture* 5: 1.

#Dell, Katharine J. 2010. "The Significance of the Wisdom Tradition in the Ecological Debate." In *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T&T Clark International.

Dempsey, Carol J., and Russell A. Butkus, eds. *All Creation Is Groaning: An Interdisciplinary Vision for Life in a Sacred Universe*. Collegeville, MN: Liturgical Press, 1999.

*Des Jardins, Joseph R. *Environmental Ethics: An Introduction to Environmental Philosophy*. Belmont, Calif.; London: Wadsworth Thomson Learning, 2001.

#Dessì, Ugo. "'Greening Dharma': Contemporary Japanese Buddhism and Ecology." *Journal for the Study of Religion, Nature and Culture* 7, no. 3 (2013): 334–55.

#Devall, Bill. "The Ecological Self." In *The Deep Ecology Movement: An Introductory Anthology*. Eds. Alan Drengson & Yuichi Inoue. Berkeley: North Atlantic Books, 1995.

DeWitt, Calvin B. "The Scientist and the Shepherd: The Emergence of Evangelical Environmentalism." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006. (Gets the title of "roots" right (DeWitt 2006, 577) but doesn't cite White at all in his endnotes. But white is cited in the larger book edited by gottlieb that this is a part of).

Dubos, René. 2006. "Franciscan Conservation versus Benedictine Stewardship." In *Environmental Stewardship: Critical Perspectives – Past and Present*. New York: T&T Clark International.

#Duitsman, Mary Aline. *Ecology and Theology: Christian Responses to Lynn White Jr.* California State University, Northridge. May 1987.

Dwivedi, O.P. 2004. "Satyagraha for Conservation: Awakening the Spirit of Hinduism." *This Sacred Earth: Religion, Nature, Environment*. Edited by Roger Gottlieb. Second Edition. New York: Routledge.

*Elvey, Anne F. *An Ecological Feminist Reading of the Gospel of Luke: A Gestational Paradigm*. Lewiston, NY: Edwin Mellen Press, 2005.

*Farley, Margaret A. "Religious Meanings for Nature and Humanity." In *The Good in Nature and Humanity: Connecting Science, Religion, and Spirituality with the Natural World*. Edited by Stephen R. Kellert and Timothy J. Farnham. Washington DC: Island Press, 2002.

*#Feenstra, Ernest S., Lynn White, Jr., Renato Baserga, Cesare Emiliani, and Shale Niskin. "Christian Impact on Ecology." *Science* 156 (3776) (May 12, 1967).

*Fleming, Patricia Ann. 2006. "Can Nature (Legitimately) Be Our Guide?." In *Religion and the New Ecology: Environmental Responsibility in a World of Flux*. Edited by David M. Lodge and Christopher Hamlin. Notre Dame, IN: University of Notre Dame Press.

Foltz, Richard C. 2003. "Mormon Values and the Utah Environment." In *Worldviews, Religion and The Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson.

#Foltz, Richard C., Ed. 2003. *Worldviews, Religion and The Environment: A Global Anthology*. Belmont, CA: Wadsworth Thomson.

Foltz, Richard C. "Islam." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.

*Fowler, Robert Booth. *The Greening of Protestant Thought*. Chapel Hill: University of North Carolina Press, 1995.

#Frymer-Kensky, Tikva. 2003. "Ecology in a Biblical Perspective." In *Worldviews, Religion and The Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson.

Fudpucker, Wilhelm E., SJ. "Through Christian Technology to Technological Christianity." In *Theology and Technology: Essays in Christian Analysis and Exegesis*. Edited by Carl Mitcham and Jim Grote. Lanham, MD: University Press of America, 1984.

*Gerten, Dieter and Sigurd Bergmann. "Facing the Human Faces of Climate Change." In *Religion in Environmental and Climate Change: Suffering, Values, Lifestyles*. Edited by Dieter Gerten and Sigurd Bergmann. New York: Continuum. 2012.

#Glick, Thomas F. "White, Lynn, Jr. 1907-1987." *Encyclopedia of Historians and Historical Writing*. Edited by Kelly Boyd. Chicago: Fitzroy Dearborn, 1999.

*Goffi, Jean-Yves. 1994. *Le Philosophe et ses Animaux: Du Statut Éthique de l'Animal*. Nîmes (France): Jacqueline Chambon.

*Gottlieb, Roger, ed. 2004. *This Sacred Earth: Religion, Nature, Environment*. New York: Routledge.

*Gottlieb, Roger S. *This Sacred Earth: Religion, Nature, Environment*. 1st ed. New York: Routledge, 1996.

*Gottlieb, Roger, ed. 2004. *This Sacred Earth: Religion, Nature, Environment*. Second Edition. New York: Routledge.

*Gottlieb, Roger S. "Saving the World: Religion and Politics in the Environmental Movement." In *Liberating Faith: Religious Voices for Justice, Peace, and Ecological Wisdom*. Edited by Roger S. Gottlieb. New York: Rowman & Littlefield, 2003.

*Gottlieb, Roger S., ed. *The Oxford Handbook of Religion and Ecology*. New York: Oxford University Press, 2006.

*Gould, Rachelle K., Nicole M. Ardoin, and Jennifer Kamakanipakolonahe'okekai Hashimoto. 2010. "'Mālama the 'āina, Mālama the People on the 'āina': The Reaction to Avatar in Hawai'i." *Journal for the Study of Religion, Nature and Culture* 4: 4. Pp. 425-456.

*Habel, Norman. Ed. *Readings from the Perspective of Earth*. The Earth Bible, 1. Cleveland, OH: The Pilgrim Press, 2000.

*-----, *The Earth Story in the Psalms and the Prophets*. The Earth Bible 4. The Pilgrim Press. Cleveland, 2001.

*Habel, Normann C., and Shirley Wurst, eds. *The Earth Story in Genesis*. Sheffield, England: Sheffield Academic Press, 2000.

*Haberman, David L. *People Trees: Worship of Trees in Northern India*. New York: Oxford University Press, 2013.

#Haberman, David L. 2010. "Faces in the Trees." *Journal for the Study of Religion, Nature and Culture* 4:2. Pp. 173-190.

#Hall, Bert S. 1988. "Éloge: Lynn White, Jr., 29 April 1907 - 30 March 1987." *Isis*. 79 (3) (September). A Special Issue on Artifact and Experiment: 478-481.

#Hall, Bert S. "Lynn Townsend White, Jr. (1907-1987)." *Technology and Culture* 30: (1) (January 1989): 194-213.

#Hall, Bert. 1996. "Lynn White's *Medieval Technology and Social Change* After Thirty Years." In *Technological Change: Methods and Themes in the History of Technology*. Edited by Robert Fox. Amsterdam, The Netherlands: Harwood Academic Publishers.

#Hall, Bert, and Ranald Mackenzie Macleod. "Technology, Ecology and Religion: Thoughts on the Views of Lynn White." In *Design and Production in Medieval and Early Modern Europe: Essays in Honor of Bradford Blaine*. Edited by Bradford Blaine and Nancy Van Deusen, 149-62. Claremont Cultural Studies; Wissenschaftliche Abhandlungen (Institute of Mediaeval Music). Ottawa, Canada: Institute of Mediaeval Music, 1998.

Hall, John Douglas. 1986. *Imagining God: Dominion as Stewardship*. Grand Rapids: Wm. B. Eerdmans Publishing Co. and New York: Friendship Press.

Hall, Douglas J. 2006. "Stewardship as Key to a Theology of Nature." In *Environmental Stewardship: Critical Perspectives – Past and Present*. New York: T&T Clark International.

#Hamlin, Christopher and David M. Lodge. 2006. "Introduction: Beyond Lynn White: Religion, the Contexts of Ecology, and the Flux of Nature." In *Religion and the New Ecology: Environmental Responsibility in a World of Flux*. Edited by David M. Lodge and Christopher Hamlin. Notre Dame, IN: University of Notre Dame Press.

Hargrove, Eugene C. 1986. "Introduction." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens, GA: The University of Georgia Press.

*#Hargrove, Eugene C. 1986. "Preface: Religion and Environmental Ethics: Beyond the Lynn White Debate." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens, GA: The University of Georgia Press.

*#Hargrove, Eugene C. Editor. 1986. *Religion and Environmental Crisis*. Eugene C. Hargrove. Athens, GA: The University of Georgia Press.

*#Harris, Ian. 2003. "Ecological Buddhism?" In *Worldviews, Religion and The Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson.

#Harrison, Peter. 2006. "Having Dominion: Genesis and the Mastery of Nature." In *Environmental Stewardship: Critical Perspectives – Past and Present*. New York: T&T Clark International. (the bibliography for the whole edited volume is compiled together so no individual author in this volume really cites White individually).

Harrod, Howard L. 2000. *The Animals Came Dancing: Native American Sacred Ecology and Animal Kinship*. Tucson: The University of Arizona Press.

*Hathaway, Mark, and Leonardo Boff. *The Tao of Liberation: Exploring the Ecology of Transformation*. Maryknoll, NY: Orbis Books, 2009.

#Haught, John F. "Religion and the Origins of the Environmental Crisis." In *An Ecology of the Spirit: Religious Reflection and Environmental Consciousness*. Edited by Michael Horace Barnes. Vol. 36. The Annual Publication of the College Theology Society. New York: University Press of America and the College Theology Society, 1994.

