

The historical roots of the ecological crisis

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Introduction

The journal article, “The historical roots of the ecologic crisis” (White 1967) is one of the most cited articles to be published on religion and ecology,ⁱ and serves as a standard reference point for scholarship seeking to correlate Christianity and the environmental crisis. Regardless of the veracity of his claims (which have indeed come under a wide range of scrutiny especially over the last decade) White captured a common, and particularly modern, anxiety among Western scholars over the role of Christianity – including its texts – in underwriting the environmental crisis. As a result, this small article has in many ways set the agenda for the scholarly discourse on Christianity and ecology for the last 50 years. Given the ways that the elements of this discourse in religion and ecology are affected by the gravity of White’s paper like small planets orbiting a mighty “scholarly” star, I will begin this chapter by assessing White’s paper as an object of hermeneutical inquiry. For the first half of the chapter I will (1) briefly survey the argument White offers in the paper itself and (2) assess the *Sitz im Leben* for the paper. While this first half will be largely descriptive, in the second half of the chapter, I engage in critique of White’s article. It is my hope that by deconstructing

some of the problematic structures of White's approach to the issue of the "ecologic crisis" and the study of religion, we might clear the way for new and more attentive exegesis. In particular, I will note how there are a variety of possible hermeneutical approaches towards the concept of "crisis". As the environmental humanities have recently shown signs of maturing as a set of overlapping scholarly foci - into literature, history, religion, and culture – the deepening of environmental sensibility in each of these kinds of inquiry has brought about new opportunities for exegetical scholarship. Environmental history has brought a new level of awareness to the influence of environmental change to historical events and towards the presence of kinds of ecological sensibility in ancient cultures. Eco-criticism has increased the volume of other-than-human voices in literary texts and their production. Human geography has highlighted the ways in which the very idea of "crisis" and "ecology" are culturally conditioned, constructed and maintained. It is my hope that by demystifying White's article and setting it as a product of a very modern scholarly context, we may clear the path for texts and modes of reading which have been neglected in the subsequent clamour to grapple with anthropocentrism. As I will argue, there are a range of ways to view our ecological moment, and a range of ways that critical scholarly work on the bible can help inform a response to the increasing levels of biospheric distress we can see all around us.

Lynn White and His Essay

Let us begin this exegetical exercise with the author, Lynn White. It is important to note at the outset that White was not a trained specialist in working with biblical texts, their

theologies or the scholarly study of religion. He was a professor of history and more specifically, a medievalist specialising in the history of technology. However, from within this field of study he was well-placed to observe the gradually intensifying ecological impacts of western society and their intertwining with medieval Christianity. It is also worth noting that White is surprisingly well-read in the environmental science of the early 20th century. For example, in the “ecologic crisis” article he conveys a level of awareness of paleo-biology (as it was in the 1960s) and this foreshadows a level of interdisciplinary environmental science-humanities engagement which was unusual at the time, but which has become far more common in recent decades, particularly with the discussion of human ecological impacts across time towards the recently announced “anthropocene” (Steffen et al. 2011).

Turning to the content of White’s article, the historian opens his commentary by noting a recent conversation with Aldous Huxley in which the two had been discussing “Man’s unnatural treatment of nature and its sad results” (White 1967: 1203). He muses over the way the people have, from time immemorial been a “dynamic element in their own environment” but goes on to observe how the levels of modification and harm to the natural world have become uniquely harmful in recent decades. White dismisses simplistic calls that seek to address anthropogenic environmental change as simple cause and effect, as well as moves to “revert to a romanticized past” (1204). A proper approach to this problem of “the ecologic crisis”, as he terms it, must involve an effort to “rethink our axioms”(1204).