*Hinsdale, Mary Ann. 1995. "Ecology, Feminism, and Theology." In *Readings in Ecology and Feminist Theology*. Edited by Mary Heather MacKinnon and Moni McIntyre. Kansas City: Sheed & Ward.

*Hobgood-Oster, Laura. *The Friends We Keep: Unleashing Christianity's Compassion for Animals*. Waco, TX: Baylor University Press, 2010.

Hodder, Bryce S. *Christianity's Burden of Guilt: An Examination of Lynn White's Thesis on the Ecological Crisis in the Light of the Biblical Data*. Master's Thesis. Newfoundland: Department of Religious Studies. Memorial University of Newfoundland, 1995.

*Hopper, David H. *Technology, Theology, and the Idea of Progress*. Louisville, KY: Westminster/John Knox Press, 1991.

#Horrell, David G. 2010. "Introduction." In *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T&T Clark International.

*Hughes, J. Donald. 1986. "Pan: Environmental Ethics in Classical Polytheism." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens, GA: The University of Georgia Press.

Hütterman, Aloys. 2003. "Genesis 1 – The Most Misunderstood Part of the Bible." In *Worldviews, Religion and The Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson.

Jacka, Jerry K. 2010. "The Spirits of Conservation: Ecology, Christianity, and Resources Management in Highlands Papua New Guinea." *Journal for the Study of Religion, Nature and Culture* 4: 1. Pp. 24-47.

*#Jakowska, Sophie. 1986. "Roman Catholic Teaching and Environmental Ethics in Latin America." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens, GA: The University of Georgia Press.

*Jenkins, Willis and Christopher Key Chapple. 2011. "Religion and Environment." *Annual Reviews Environment and Resources* 36: 441-63. Available from www.annualreviews.org.

Jenkins, Willis. *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity*. Washington, DC: Georgetown University Press, 2013.

Johnson, Elizabeth A. *Ask the Beasts: Darwin and the God of Love*. New York: Bloomsbury Publishing, 2014.

*Johnston, Lucas F. *Religion and Sustainability: Social Movements and the Politics of the Environment*. Bristol, CT: Equinox Publishing, 2013.

#Kalland, Arne. "The Religious Environmentalist Paradigm." In *The Encyclopedia of Religion and Nature*. Volume 2. Edited by Bron Taylor and Jeffry Kaplan. New York: Continuum, 2008.

*Kalof, Linda, Seven Mattes, Amy Fitzgerald. "Animal Studies Bibliography." Animal Studies Program. Michigan State University. <http://animalstudies.msu.edu/bibliography.php>. Accessed 8 February 2012.

#Kay, Jeanne. "Concepts of Nature in the Hebrew Bible." In *Judaism and Environmental Ethics: A Reader*. Edited by Martin D. Yaffe. New York: Lexington Books. 2001.

*#Kearns, Laurel. "Saving the Creation: Christian Environmentalism in the United States." *Sociology of Religion* 57, no. 1 (1996): 55–70.

*Kellert, Stephen R. *Birthright: People and Nature in the Modern World*. New Haven: Yale University Press, 2012.

*Kenel, Sally. "Nature and Grace: An Ecological Metaphor." In *An Ecology of the Spirit: Religious Reflection and Environmental Consciousness*. Edited by Michael Horace Barnes. Vol. 36. The Annual Publication of the College Theology Society. New York: University Press of America and the College Theology Society, 1994.

#Kent, Eliza F. 2010. "A Road Runs Through It: Changing Meanings in a Sacred Grove in Tiruvannamalai, Tamil Nadu." *Journal for the Study of Religion, Nature and Culture* 4: 2. Pp 213-231.

*#Kinsley, David. "Christianity as Ecologically Harmful." 1996. *This Sacred Earth: Religion, Nature, Environment*. First Edition. Edited by Roger S. Gottlieb. New York: Routledge. (reprinted from Kinsley, David. 1994. *Ecology and Religion*. Englewood Cliffs, NJ: Prentice Hall).

*Kinsley, David. 1995. *Ecology and Religion: Ecological Spirituality in Cross-Cultural Perspective*. Englewood Cliffs, NJ: Prentice Hall.

*#Kline, Benjamin. 2007. *First Along the River: A Brief History of the U.S. Environmental Movement*. New York: Rowman & Littlefield.

*#LaBar, Martin. 1986. "A Biblical Perspective on Nonhuman Organisms: Values, Moral Considerability, and Moral Agency." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens, GA: The University of Georgia Press.

#Leduc, Timothy. "Contemplating Climategate: Religion and the Future of Climate Research." In *Religion in Environmental and Climate Change: Suffering, Values, Lifestyles*. Edited by Dieter Gerten and Sigurd Bergmann. New York: Continuum. 2012.

#Livingstone, David N. "Ecology and the Environment." In *Science and Religion: A Historical Introduction*. Edited by Gary B. Ferngren. Baltimore, MD: The Johns Hopkins University Press, 2002.

*#Livingstone, David N. "The Historical Roots of Our Ecological Crisis: A Reassessment." *Fides et Historia* 26 (1994).

Livingston, John A. *The John A. Livingston Reader The Fallacy of Wildlife Conservation and One Cosmic Instant: a Natural History of Human Arrogance*. Toronto: McClelland & Stewart, 2007.

Lorentzen, Lois Ann. "Globalization." in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*. Eds. Bauman, Whitney A., Richard R. Bohannon II, and Kevin J. O'Brien. Routledge. New York: 2011.

*#Machen, Judith. *Cultural Values and the Vitality of the West: the Mind of Lynn White*. Thesis. The University of Oklahoma Graduate College. Master of Liberal Studies. Norman, Oklahoma. 1993.

*MacKinnon, Mary Heather and Moni McIntyre, Editors. 1995. *Readings in Ecology and Feminist Theology*. Kansas City: Sheed & Ward.

*Maguire, Daniel C. "Population, Religion, and Ecology." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.

#Maier, Harry O. 2010. "Green Millennialism: American Evangelicals, Environmentalism and the Book of Revelation." In *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T&T Clark International.

*#Marangudakis, Manussos. "The Medieval Roots of Our Ecological Crisis." *Environmental Ethics* 23 (Fall 2001): 243–260.

#McFague, Sallie. 2003. "An Ecological Christology: Does Christianity Have It?." In *Worldviews, Religion and The Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson.

*#McFague, Sallie. 2001. "New House Rules: Christianity, Economics, and Planetary Living." *Daedalus: Journal of the American Academy of Arts and Sciences* 130 no. 4 (Fall). Pp. 125-140.

*Merchant, Carolyn. 2003. *Reinventing Eden: The Fate of Nature in Western Culture*. New York: Routledge.

Merchant, Carolyn. 1983. *The Death of Nature: Women, Ecology, and the Scientific Revolution*. New York: HarperCollins.

Mickey, Sam. "Contributions to Anthropocosmic Environmental Ethics." *Worldviews: Global Religions, Culture, and Ecology* 11, no. 2 (2007): 226–247.

#Moncrief, Lewis W. "The Cultural Basis for Our Environmental Crisis." *Science* 170, no. 3957 (October 30, 1970): 508–512.

*Montefiore, Hugh, ed. "The Report." In *Man and Nature*, 1-84. London: Collins, 1975.

*#Moss, David. 2010. "Hans Urs von Balthasar: Beginning with Beauty." In *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T&T Clark International.

#Nash, James A. "Christianity (1) - Introduction." In *The Encyclopedia of Religion and Nature*. Volume 1. Edited by Bron Taylor and Jeffry Kaplan. New York: Continuum, 2008.

Nash, Roderick F. *The Rights of Nature: A History of Environmental Ethics*. Madison, WI: University of Wisconsin Press, 1989.

#Nelson, Michael P. "Lynn White, Jr." In *Fifty Key Thinkers on the Environment*. Edited by Joy A. Palmer. New York: Routledge, 2001.

*Nixon, Denver Vale. 2006. "The Environmental Resonance of Daoist Moving Meditations." *Worldviews: Environment, Culture, Religion* 10: 3.

#Oelschlaeger, Max. 1994. *Caring for Creation: An Ecumenical Approach to the Environmental Crisis*. New Haven: Yale University Press.

*Page, Tavis. 2007. "Has Ecofeminism Cornered the Market? Gender Analysis in the Study of Religion, Nature and Culture." In *Journal for the Study of Religion, Nature, and Culture* 1: 3.

Palmer, Clare. 2006. "Stewardship: A Case Study in Environmental Ethics." In *Environmental Stewardship: Critical Perspectives – Past and Present*. New York: T&T Clark International.

*Paper, Jordan. 2001. "Chinese Religion, 'Daoism,' and Deep Ecology." In *Deep Ecology and World Religions: New Essays on Sacred Grounds*. Edited by David Landis Barnhill and Roger S. Gottlieb. Albany, NY: State University of New York Press.

#Passmore, John. 1974. *Man's Responsibility for Nature: Ecological Problems and Western Traditions*. London: Gerald Duckworth and Co.

*#Peacocke, A. R. "On 'The Historical Roots of Our Ecological [sic] Crisis.'" In *Man and Nature*. Edited by Hugh Montefiore, 155-158. London: Collins, 1975.

Peterson, Anna L. 2001. *Being Human: Ethics, Environment, and Our Place in the World*. Berkeley, CA: University of California Press.

#Peterson, Anna. 2003. "In and of the World? Christian Theological Anthropology and Environmental Ethics." In *Worldviews, Religion and The Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson.

*#Peterson, Anna. "In and Of the World? Christian Theological Anthropology and Environmental Ethics." *Journal of Agricultural and Environmental Ethics* 12, no. 3 (2000): 237-261.

*Pojman, Louis P. *Environmental Ethics: Readings in Theory and Application*. Belmont, CA: Wadsworth, 2001.

#Proctor, James D. and Evan Berry. 2008. "Social Science on Religion and Nature." In *The Encyclopedia of Religion and Nature*. Volume 2. Edited by Bron Taylor and Jeffry Kaplan. New York: Continuum.

Randolph, Richard O. 2008. "Valuing Nature." In *The Encyclopedia of Religion and Nature*. Volume 2. Edited by Bron Taylor and Jeffry Kaplan. New York: Continuum.

Ray, Murray. 2006. "To Render Praise: Humanity in God's World." In *Environmental Stewardship: Critical Perspectives – Past and Present*. New York: T&T Clark International.

*Rieger, Joerg. "Dualism." In *The Encyclopedia of Religion and Nature*. Volume 1. Edited by Bron Taylor and Jeffry Kaplan. New York: Continuum, 2008.

Roberts, Michael. "Evangelicals and Climate Change." In *Religion in Environmental and Climate Change: Suffering, Values, Lifestyles*. Edited by Dieter Gerten and Sigurd Bergmann. New York: Continuum. 2012.

*Rockefeller, Steven C. and John C. Elder. "Introduction." In *Spirit and Nature: Why the Environment Is a Religious Issue: An Interfaith Dialogue*. Eds. Rockefeller, Steven C. and John C. Elder. Boston: Beacon Press, 1992.

Rockefeller, Steven C. and John C. Elder, Eds. *Spirit and Nature: Why the Environment Is a Religious Issue: An Interfaith Dialogue*. Boston: Beacon Press, 1992.

#Rogerson, John W. 2010. "The Creation Stories: Their Ecological Potential and Problems." In *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T&T Clark International.

*Rolston III, Holmes. "Science and Religion in the Face of the Environmental Crisis." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006a.

*Rolston III, Holmes. "Environmental Ethics and Religion/Science." In *The Oxford Handbook of Religion and Science*. Edited by Philip Clayton and Zachary Simpson. New York: Oxford University Press, 2006b.

*Rolston III, Holmes. *A New Environmental Ethics: The Next Millennium for Life on Earth*. New York: Routledge, 2012.

Ruether, Rosemary Radford. 2001. "Deep Ecology, Ecofeminism, and the Bible." In *Deep Ecology and World Religions: New Essays on Sacred Grounds*. Edited by David Landis Barnhill and Roger S. Gottlieb. Albany, NY: State University of New York Press.

Ruether, Rosemary Radford. "Religious Ecofeminism: Healing the Ecological Crisis." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.

*#Rupp, George. 2001. "Religion, Modern Secular Culture, and Ecology." *Daedalus: Journal of the American Academy of Arts and Sciences* 130 no. 4 (Fall).

*Santmire, H. Paul, and John B. Cobb. "The World of Nature According to the Protestant Tradition." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.

*Schama, Simon. 1995. *Landscape and Memory*. New York: Random House.

*Schmidt, David and Elizabeth Willott, Eds. White, Lynn, Jr. "The Historical Roots of Our Ecological [sic] Crisis." In *Environmental Ethics: What Really Matters, What Really Works*. New York: Oxford University Press, 2002.

*#Schönfeld, Martin. "The Future of Faith: Climate Change and the Fate of Religions." In *Religion in Environmental and Climate Change: Suffering, Values, Lifestyles*. Edited by Dieter Gerten and Sigurd Bergmann. New York: Continuum. 2012.

*#Schorsch, Ismar. "Learning to Live with Less: A Jewish Perspective." In *Spirit and Nature: Why the Environment Is a Religious Issue: An Interfaith Dialogue*. Eds. Rockefeller, Steven C. and John C. Elder. Boston: Beacon Press, 1992.

*#Schumaker, Millard. "Delimiting the Debate." In *Subduing the Earth: An Exchange of Views*. Edited by Donald E. Gowan and Millard Schumaker, 7-9. Kingston, Ontario: Queen's Theological College & The Bay of Quinte Conference, The United Church of Canada, 1980.

#Schumaker, Millard. "Nature's Servant-King" In *Subduing the Earth: An Exchange of Views*. Edited by Donald E. Gowan and Millard Schumaker, 15-19. Kingston, Ontario: Queen's Theological College & The Bay of Quinte Conference, The United Church of Canada, 1980.

Schwarzschild, Steven S. "The Unnatural Jew." In *Judaism and Environmental Ethics: A Reader*. Edited by Martin D. Yaffe. New York: Lexington Books. 2001.

Sessions, George. 1995. "Ecocentrism and the Anthropocentric Detour." *Deep Ecology for the Twenty-First Century*. Edited by George Sessions. Boston: Shambhala.

Sessions, George. 1995. "Introduction" and "Preface." *Deep Ecology for the Twenty-First Century*. Edited by George Sessions. Boston: Shambhala.

Shinn, Roger L. 1972. "Science and Ethical Decision: Some New Issues." In *Earth Might Be Fair: Reflections on Ethics, Religion, and Ecology*. Edited by Ian G. Barbour. Englewood Cliffs, NJ: Prentice-Hall.

#Sideris, Lisa. "Religion, Environmentalism, and the Meaning of Ecology." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006. (Gets the title right and cites gottlieb's version (Sideris 2006, 442 n. 1). Mentions white right in the first paragraph (Sideris 2006, 446)).

Smith, Pamela. *What Are They Saying About Environmental Ethics*. Mahwah, NJ: Paulist Press, 1997.

*#Sponsel, Leslie Elmer. *Spiritual Ecology: A Quiet Revolution*. Santa Barbara: Praeger, 2012.

#Spring, David and Eileen Spring, Eds. *Ecology and Religion in History*. New York: Harper Torchbooks, 1974.

*Stewart, Claude Y., Jr. 1983. *Nature in Grace: A Study in the Theology of Nature*. Dissertation. Macon, GA: Mercer University Press.

*#Sullivan, Bruce M. 2003. "Theology and Ecology at the Birthplace of Kṛṣṇa." In *Worldviews, Religion and The Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson.

*#Taylor, Bron. "A Green Future for Religion?" *Futures* 36, no. 9 (2004): 991–1008.

*Taylor, Bron. "Exploring Religion, Nature and Culture - Introducing the Journal for the Study of Religion, Nature and Culture." *Journal for the Study of Religion, Nature and Culture* 1, no. 1 (2007): 5–24.

#Taylor, Bron. 2012. "Foreword." In Sponsel, Leslie E. *Spiritual Ecology: A Quiet Revolution*. Denver: Praeger.

Thomas, Keith. *Man and the Natural World*. London: Penguin Books, 1983.

#Thompson, Geoff. 2010. "'Remaining Loyal to the Earth': Humanity, God's Other Creatures and the Bible in Karl Barth." In *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T&T Clark International.

*#Tirosh-Samuelson, Hava. 2001. "Nature in the Sources of Judaism." *Daedalus: Journal of the American Academy of Arts and Sciences* 130 no. 4 (Fall).

*Tirosh-Samuelson, Hava. "Judaism." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.

*#Tomalin, Emma. *Biodivinity and Biodiversity: The Limits to Religious Environmentalism*. Burlington, VT: Ashgate, 2009.

*#Townsend, Patricia. "White, Lynn, Jr. (1907–1987) Historian of Medieval Technology." *Encyclopedia of World Environmental History*. Edited by Shepard Krech III, J.R. McNeill, and Carolyn Merchant. New York: Routledge, 2004.

#Tuan, Yi-Fu. "Discrepancies Between Environmental Attitude and Behaviour: Examples from Europe and China." *The Canadian Geographer* 12, no. 3 (September 1968): 176–191.

Tucker, Mary Evelyn. "Religion and Ecology: Survey of the Field." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.

Tucker, Mary Evelyn and John A. Grim. 2001. "Introduction: The Emerging Alliance of World Religions and Ecology." *Daedalus: Journal of the American Academy of Arts and Sciences* 130 no. 4 (Fall). (also version that is only by MET written in 1997 for Worldviews. See notes for more).

Tucker, Mary Evelyn and John Grim. 2000. "Series Forward." In *Christianity and Ecology: Seeking Well-Being of Earth and Humans*. Edited by Dieter T. Hessel and Rosemary Radford Ruether. Cambridge, MA: Harvard University Press.

*Van Houtan, Kyle S. and Stuart L. Pimm. 2006. "The Various Christian Ethics of Species Conservation." In *Religion and the New Ecology: Environmental Responsibility in a World of Flux*. Edited by David M. Lodge and Christopher Hamlin. Notre Dame, IN: University of Notre Dame Press.