White suggests that though environmental stresses begin to be seen in the mid-nineteenth century, the roots of modern science and technology lie far earlier than this. Along these lines, White observes that the middle-ages is a good place to begin precisely because this is when “both our technological and our scientific movements got their start, acquired their character,

and achieved world dominance” (1205). White’s argument regarding the history of science and technology in this *Science* article rests on a broader argument which runs through his other work (e.g. White 1940; 1962). The crux of this argument is that the presence of Christian values caused medieval Europe to become technologically enhanced at a more accelerated pace than other civilizations. White highlights (mostly indirectly) a range of elements within the “Judeo-Christian tradition” which in his view were deployed with special force in the medieval development of science like the idea of creation *ex nihilo* (White 1967: 1205) or the way the description of “dominion” in the text of Genesis 1:26-28 was taken to commend a mandate sanctioning “dominance over creatures” (p. 1207). One of White’s scholarly peers, the historian Elspeth Whitney (1993), suggests that in White’s view, the sophisticated machines developed by European monks, like clocks and organs, “demonstrated that medieval people had developed a unique conception of technology as morally virtuous and divinely sanctioned” (p. 152). The ecologic crisis, driven by a relentless complex of modern science and technology is, according to White, ultimately caused by “the Christian doctrine of creation” (1206). This doctrine was mobilized by “every major scientist” from the 13th century until the late-18th century towards an unfettered creative exploration of the natural world through experimentation and exploitation.

Taken by itself, White’s thesis regarding the history of science and technology (which forms the preamble for the *Science* article) is an interesting one which has generated much debate. However – and this may be part of the reason the article has had such persistent and broad appeal since its publication – it is clear that he intends for this to serve as more than a scholarly proposal. Compared to White’s other scholarly writing (in his monographs, for example), his writing in the *Science* article has a more personal

than-scholarly conceptions of theological thought. For example, it is clear that White believes, following Max Weber, that the theological convictions he has found in the medieval context have strong determinative power for later generations, including the current one. Even though he attempts to distance himself from such an approach, it is also clear that his reading of religious “traditions” is essentialist. We find such an appeal in his now famous statement that, “Christianity is the most anthropocentric religion the world has seen” (1967: 1205). In reaction to such a statement, it would be quite appropriate to ask “which Christianity”? As I will note further below, some more recent scholarship – including work by Nancy Ammerman – has pressed for scholarly attention to the possible plurality of lived religions, including Christianity. This point is particularly important given the way in which subsequent scholarship in the social scientific study of religion and ecology, inspired by White, has gone on to highlight significant differences in attitudes towards nature among denominations and regional expressions of Christianity (e.g. Hagevi 2012). It is also important to note that White’s concern is not founded on scholarly detachment, the concern which led to the writing of the article in *Nature* was in fact quite personal. White expresses elsewhere his own identification as a believing Christian (White, 1971; Whitney, 1993, p. 154-155). Seen in this way, the response that White presents in this article to the ecological harms brought about by (medieval) Christian promotion of technology is not flight to another religious tradition or away from Christianity altogether, but rather represents a proposal towards a rehabilitation of contemporary Christianity. His proposal for this rehabilitation is identified explicitly in the final section of the article where he calls for the adoption of “an alternative Christian view” (1967: 1206). Such an alternative, he hopes, will be able to offset the impacts of a thoroughly de-mythologised “man-nature relationship” (1967: 1206). For White, the solution lies in the

approach typified by his proposed patron saint of nature, Saint Francis, who “tried to substitute the idea of the equality of all creatures, including man, for the idea of man’s limitless rule of creation” (p. 1207).

Lynn White in Context: Modern Diagnosis of the Ecologic Crisis

The idea that the Judaeo-Christian tradition paved the road for the development of western science was hardly a new one when White first made this argument in 1967. It is important to note, in fact, that this discourse had been brewing since at least the 1930s with the publication of three articles in the philosophy journal *Mind* by Michael Foster (1934; 1935; 1936). Seen in this way, White’s analysis, which looks to the relationship between theological exposition and the history of technology and invention in the late-medieval period (mostly by Christian monks) is actually a more developed version of an argument which had become popular in the early 1960s. This is captured in a statement by John Macquarrie, who suggested in the 1970s, “it has been fashionable in recent years among some theologians to make much of the claim that Western science and technology owe their origins to biblical influences and especially to the biblical doctrine of creation” (1971).