Whitney, Elspeth. *Paradise Restored: The Mechanical Arts from Antiquity Through the Thirteenth Century*. Transactions of the American Philosophical Society. Volume 80, no. 1. Philadelphia: The American Philosophical Society, 1990.

#Wynn, Mark. 2010. "Thomas Aquinas: Reading the Idea of Dominion in the Light of the Doctrine of Creation." In *Ecological Hermeneutics: Biblical, Historical, and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavropoulou. New York: T&T Clark International.

#Whitney, Elspeth. 2006. "Christianity and Changing Concepts of Nature: An Historical Perspective." In *Religion and the New Ecology: Environmental Responsibility in a World of Flux*. Edited by David M. Lodge and Christopher Hamlin. Notre Dame, IN: University of Notre Dame Press.

#Whitney, Elspeth. 2008. "White, Lynn (1907-1987) – Thesis of." In *The Encyclopedia of Religion and Nature*. Vol. 2. Edited by Bron Taylor. New York: Continuum.

*#Yaffe, Martin D. "Introduction." In *Judaism and Environmental Ethics: A Reader*. Edited by Martin D. Yaffe. New York: Lexington Books. 2001.

*Yordy, Laura. *Green Witness: Ecology, Ethics, and the Kingdom of God*. Eugene, OR: Cascade Books, 2008.

Zimmerman, Michael E. "Feminism, Deep Ecology, and Environmental Ethics." In *The Deep Ecology Movement: An Introductory Anthology*. Eds. Alan Drengson & Yuichi Inoue. Berkeley: North Atlantic Books, 1995.

*Zaidi, Iqtidar H. 1986. "On the Ethics of Man's Interaction with the Environment: An Islamic Approach." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens, GA: The University of Georgia Press.

Bibliography

- Adams, Ansel. The Lynn Townsend White Papers, 1937–1985. Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.
- “A First for UCLA and Humanities: White Wins ‘Professor Award.’” *UCLA Daily Bruin*, October 4, 1972.
- Afzaal, Ahmed. “Disenchantment and the Environmental Crisis: Lynn White Jr., Max Weber, and Muhammed Iqbal.” *Worldviews* 16 (2012): 239–62.
- Alliance of Religions and Conservation. “The Assisi Declarations: Messages on Humanity and Nature from Buddhism, Christianity, Hinduism, Islam, and Judaism.” *Basilica Di S. Francesco Assisi, Italy, 25th Anniversary of the World Wildlife Federation*, September 29, 1986.
<http://www.arcworld.org/downloads/THE%20ASSISI%20DECLARATIONS.pdf>.
- Attfield, Robin. *Environmental Philosophy: Principles and Prospects*. Aldershot, UK: Avebury, 1994.
- . “Social History, Religion, and Technology.” *Environmental Ethics* 31, no. 1 (2009): 31–50.
- Barbour, Ian G., ed. *Western Man and Environmental Ethics: Attitudes toward Nature and Technology*. Reading, MA: Addison-Wesley Publishing Company, 1973.
- Bauman, Whitney A. “Opening the Language of Religion and Ecology: Viable Spaces for Transformative Politics.” In *Inherited Land: The Changing Grounds of Religion and Ecology*. Edited by Whitney A. Bauman, Richard R. Bohannon, II, and Kevin J. O’Brien. Eugene, OR: Wipf and Stock Publishers, 2011.
- Bauman, Whitney A., Richard R. Bohannon, II, and Kevin J. O’Brien. “Conclusion: The Territory Ahead.” In *Inherited Land: The Changing Grounds of Religion and Ecology*. Edited by Whitney A. Bauman, Richard R. Bohannon, II, and Kevin J. O’Brien. Eugene, OR: Wipf and Stock Publishers, 2011.
- Berger, Peter. *The Sacred Canopy: Elements of a Sociological Theory of Religion*. Garden City, NY: Doubleday, 1967.
- Berry, Thomas. “Evening Thoughts.” In *Evening Thoughts: Reflecting on Earth as Sacred Community*. Edited by Mary Evelyn Tucker. San Francisco: Sierra Club Books, 2006.
- . “Our Way Into the Future: A Communion of Subjects.” In *Evening Thoughts: Reflecting on Earth as Sacred Community*. Edited by Mary Evelyn Tucker. San Francisco: Sierra Club Books, 2006.
- Berthong, John. “Motifs for a New Confucian Ecological Vision.” In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.
- Bloch, Marc. *Les caractères originaux de l’histoire rurale française*. Cambridge, MA: Harvard University Press, 1931.
- Bohannon, Richard. *Public Religion and the Urban Environment: Constructing a River Town*. New York: Continuum, 2012.

- Bratton, Susan Power. "Ecology and Religion." In *The Oxford Handbook of Religion and Science*. Edited by Philip Clayton and Zachary R. Simpson. New York: Oxford University Press, 2006.
- Callicott, J. Baird. *Beyond the Land Ethic: More Essays in Environmental Philosophy*. Albany, NY: State University of New York Press, 1999.
- . "Environmental Ethics: An Overview, Yale Forum on Religion and Ecology." Accessed January 24, 2016. <http://fore.yale.edu/disciplines/ethics/>.
- . "Natural History as Natural Religion." Edited by Bron Taylor and Jeffrey Kaplan. *Encyclopedia of Environmental Ethics and Philosophy*. Continuum, 2008.
- Callicott, J. Baird, and Robert Frodeman. "Introduction." Edited by J. Baird Callicott and Robert Frodeman. *Encyclopedia of Environmental Ethics and Philosophy*. Detroit: MacMillan, 2009.
- Carson, Rachel. *Silent Spring*. Cambridge, MA: Riverside Press, 1962.
- Clagett, Marshall, Richard H. Rouse, and Edward Grant. "Memoirs of Fellows and Corresponding Fellows of the Medieval Academy of America." *Speculum* 63, no. 3 (1988): 755–71.
- Clifford, Anne M. "Feminist Perspectives on Science: Implications for an Ecological Theology of Creation." In *Readings in Ecology and Feminist Theology*. Edited by Mary Heather MacKinnon and Moni McIntyre. Kansas City: Sheed & Ward, 1995.
- Cobb, John B. "Protestant Theology and Deep Ecology." In *Deep Ecology and World Religions: New Essays on Sacred Grounds*. Edited by David Landis Barnhill and Roger S. Gottlieb. Albany: State University of New York Press, 2001.
- . *Sustainability: Economics, Ecology, and Justice*. Maryknoll, NY: Orbis, 1992.
- Cohen, Jeremy. *Be Fertile and Increase, Fill the Earth and Master It: The Ancient and Medieval Career of a Biblical Text*. Ithaca: Cornell University Press, 1989.
- Conradie, Ernst M., ed. "The Journey of Doing Christian Ecotheology: A Collective Mapping of the Terrain." *Theology* 116, no. 1 (2013): 4–17.
- . "What on Earth Is an Ecological Hermeneutics? Some Broad Parameters." In *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T & T Clark, 2010.
- Curry, Janel, and Kathi Groenendyk. "Nature Seen through the Eyes of Faith: Understandings among Seminarians." *World Views: Environment, Culture, Religion* 10, no. 3 (2006): 326–54.
- David Ehrenfeld, and Joan Ehrenfeld. "Some Thoughts on Nature and Judaism." In *Judaism and Environmental Ethics: A Reader*. Edited by Martin D. Yaffe. Lanham, MD: Lexington Books, 2001.
- David N. Livingstone. "The Historical Roots of Our Ecological Crisis: A Reassessment." *Fides et Historia* 26 (1994): 38–55.
- Davidson, Mark. "The New History: Can It Free Us From the Past?" *The UCLA Monthly*, November 1971.
- Deane-Drummond, Celia. "Theology, Ecology, and Values." In *The Oxford Handbook of Religion and Science*. Edited by Philip Clayton and Zachary R. Simpson. New York: Oxford University Press, 2006.

- Des Jardins, Joseph R. *Environmental Ethics: An Introduction to Environmental Philosophy*. Belmont, CA: Wadsworth Thomson Learning, 2000.
- Dessi, Ugo. "'Greening Dharma': Contemporary Japanese Buddhism and Ecology." *Journal for the Study of Religion, Nature and Culture* 7, no. 3 (2013): 334–55.
- De Steiguer, Joseph Edward. *Age of Environmentalism*. New York: McGraw-Hall, 1997.
- Dewey, John. *Democracy and Education: An Introduction to the Philosophy of Education*. New York: Macmillan, 1916.
- DeWitt, Calvin B. "The Scientist and the Shepherd: The Emergence of Evangelical Environmentalism." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.
- Djupe, Paul A., and Patrick Kieran Hunt. "Beyond the Lynn White Thesis: Congregational Effects on Environmental Concern." *Journal for the Scientific Study of Religion* 48, no. 4 (2009): 670–86.
- Dobel, J. Patrick. "Stewards of the Earth's Resources: A Christian Response to Ecology." *The Christian Century* 94 (October 12, 1977): 906–7.
- "Dr. Lynn T. White." *San Anselmo Bulletin*. July 8, 1948.
- Duitsman, Mary Aline. "Ecology and Theology: Christian Responses to Lynn White Jr." Master's Thesis, California State University, 1987.
- Eckberg, Douglas Lee, and T. Jean Blocker. "Varieties of Religious Involvement and Environmental Concerns: Testing the Lynn White Thesis." *Journal for the Scientific Study of Religion* 28, no. 4 (1989): 509–17.
- Ehrlich, Paul R. *The Population Bomb*. New York: Ballantine Books, 1968.
- "Evangelical Declaration on the Care of Creation." *Evangelical Environmental Network*, April 29, 2015. <http://creationcare.org/creation-care-resources/evangelical-declaration-on-the-care-of-creation/>.
- Faith Outreach. "'Eating Mercifully.'" *The Humane Society of the United States*. Accessed February 22, 2016. http://video.humanesociety.org/index.php?id=0061A92DAF925275&credit=web_id96887623.
- Farley, Margaret A. "Religious Meanings for Nature and Humanity." In *The Good in Nature and Humanity: Connecting Science, Religion, and Spirituality with the Natural World*. Edited by Stephen R. Kellert and Timothy J. Farnham. Washington, D.C.: Island Press, 2002.
- Feenstra, Ernest S., Lynn Townsend White, jr., Renato Baserga, Cesare Emiliani, and Shale Niskin. "Christian Impact on Ecology." *Science* 156, no. 3776 (1967): 737–38.
- Ferguson, Todd W., and Jeffry A. Tamburello. "The Natural Environment as Spiritual Resource: A Theory of Regional Variation in Religious Adherence." *Sociology of Religion* 76, no. 3 (2015): 1–20.
- Foltz, Richard C. "Islam." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.
- . , ed. *Worldviews, Religion, and the Environment: A Global Anthology*. Belmont, CA: Wadsworth Thomson, 2003.

- Francis I. *Laudato Si' of the Holy Father Francis on Care for Our Common Home*. Encyclical Letter. Rome: Vatican Press, 2015.
- Frymer-Kensky, Tikva. "Ecology in a Biblical Perspective." In *Worldviews, Religion, and the Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson, 2003.
- Fudpucker, Wilhelm. "Through Christian Technology to Technological Christianity." In *Theology and Technology: Essays in Christian Analysis and Exegesis*. Edited by Carl Mitcham and Jim Grote. Lanham, MD: University Press of America, 1984.
- General Board of Church and Society of the United Methodist Church. "Environmental Stewardship." *General Board of Church & Society*. Accessed July 9, 2015. <http://umc-gbcs.org/resolutions/environmental-stewardship-1026-2008-bor>.
- Glacken, Clarence J. *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century*. Berkeley: University of California Press, 1967.
- Glick, Thomas F. "White, Lynn, Jr. 1907–1987." Edited by Kelly Boyd. *Encyclopedia of Historians and Historical Writing*. Chicago: Fitzroy Dearborn, 1999.
- Gorski, Philip S. "The Little Divergence: The Protestant Reformation and Economic Hegemony in Early Modern Europe." In *The Protestant Ethic Turns 100: Essays on the Centenary of the Weber Thesis*. Edited by William H. Swatos and Lutz Kaelber. Boulder: Paradigm Publishers, 2005.
- Gowan, Donald E., and Millard Schumaker. *Subduing the Earth: An Exchange of Views*. Kingston, ON: The United Church of Canada, 1980.
- Guth, James L., John C. Green, Lyman A. Kellstedt, and Corwin E. Smidt. "Faith and the Environment: Religious Beliefs and Attitudes on Environmental Policy." *American Journal of Political Science* 39, no. 2 (1995): 364–82.
- Habel, Norman C., and Shirley Wurst. *The Earth Story in Genesis*. Sheffield: Sheffield Academic, 2000.
- Haberman, David L. "Faces in the Trees." *Journal for the Study of Religion, Nature and Culture* 4, no. 2 (2010): 173–90.
- . *People Trees: Worship of Trees in Northern India*. New York: Oxford University Press, 2013.
- . *River of Love in an Age of Pollution: the Yamuna River of Northern India*. Berkeley, CA: University of California Press, 2006.
- Hall, Bert S. "Éloge: Lynn White, Jr., 29 April 1907–30 March 1987." *Isis* 79, no. 3 (1988): 478–81.
- . "Lynn Townsend White, Jr. (1907–1987)." *Technology and Culture* 30, no. 1 (1989): 194–213.
- . "Lynn White's Medieval Technology and Social Change After Thirty Years." In *Technological Change: Methods and Themes in the History of Technology*. Edited by Robert Fox. Amsterdam, NL: Harwood Academic, 1996.
- . Interview by Matthew T. Riley, June 28, 2014.
- Hall, Bert S., and Ranald Mackenzie Macleod. "Technology, Ecology and Religion: Thoughts on the Views of Lynn White." In *Design and Production in Medieval and*

- Early Modern Europe: Essays in Honor of Bradford Blaine*. Edited by Bradford Blaine and Nancy Van Deusen. Ottawa, Canada: Institute of Mediaeval Music, 1998.
- Hall, Bert S., and Delno C. West, eds. "Dedication." In *On Pre-Modern Technology and Science: A Volume of Studies in Honor of Lynn White, Jr.* Malibu: Undena Publications, 1976.
- Hallman, Max O. "Nietzsche, Friedrich (1844–1900)." Edited by Bron R. Taylor. *The Encyclopedia of Religion and Nature*. New York: Continuum, 2008.
- Hamlin, Christopher, and David M. Lodge. "Ecology and Religion for a Post Natural World." In *Religion and the New Ecology: Environmental Responsibility in a World in Flux*. Edited by David M. Lodge and Christopher Hamlin. Notre Dame: University of Notre Dame Press, 2006.
- Hardin, Garrett. "The Tragedy of the Commons." *Science* 162, no. 3859 (December 3, 1968): 1243–48.
- Hargrove, Eugene C. "Preface: Religion and Environmental Ethics: Beyond the Lynn White Debate." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens: University of Georgia Press, 1986.
- Hessel, Dieter T., and Rosemary Radford Ruether. "Introduction: Current Thought on Christianity and Ecology." In *Christianity and Ecology: Seeking the Well-Being of Earth and Humans*. Edited by Dieter T. Hessel and Rosemary Radford Ruether. Cambridge, MA: Harvard University Press, 2000.
- Hiebert, Theodore. "Rethinking Dominion Theology." *Direction* 25, no. 2 (1996): 16–25.
- Hobgood-Oster, Laura. *The Friends We Keep: Unleashing Christianity's Compassion for Animals*. Waco, TX: Baylor University Press, 2010.
- Hoge, Dean R. "Judeo-Christian Values and the Ecological Crisis." In *The Place of the Person in Social Life*. Edited by Paul Peachey, John Kromkowski, and George F. McLean. Washington, D.C.: Council for Research in Values and Philosophy, 1991.
- Holt, Richard. "Medieval Technology and the Historians: The Evidence for the Mill." In *Technological Change: Methods and Themes in the History of Technology*. Edited by Robert Fox. Amsterdam, NL: Harwood Academic, 1996.
- Hopper, David H. *Technology, Theology, and the Idea of Progress*. Louisville, KY: Westminster/John Knox Press, 1991.
- Horrell, David G. "Introduction." In *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T & T Clark, 2010.
- Hulme, Edward Maslin. *The Middle Ages*. New York: H. Holt and Company, 1929.
- Huxley, Aldous. Lynn Townsend White, jr. Special Collections, F.W. Olin Library, Mills College.
- Huxley, Aldous, et al. *Tangents of Technology, Program 7, Parts A and B*. Audio recording. Santa Barbara: Technological Order Conference, 1962. Item 5201, Center for the Study of Democratic Institutions Collection, 1950–91 (Mss 18). Digital Collections, Department of Special Collections, University of California Santa Barbara Library.