In a related way, White was also caught up in a tendency popular in mid-twentieth century social science to set up a binary opposition between “humans” and “nature”. Though this binary represents the formalization of a range of intellectual trajectories set in the early modern period by scholars such as René Descartes and Francis Bacon which differentiate human from non-human nature, this way of thinking was consolidated in the context of empirical study of environmental values and attitudes in a particular way by social scientists

towards the middle of the 20th century. Among these scholars, Florence R. Kluckhohn had already begun the work of consolidating this bifurcation a decade before White's essay, arguing that among the world's cultures, environmental attitudes could be construed in terms of a "man-nature" value orientation. She provided three options for possible orientations: as "subjugation-to-nature," "harmony-with-nature," or "mastery-over-nature" (1961: 13). Drawing from this new emerging discipline of moral psychology and environmental values, writers like White simply expressed a growing consensus which implied that much of the Judeo-Christian tradition from Moses to Billy Graham underwrote a mastery-over-nature orientation. To summarise, White participated in two key intellectual moves which determine to some extent the way that diagnoses the crisis: (1) he has a binary opposition of a human antagonist against "nature" or "the environment", which is then seen as a passive protagonist and (2) he works with essentialised interpretations of religions and cultures, like "Western Christianity" which is either for or against "nature".

White's diagnosis, based as it is on these simplistic binaries, fails to take into account a variety of relevant factors. To take just one example, that of economic status, within a particular society there are naturally some persons have a high degree of control over their environmental impacts whilst others have little choice over the sourcing over energy and food choices. Ecologic impacts are widely variable: a majority of humans continue to live with a modest ecological footprint with very extreme contributions to environmental change at upper demographics. To say that "Western Societies" are responsible for the ecologic crisis, fails to grasp at the differential contribution by wealthy members of those societies.

Part of the reason that I highlight the role of these intellectual stances in forming White's argument is because self-consciousness and anxiety over the presence of a "mastery-over-

nature” orientation has had a great deal of influence over 20th century scholarly exegesis on texts such as Genesis 1:26-28. One can see how such a concern has even become formalized in at least one strand of the ecological hermeneutics project. This is conveyed in the application of a “hermeneutic of suspicion” in the *Exploring ecological hermeneutics* volume edited by Norman C Habel and Peter L. Trudinger (2008).

More recent scholarship in theological hermeneutics has defended the possibility that theological interpretation does not require a monolithic anthropology, and that text (or hermeneutic), can work within canonical polyphony. Projects in ecological hermeneutics like the *Ecological Hermeneutics* volume edited by Horrell, Hunt, Southgate, and Stavropoulou (2010) leave open the possibility that there may be a variety of voices in the bible reacting to the ecological crisis in a range of different ways. There is much more to say about these projects, which I will leave for the insight and analysis of David Horrell in the next chapter. Suffice it to say for now that some scholarship in modern hermeneutics has configured itself in a very specific way around the notion of “crisis” and that this configuration has been shaped by these binary constructions of “man” and “nature” which reached their social scientific apex in the 1960s-1980s but which have continued to carry an influence on more recent scholarly work on the bible.

The point of this brief hermeneutic exercise on Lynn White’s article is not to displace the notion of crisis as a valid theme for exegetical reflection, but rather to highlight the ways in which the constitution and centrality of crisis as a paradigm for interpreting human-nature interactions has been taken for granted, and this in turn has influenced the shape of ecological scholarship in a range of ways. If interpreters of the bible want to proceed with a more robust critical construction of “crisis” as I have already implicitly argued above, it will not do to

merely set aside White's specific interpretation of the Christian causality of crisis. We must account for the ways that "crisis" has served as a central theme for interpreting the ancient world more broadly as well and draw the resources that are available from this wider discourse for conceptualising "crisis".

Whose Crisis?

In seeking to formulate a critical response to White, I want to look closely at the concept of "crisis" which he invokes in the essay. Here too, there is a long modern conceptual legacy surrounding the use of crisis in the interpretation of historical events and documents. However, I would suggest that new scholarship in crisis studies hints at the possibility that, as I will go on to suggest, we may be able to reconfigure our hermeneutics of crisis towards more effective modes of reading.