- James, George A. "Indian Hermeneutics of Nature and the Hermeneutic of Nature of Hindu Nationalism." Conference Paper presented at the Annual Meeting of the American Academy of Religion, San Francisco, November 22, 2011.
- Jenkins, Willis. "After Lynn White: Religious Ethics and Environmental Problems." *Journal of Religious Ethics* 37, no. 2 (2009): 283–309.
- . *The Future of Ethics: Sustainability, Social Justice, and Religious Creativity*. Washington, D.C.: Georgetown University Press, 2013.
- Kalberg, Stephen. *Max Weber's Comparative-Historical Sociology*. Chicago: University of Chicago Press, 1994.
- . "Should the 'Dynamic Autonomy' of Ideas Matter to Sociologists?: Max Weber on the Origin of Other-Worldly Salvation Religions and the Constitution of Groups in American Society Today." *Journal of Classical Sociology* 1, no. 3 (2001): 291–327.
- . "The Role of Ideal Interests in Max Weber's Comparative Historical Sociology." In *A Weber-Marx Dialogue*. Edited by Robert J. Antonio and Ronald M. Glassman. Lawrence, KS: University Press of Kansas, 1985.
- Kalland, Arne. "The Religious Environmentalist Paradigm." Edited by Bron R. Taylor. *The Encyclopedia of Religion and Nature*. New York: Continuum, 2008.
- Kay, Jeanne. "Concepts of Nature in the Hebrew Bible." In *Judaism and Environmental Ethics: A Reader*. Edited by Martin D. Yaffe. Lanham, MD: Lexington Books, 2001.
- Kearns, Laurel. "Green Evangelicals." In *The New Evangelical Social Engagement*. Edited by Brian Steensland and Philip Goff, 2014.
- . "Noah's Ark Goes to Washington: A Profile of Evangelical Environmentalism." *Social Compass* 44 (1997): 349–66.
- . "Saving the Creation: Christian Environmentalism in the United States." *Sociology of Religion* 57, no. 1 (1996).
- . "The Context of Eco-Theology." In *The Blackwell Companion to Modern Theology*. Edited by Gareth Jones. Malden, MA: Wiley-Blackwell, 2004.
- Keller, David R. "Introduction: What Is Environmental Ethics." In *Environmental Ethics: The Big Questions*. Malden, MA: Wiley-Blackwell, 2010.
- Kent, Eliza F. "A Road Runs Through It: Changing Meanings in a Sacred Grove in Tiruvannamalai, Tamil Nadu." *Journal for the Study of Religion, Nature and Culture* 4, no. 2 (2010): 213–31.
- Kinsley, David. "Christianity as Ecologically Harmful." In *This Sacred Earth: Religion, Nature, Environment*. Edited by Roger S. Gottlieb. New York: Routledge, 1996.
- Los Angeles Division of the Academic Senate. The Lynn Townsend White Papers, 1937–85, Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.
- "Lynn White, Jr. University Professor of History." The Lynn Townsend White Papers, 1937–1985. Department of Special Collections, Charles E. Young Research Library, University of California Los Angeles.
- Machen, Judith. "Cultural Values and the Vitality of the West: The Mind of Lynn White, Jr." The University of Oklahoma Graduate College, 1993.

- Maguire, Daniel C. "Population, Religion, and Ecology." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.
- Marangudakis, Manussos. "The Medieval Roots of Our Environmental Crisis." *Environmental Ethics* 23, no. 3 (2001): 243–60.
- Marx, Karl, and Friedrich Engels. "The German Ideology." In *On Religion*. Moscow: Progress Publishers, 1975.
- McFague, Sallie. "An Ecological Christology: Does Christianity Have It?" In *Worldviews, Religion, and the Environment: A Global Anthology*. Edited by Richard C. Foltz. Belmont, CA: Wadsworth Thomson, 2003.
- . "New House Rules: Christianity, Economics, and Planetary Living." *Daedalus* 130, no. 4 (2001): 125–40.
- Merchant, Carolyn. *Reinventing Eden: The Fate of Nature in Western Culture*. New York: Routledge, 2003.
- . *The Death of Nature: Women, Ecology, and the Scientific Revolution*. New York, NY: Harper Collins, 1983.
- Minteer, Ben, and Robert Manning. "An Appraisal of the Critique of Anthropocentrism and Three Lesser Known Themes in Lynn White's 'The Historical Roots of Our Ecologic Crisis.'" *Organization and Environment* 18, no. 2 (2005): 163–76.
- "Mission and Areas of Focus." *GreenFaith*. Accessed February 21, 2016. <http://www.greenfaith.org/about/mission-and-areas-of-focus>.
- Mitzman, Arthur. *The Iron Cage: An Historical Interpretation of Max Weber*. New York: Alfred A. Knopf, 1970.
- Moncrief, Lewis W. "The Cultural Basis for Our Environmental Crisis." *Science* 170, no. 3957 (October 30, 1970): 508–12.
- Montefiore, Hugh. "Man and Nature: The Working Group." In *Man and Nature*. Edited by Hugh Montefiore. London: Collins, 1975.
- Nash, James A. "Christianity (1)—Introduction." Edited by Bron R. Taylor. *The Encyclopedia of Religion and Nature*. New York: Continuum, 2008.
- Nash, Roderick. "The Greening of Religion." In *This Sacred Earth: Religion, Nature, Environment*. Edited by Roger S. Gottlieb. New York: Routledge, 1996.
- . *The Rights of Nature: A History of Environmental Ethics*. Madison, WI: University of Wisconsin Press, 1989.
- . *Wilderness and the American Mind*. New Haven: Yale University Press, 1982.
- Nasr, Seyyed Hossein. *The Encounter of Man and Nature: The Spiritual Crisis of Modern Man*. London: Allen & Unwin, 1968.
- Needham, Joseph. "Book Review of Lynn White's Medieval Technology and Social Change." *Isis* 54, no. 3 (1963): 418–20.
- Nelson, Michael P. "Lynn White, Jr." In *Fifty Key Thinkers on the Environment*. Edited by Joy Palmer. New York: Routledge, 2001.
- Niebuhr, Reinhold. *Reinhold Niebuhr on Politics: His Political Philosophy and Its Application to Our Age as Expressed in His Writings*. Edited by Harry Rex Davis and Robert C. Good. Eugene, OR: Wipf & Stock, 1960.

- . *The Nature and Destiny of Man: A Christian Interpretation*. New York: Charles Scribner's Sons, 1941.
- Norton, Bryan G. *Searching for Sustainability: Interdisciplinary Essays in the Philosophy of Conservation Biology*. Cambridge: Cambridge University Press, 2003.
- Oelschlaeger, Max. *Caring for Creation: An Ecumenical Approach to the Environmental Crisis*. New Haven: Yale University Press, 1994.
- Ovitt, George. *The Restoration of Perfection: Labor and Technology in Medieval Culture*. New Brunswick: Rutgers University Press, 1987.
- Pals, Daniel L. *Eight Theories of Religion*. 2nd ed. New York: Oxford University Press, 2006.
- Paper, Jordan. "Chinese Religion, 'Daoism,' and Deep Ecology." In *Deep Ecology and World Religions: New Essays on Sacred Grounds*. Edited by David Landis Barnhill and Roger S. Gottlieb. Albany: State University of New York Press, 2001.
- Parsons, Talcott. "Introduction." In *The Protestant Ethic and the "Spirit" of Capitalism and Other Writings*, by Max Weber. Edited by Peter R. Baehr. New York: Penguin Books, 2002.
- . "On 'De-Parsonizing Weber.'" *American Sociological Review* 40, no. 5 (1975): 666–70.
- . "Preface to the New Edition." In *The Protestant Ethic and the Spirit of Capitalism*, by Max Weber, translated by Talcott Parsons, 2003.
- . "The Role of Ideas in Social Action." *American Sociological Review* 3, no. 5 (1938): 652–64.
- Passmore, John Arthur. *Man's Responsibility for Nature: Ecological Problems and Western Traditions*. New York: Scribner, 1974.
- Peacocke, Arthur R. "On 'The Historical Roots of Our Ecological [sic] Crisis.'" In *Man and Nature*. Edited by Hugh Montefiore. London: Collins, 1975.
- Pedersen, Poul. "Nature, Religion, and Cultural Identity: The Religious Environmentalist Paradigm." In *Asian Perceptions of Nature: Critical Approach*. Edited by Ole Bruun and Arne Kalland. Surrey: Curzon Press, 1994.
- Perdue, Peter C. "Technological Determinism in Agrarian Societies." In *Does Technology Drive History?: The Dilemma of Technological Determinism*. Edited by Merritt Roe Smith and Leo Marx. Cambridge, MA: MIT Press, 1994.
- Peterson, Mark C. "Descartes, René (1596–1650) and the Problem of Cartesian Dualism." Edited by Bron R. Taylor. *The Encyclopedia of Religion and Nature*. New York: Continuum, 2008.
- Proctor, James D., and Evan Berry. "Social Science on Religion and Nature." Edited by Bron R. Taylor. *The Encyclopedia of Religion and Nature*. New York: Continuum, 2008.
- Rasmussen, Larry. *Earth Community, Earth Ethics*. Maryknoll, NY: Orbis Books, 1996.
- . *Earth-Honoring Faith: Religious Ethics in a New Key*. New York: Oxford University Press, 2013.
- Ray, Murray. "To Render Praise: Humanity in God's World." In *Environmental Stewardship: Critical Perspectives, Past and Present*. Edited by R. J. Berry. New York: T & T Clark, 2006.

- Riley, Matthew T. "A Spiritual Democracy of All God's Creatures: Ecotheology and the Animals of Lynn White Jr." In *Divinanimality: Animal Theory, Creaturely Theology*. Edited by Stephen D. Moore. New York: Fordham University Press, 2014.
- Roberts, Michael. "Evangelicals and Climate Change." In *Religion in Environmental and Climate Change: Suffering, Values, Lifestyles*. Edited by Dieter Gerten and Sigurd Bergmann. New York: Continuum, 2012.
- Rockefeller, Steven C., and John Elder, eds. *Spirit and Nature: Why the Environment Is a Religious Issue : An Interfaith Dialogue*. Boston: Beacon Press, 1992.
- Rogerson, John W. "The Creation Stories: Their Ecological Potential and Problems." In *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*. Edited by David G. Horrell, Cherryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou. New York: T & T Clark, 2010.
- Roland, Alex. "Once More into the Stirrups: Lynn White Jr., Medieval Technology and Social Change." *Technology and Culture* 44, no. 3 (2003): 574–85.
- Rolston, Holmes. *A New Environmental Ethics: The Next Millennium for Life on Earth*. New York: Routledge, 2012.
- . "Environmental Ethics and Religion/Science." In *The Oxford Handbook of Religion and Science*. Edited by Philip Clayton and Zachary R. Simpson. New York: Oxford University Press, 2006.
- . "Science and Religion in the Face of the Environmental Crisis." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.
- Ruether, Rosemary Radford. "Religious Ecofeminism: Healing the Ecological Crisis." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.
- Rupp, George. "Religion, Modern Secular Culture, and Ecology." *Daedalus* 130, no. 4 (2001): 23–30.
- Santmire, H. Paul. *Before Nature: A Christian Spirituality*. Minneapolis: Fortress Press, 2014.
- . *Ritualizing Nature: Renewing Christian Liturgy in a Time of Crisis*. Minneapolis: Fortress Press, 2008.
- . "The Liberation of Nature: Lynn White's Challenge Anew." *Christian Century* 102 (1985).
- . *The Travail of Nature: The Ambiguous Ecological Promise of Christian Theology*. Philadelphia: Fortress Press, 1985.
- Santmire, H. Paul, and John B. Cobb. "The World of Nature According to the Protestant Tradition." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.
- Sawyer, P. H., and R. H. Hilton. "Technical Determinism: The Stirrup and the Plough." *Past & Present*, no. 24 (1963): 90–100.
- Schaeffer, Francis A. *Pollution and the Death of Man: The Christian View of Ecology*. Wheaton, IL: Tyndale House Publishers, 1970.

- Schönfeld, Martin. "The Future of Faith: Climate Change and the Fate of Religions." In *Religion in Environmental and Climate Change: Suffering, Values, Lifestyles*. Edited by Dieter Gerten and Sigurd Bergmann. New York: Continuum, 2012.
- Schorsch, Ismar. "Learning to Live with Less: A Jewish Perspective." In *Spirit and Nature: Why the Environment Is a Religious Issue : An Interfaith Dialogue*. Edited by Steven C. Rockefeller and John Elder. Boston: Beacon Press, 1992.
- Sessions, George, ed. *Deep Ecology for the Twenty-First Century*. Boston: Shambhala, 1994.
- . "Ecocentrism and the Anthropocentric Detour." In *Deep Ecology for the Twenty-First Century*. Boston: Shambhala / Random House, 1994.
- . The Lynn Townsend White Papers, 1937–1985. Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.
- Shaiko, Ronald G. "Religion, Politics, and Environmental Concern: A Powerful Mix of Passions." *Social Science Quarterly* 68, no. 2 (1987): 244–62.
- Shinn, Roger L. "Science and Ethical Decision: Some New Issues." In *Earth Might Be Fair: Reflections on Ethics, Religion, and Ecology*. Edited by Ian G. Barbour. Englewood Cliffs, NJ: Prentice-Hall, 1972.
- Sideris, Lisa. "Religion, Environmentalism, and the Meaning of Ecology." In *The Oxford Handbook of Religion and Ecology*. Edited by Roger S. Gottlieb. New York: Oxford University Press, 2006.
- Silicon Valley Toxics Coalition. "Toward a Just and Sustainable Solar Energy Industry," January 14, 2009. http://svtc.org/wp-content/uploads/Silicon_Valley_Toxics_Coalition_-_Toward_a_Just_and_Sust.pdf.
- Sittler, Joseph. "A Theology For Earth." *The Christian Scholar* 37, no. 3 (1954): 367–74.
- . *The Care of the Earth, and Other University Sermons*. Minneapolis: Fortress Press, 1964.
- Solomon, S.D., et al. "Direct Global Warming Potentials." *Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007*. New York: Cambridge University Press, 2007.
- Southern Baptist Environment and Climate Initiative. "A Southern Baptist Declaration on the Environment and Climate Change." Accessed July 9, 2015. <http://www.baptistcreationcare.org/node/1>.
- Sponsel, Leslie Elmer. *Spiritual Ecology: A Quiet Revolution*. Santa Barbara: Praeger, 2012.
- Spring, David, and Eileen Spring. *Ecology and Religion in History*. New York: Harper & Row, 1974.
- Stewart, Claude Y. *Nature in Grace: A Study in the Theology of Nature*. PhD Dissertation. Macon, GA: Mercer University Press, 1983.
- Suzuki, Daisetz Teitaro. "The Role of Nature in Zen Buddhism." In *Zen Buddhism: Selected Writings of D.T. Suzuki*. Edited by William Barrett. New York: Doubleday Anchor Books, 1956.
- Swedberg, Richard. "The Changing Picture of Max Weber's Sociology." *Annual Review of Sociology* 29 (2003): 283.

- Swedberg, Richard, and Ola Agevall. *The Max Weber Dictionary: Key Words and Central Concepts*. Stanford, CA: Stanford Social Sciences, 2005.
- Swidler, Ann. "Culture in Action: Symbols and Strategies." *American Sociological Review* 51, no. 2 (1986): 273–86.
- . "Foreword." In *The Sociology of Religion*, by Max Weber, translated by Ephraim Fischhoff. Boston: Beacon Press, 1993.
- Swimme, Brian, and Thomas Berry. *The Universe Story: From the Primordial Flaring Forth to the Ecozoic Era—A Celebration of the Unfolding of the Cosmos*. New York: Harper Collins, 1992.
- Taylor, Bron. "Critical Perspectives on 'Religions of the World and Ecology.'" Edited by Bron Taylor. *The Encyclopedia of Religion and Nature*. New York: Continuum, 2008.
- . "Exploring Religion, Nature and Culture—Introducing the Journal for the Study of Religion, Nature and Culture." *Journal for the Study of Religion, Nature and Culture* 1, no. 1 (2007): 5–24.
- . "Foreword." In *Spiritual Ecology: A Quiet Revolution*. Edited by Leslie Elmer Sponsel. Santa Barbara: Praeger, 2012.
- . "Introduction." Edited by Bron R. Taylor. *The Encyclopedia of Religion and Nature*. New York: Continuum, 2008.
- . "The Tributaries of Radical Environmentalism." *Journal for the Study of Radicalism* 2, no. 1 (2008): 27–61.
- Taylor, Sarah McFarland. *Green Sisters a Spiritual Ecology*. Cambridge, MA: Harvard University Press, 2007.
- Thomas, George F., ed. *The Vitality of the Christian Tradition*. New York: Harper & Brothers, 1944.
- Tillich, Paul. "Nature, Also, Mourns for a Lost Good." In *The Shaking of the Foundations*. Eugene, OR: Wipf & Stock, 1948.
- Tirosh-Samuelson, Hava. "Nature in the Sources of Judaism." *Daedalus: Journal of the American Academy of Arts and Sciences* 130, no. 4 (2001): 99.
- Townsend, Patricia. "White, Lynn, Jr. (1907–87) Historian of Medieval Technology." Edited by Shepard Krech, III, John Robert McNeill, and Carolyn Merchant. *Encyclopedia of World Environmental History*. New York: Routledge, 2004.
- Tuan, Yi-Fu. "Discrepancies Between Environmental Attitude and Behaviour: Examples From Europe and China." *The Canadian Geographer* 12, no. 3 (1968): 176–91.
- Tucker, Mary Evelyn, and John Grim. "Series Foreword." In *Christianity and Ecology: Seeking the Well-Being of Earth and Humans*. Edited by Dieter T. Hessel and Rosemary Radford Ruether. Cambridge, MA: Harvard University Press, 2000.
- Tucker, Mary Evelyn, and John A. Grim. "Introduction: The Emerging Alliance of World Religions and Ecology." *Daedalus: Journal of the American Academy of Arts and Sciences* 130, no. 4 (2001): 1–22.
- Turner, Bryan S. "Preface." In *From Max Weber: Essays in Sociology*. Edited by Hans H. Gerth and C. Wright Mills, 2nd ed. London: Routledge, 1991.

- United Ministries in Higher Education in Southern California. The Lynn Townsend White Papers, 1937–1985. Department of Special Collections, Charles E. Young Research Library, University of California, Los Angeles.
- “University Professor Lynn White, Jr. ‘Renaissance Man’ for All Seasons.” *UCLA Weekly* 3, no. 14 (February 12, 1973): 4.
- Unknown. “Front Matter.” In Lynn Townsend White, jr.’s “Medieval Technology: Transfers and Spinoffs.” Lecture. *The First Annual Rolf Buchdahl Lecture on Science, Technology and Values*. Raleigh, NC: Division of University Studies, North Carolina State University, 1981.
- Van Houtan, Kyle S., and Stuart L. Pimm. “The Various Christian Ethics of Species Conservation.” In *Religion and the New Ecology: Environmental Responsibility in a World in Flux*. Edited by David M. Lodge and Christopher Hamlin. Notre Dame: University of Notre Dame Press, 2006.
- Weber, Max. “‘Objectivity’ in Social Science and Social Policy.” In *The Methodology of the Social Sciences*. Edited by Edward Shils and Henry A. Finch. New York: Free Press, 1920.
- . *The Protestant Ethic and the Spirit of Capitalism*. Translated by Talcott Parsons, 2003.
- . “The Protestant Sects and the Spirit of Capitalism.” In *From Max Weber: Essays in Sociology*. Edited by Hans H. Gerth and C. Wright Mills, 2nd ed. London: Routledge, 1991.
- . *The Religion of China: Confucianism and Taoism*. Translated by Hans H. Gerth. New York: Free Press, 1920.
- . “The Social Psychology of the World Religions.” In *From Max Weber: Essays in Sociology*. Edited by Hans H. Gerth and C. Wright Mills, 2nd ed. London: Routledge, 1991.
- . *The Sociology of Religion*. Translated by Ephraim Fischhoff. Boston: Beacon Press, 1922.
- Whitehead, Alfred North. *Process and Reality: An Essay in Cosmology*. New York: The Free Press, 1929.
- White, III, Lynn Townsend. Interview by Matthew T. Riley, April 17, 2014.
- . Letter to Matthew T. Riley. “Church and Human Institutions,” February 26, 2014.
- . Letter to Matthew T. Riley. “Discussions Between Lynn White, Sr. and Robert Dollar,” February 4, 2014.
- White, jr., Lynn Townsend. “A Climate of Courage: Loneliness, the Great Disease of the Twentieth Century.” *Vital Speeches of the Day* 21 (March 1, 1955): 1075–77.
- . “A Jewish Option in Modern America.” Commencement address pamphlet. Los Angeles: Hebrew Union College—Jewish Institute of Religion, June 12, 1964.
- . “A Remark from Lynn White, Jr.” *CoEvolution Quarterly* 16 (1977).
- . Lynn Townsend White, jr. Special Collections, F.W. Olin Library, Mills College.