A key focal point for modern scholarly work in history, archaeology, anthropology and classics has been the dynamics of civilisational decline and collapse. Starting in the 18th century, works such as Edward Gibbon's six volume *History of the Decline and Fall of the Roman Empire* (1776-1788) have narrated the arrival at a point of crisis of various human societies. The collapse of ancient empires has also often served as a proxy by which to imagine the trajectory of contemporary ecological troubles. In spite of the long run of this scholarly conversation, it has only recently been the case that narratives of collapse could be empirically tied to environmental factors, and in particular, environmental change precipitated by human interaction. A touchstone for this new appreciation of crisis in the ancient world was the 2005 book by geographer Jared Diamond, aptly titled *Collapse*. Diamond's work has done much to popularise the idea that ecological over-reach is

inextricably entangled with wider societal decline.

Building on this early work, a new inter-disciplinary focus has arisen, “crisis studies” which seeks to critically appraise scholarly interpretation and construction of historical crises. One key finding, which Diamond is attempting to address to some extent, relates to the way that historians (and the surrounding society) have failed to narrate the specifically *environmental* context in which civilizations rise and fall. We are very quick to point to ways that our civilizations create an ecological crisis, but slow to recognize how the events coming from the natural environment can foment social crises. Further, as crisis scholars have begun to suggest, there are a range of different agendas that can arise in response to the mobilization of human response to a “crisis”. For example, in Middleton’s analysis, Diamond’s text is “catastrophist” and thus we should not be surprised to find that his critique of the ways that civilizations may outstrip their landscape ends with a neo-liberal argument for smart growth. The crucial point to be made here is that the concept of “crisis” comes with its own intellectual baggage and cannot be invoked as a purely neutral observation.

Indeed, while the act of naming something a “crisis” tends to indicate comprehensive decline, this can actually obscure unexpected forms of liveliness which may persist in spite of negative conditions or even because of them. As I have indicated above, both Lynn White and Jared Diamond see the narration of crisis as the prelude to a call to action. Though they may not characterise the other-than-human forces which drive “ecocide” as malevolent, and they do not neglect to narrate the complicity of humans in contributing to crisis, the agent of destruction is ultimately natural, and the agents of deliverance from collapse are decisively human. To use Diamond’s narrative in *Collapse* as one example, he argues that many of the features that contributed to collapse have intensified such that we find “today’s larger

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population and more potent destructive technology, and today's interconnectedness posing the risk of a global rather than a local collapse" (Diamond 2005: 521). Yet, we need not sit around and wait for catastrophe; as Diamond argues, "the future is up for grabs, lying in our hands" (521-522). In this way, past crises serve as both the carrier of foreboding and hope:

We don't need new technologies to solve our problems. . . we "just" need the political will to apply solutions already available. Of course, that's a big "just." But many societies did find the necessary political will in the past. Our modern societies have already found the will to solve some of our problems, and to achieve partial solutions to others. (522)

Diamond's argument parallels White's in many ways, calling for new forms of cosmopolitan human solidarity, with crisis serving as a rallying cry.

The potential trouble with this kind of narrative is that other-than-human voices are left silent, and plant and animal agencies ignored. The bible serves to challenge such an approach with a range of examples of non-human speech and action (see Habel and Trudiger, 2008 for several good examples). My point is that our fixedness on crisis can serve (ironically) to reify anti-nature positions, and prevent new forms of collaboration on ecological restoration with other-than-human creatures. Here, the work of Actor-Network Theory provides a helpful model, seeking to de-emphasise agency, and especially the problematisation of human agency, as the central feature of discussions of the environment (Latour 2005). Other methodological emphases on "hybrid geographies" (Whatmore 2002) and "lively entanglements" (Haraway 2008) offer a promising context for re-envisioning the role of

agency in biblical texts. As we seek to assess and respond to “crises”, it is particularly important to attend to the presence and agency of these other-than-human creatures in the way that we construe ecological distress, and the work of biblical interpretation can provide a crucial context for bringing these voices to the foreground.