- . The Lynn Townsend White Papers, 1937–85. Department of Special Collections, Charles E. Young Research Library, University of California Los Angeles, Los Angeles.
- . “Can a Christian Be a Good Citizen?” In *An Address Delivered at Presbyterian Synod of California at Mills College*, 1954.
- . “Christian Myth and Christian History.” *Journal of the History of Ideas* 3, no. 2 (April 1942): 157.
- . “Christians and Nature.” *Pacific Theological Review* 7 (1975).
- . “Commentary on St. Francis of Assisi.” *Bohemian Club Library Notes*, July 29, 1982.
- . “Continuing the Conversation.” In *Western Man and Environmental Ethics: Attitudes Toward Nature and Technology*. Edited by Ian G. Barbour. Reading, MA: Addison-Wesley Publishing Company, 1973.
- . “Cultural Climates and Technological Advance in the Middle Ages.” In *Medieval Religion and Technology: Collected Essays*. Berkeley: University of California Press, 1978.
- . “Death and the Devil.” In *The Darker Vision of the Renaissance: Beyond the Fields of Reason*. Edited by Robert S. Kinsman. Berkeley: University of California Press, 1974.
- . “Do Women’s Colleges Turn out Spinsters?” *Harper’s Magazine*, October 1952.
- . “Dynamo and Virgin Reconsidered.” *The American Scholar* 27, no. 2 (1958): 183–94.
- . “Dynamo and Virgin Reconsidered.” In *Dynamo and Virgin Reconsidered: Essays in the Dynamism of Western Culture*, by Lynn Townsend White, jr. Cambridge, MA: MIT Press, 1968.
- . *Educating Our Daughters: A Challenge to the Colleges*. New York: Harper & Brothers, 1950.
- . “Engineers and the Making of a New Humanism.” *Journal of Engineering Education* 57, no. 5 (1967): 375–76.
- . “History and Horseshoe Nails.” In *The Historian’s Workshop; Original Essays by Sixteen Historians*. Edited by L. Perry Curtis. New York: Knopf, 1970.
- . *Machina Ex Deo; Essays in the Dynamism of Western Culture*. Cambridge, MA: MIT Press, 1968.
- . “Medieval Engineering and the Sociology of Knowledge.” In *Medieval Religion and Technology: Collected Essays*. Berkeley: University of California Press, 1978.
- . *Medieval Religion and Technology: Collected Essays*. Berkeley: University of California Press, 1978.
- . *Medieval Technology and Social Change*. Oxford: Clarendon Press, 1962.
- . “Medieval Technology: Transfers and Spinoffs.” The First Annual Rolf Buchdahl Lecture on Science, Technology and Values presented at the Division of University Studies, North Carolina State University, Raleigh, NC, November 3, 1981.
- . “More Incense for Caesar.” *Christian Century*, April 6, 1955.

- . “Natural Science and Naturalistic Art in the Middle Ages.” *The American Historical Review* 52, no. 3 (1947).
- . “Presbyterians and the Intellectual Worship of God.” *Presbyterian Outlook* 138, no. 25 (1956): 5.
- . “Snake Nests and Icons: Some Observations on Theology and Ecology.” *Anticipation: Christian Social Thought in Future Perspective* 10 (1972).
- . “Substitutes for Human Muscle: Past Crises.” In *Energy and the Way We Live*. Article Booklet for the Twelfth Course by Newspaper. San Francisco: Boyd & Fraser Publishing Company, 1980.
- . “Technology and Invention in the Middle Ages.” In *Medieval Religion and Technology: Collected Essays*. Berkeley: University of California Press, 1978.
- . “Technology Assessment from the Stance of a Medieval Historian.” *The American Historical Review* 79, no. 1 (1974).
- . “The American Subversion: The Fundamental Worth of Every Human Being.” *Vital Speeches of the Day* 11 (October 1, 1945).
- . “The Changing Past.” *Harper’s Magazine*, November 1954.
- . “The Changing Past.” In *Frontiers of Knowledge in the Study of Man*. Edited by Lynn Townsend White, jr., 68–78. New York: Greenwood Press, 1969.
- . “The Crisis in Democratic Leadership: Importance of the Individual Must Not Be Denied.” *Vital Speeches of the Day* 10 (August 15, 1944).
- . “The Future of Compassion.” *Ecumenical Review* 30 (1978).
- . “The Historical Roots of Our Ecologic Crisis.” *Science* 155, no. 3767 (1967): 1203–7.
- . “The Iconography of Temperantia and the Virtuousness of Technology.” In *Medieval Religion and Technology: Collected Essays*. Berkeley: University of California Press, 1978.
- . “The Medieval Meeting of East and West.” *Journal of the Blaisdell Institute* 7, no. 2 (1972).
- . “The Social Responsibility of Scholarship: History: Is Clio a Tutelary Muse?” *The Journal of Higher Education* 32, no. 7 (1961): 357–61.
- . “Tools and Civilization.” *Perspectives in Defense Management* 24 (1975).
- . “What Accelerated Technological Progress in the Western Middle Ages?” In *Scientific Change; Historical Studies in the Intellectual, Social, and Technical Conditions for Scientific Discovery and Technical Invention, from Antiquity to the Present*. Edited by Alistair C. Crombie. New York: Basic Books, 1963.
- . Personal Letter to Mary Aline Duitsman, July 24, 1984. Cited in Mary Aline Duitsman, “Ecology and Theology: Christian Responses to Lynn White Jr.,” (Master’s Thesis, California State University, Northridge, May 1987).
- White, jr., Lynn Townsend et al. *Ecology and Religion*. Audio Recording. Vol. 6. Minding the Earth. Berkeley, CA: Strong Center. New Dimension Foundation, 1982.
- White, jr., Lynn Townsend, and Rick Harmon. *Technology, History, Democracy; Oral History Transcript*. Oral History Program, The Regents of the University of California. Los Angeles: University of California, 1989.

- White, jr., Lynn Townsend, and Jonathan D. Spence. "Science in China: Science and Civilisation in China." *Isis* 75, no. 1 (1984): 171–89.
- White, jr., Lynn Townsend, and Alan Watts. *Ecological Crisis: Religious Cause and Religious Solution*. Audio recording. Sausalito: Big Sur Recordings, 1971.
- Whitney, Elspeth. "Christianity and Changing Concepts of Nature: An Historical Perspective." In *Religion and the New Ecology: Environmental Responsibility in a World in Flux*. Edited by David M. Lodge and Christopher Hamlin. Notre Dame: University of Notre Dame Press, 2006.
- . "Lynn White, Ecotheology, and History." *Environmental Ethics* 15, no. 2 (1993): 151–69.
- . "White, Lynn (1907-1987)—Thesis of." Edited by Bron R. Taylor. *The Encyclopedia of Religion and Nature*. New York: Continuum, 2008.
- Wilkinson, Loren, ed. *Earthkeeping: Christian Stewardship of Natural Resources*. Grand Rapids, MI: Eerdmans, 1980.
- Willis Jenkins, and Christopher Key Chapple. "Religion and Environment." *Annual Review of Environment and Resources* 36 (2011).
- Wolkomir, Michelle, Michael Futreal, Eric Woodrum, and Thomas Hoban. "Substantive Religious Belief and Environmentalism." *Social Science Quarterly*. 78, no. 1 (1997).
- Worster, Donald. *Nature's Economy: A History of Ecological Ideas*. New York, NY: Cambridge University Press, 1994.
- Yaffe, Martin D. "Introduction." In *Judaism and Environmental Ethics: A Reader*. Edited by Martin D. Yaffe. Lanham, MD: Lexington Books, 2001.
- Zaidi, Iqtidar H. "On the Ethics of Man's Interaction with the Environment: An Islamic Approach." In *Religion and Environmental Crisis*. Edited by Eugene C. Hargrove. Athens: University of Georgia Press, 1986.