A final problem with crisis is the way that it can obscure a range of possible registers in which we might evaluate environmental phenomena. There are a range of other ways in which the formulation of an interpretive enterprise, whether it is textual or historical, in response to crisis can obscure meaning. In a similar way, a robust modern eco-theology needs to intermingle fear and hope, excitement and caution, joyousness and lament.

So the problem is not merely with White’s framing of Christian anthropocentrism as the source of the ecological crisis, but more broadly with the deployment of crisis itself as a way of framing the systemic and anthropogenic stresses that our biosphere is undergoing. As a metaphor, “crisis” may mobilise our attentions, but it also can serve to obscure the more complex dynamics at work in the present moment and in biblical texts.

A Hermeneutics of Crisis

As I have noted above, much of White’s scholarly argument has little to do with the text of the bible and looks towards contemporary Christianity only as a kind of field in which medieval trajectories arrived. His essay does not have any single direct citation from the bible. Furthermore, the “crisis” concept is itself problematic, especially for biblical hermeneutics. So why discuss “The Historical Roots of Our Ecologic Crisis” then in light of the conversation

in this volume on the bible and ecology?

One reason for attention to White's article is simply because it has been so influential, and close study of White's conclusions and the responses which have ensued provide a crucial genealogy of the eco-disciplines which began in that period, including eco-theology, eco-psychology, and environmental history. In this way, we may appreciate how history shapes hermeneutics and note that the critical impact of White's article is linked not to the convincing nature of his conclusions, but rather for the way in which his problematisation of modern Christianity captured a broader sentiment which drove much of the formation of eco-criticism as a discipline in the 20th century and which in turn had significant influence on the shape of ecological hermeneutics. As Mark Stoll observes, the date of publication for White's article - 10 March 1967, at just three years before the first Earth Day, was a moment "in which National Concern about the environmental crisis was rising quickly" (Stoll 2012: 265). Part of the reason for this was no doubt the fact that scattered about the 1960s were increasingly visible and well-chronicled ecological crises. In one instance Rachel Carson chronicled the impacts of pesticides (especially DDT) on bird life in her book *Silent Spring* (1962). Another group of academics (founded in 1968) which came to be called "the Club of Rome" released a highly visible report in 1972 titled "The Limits to Growth" which projected major shortages in a range of natural resources from fossil fuels to fertilisers and food stocks. It is fair to say that many of the consequences of these factors became suddenly and intensely visible in the 50s and 60s and that scholarly response was mobilised in response to these discoveries as they came.

Now that a half-century has passed, I think it is fair to say that ecological hermeneutics should take this genealogy in hand, but also seek to establish new reference points and critical frames for environmental reflection (Jenkins 2009). Might we dispense with “anthropocentrism” and pursue some of the alternatives that have emerged in the environmental humanities more broadly, as I have noted above such as “lively entanglements” and “hybrid geographies”? The implicit challenge issued in White’s paper to which a wide range of scholars have sought to respond has undoubtedly and indelibly had an influence on hermeneutics and eco-theology in the latter half of the 20th century. However, we may hope that the next half-century of scholarship will bring a series of seminal articles and monographs which are not reacting to White’s work, but rather seek new frames of reference which are not defensive or self-flagellating, but integrative, creative, and dynamic.

Particularly on the matter of defensiveness, it is also important to note a relevant shift which has been underway in global environmental politics. Almost 50 years ago, just after White’s article was published, the sociologist Peter Berger made the now infamous (and refuted) claim that “By the 21st century, religious believers are likely to be found only in small sects, huddled together to resist a worldwide secular culture” (1968). One can see now how many theological agendas were shaped by this perceived undercurrent of existential threat posed by secularisation; or conversely by the perceived irrelevance of theologically specific and culturally situated forms of reasoning. In a similar way, many scholars, not just in biblical, theological and religious studies, but within the humanities more broadly had to fight for a place at the table where environmental policy decisions were being made. This is no longer the case. Wholly secular attempts to drive mitigation of climate change have not been a

resounding success, and as a result, deliberative processes like the UN-IPCC have taken on an increasingly interdisciplinary approach, integrating the study of climate science with things like human culture, values and beliefs (NRC 1992). In this newly reconfigured discourse, historians, classicists, theologians and biblical scholars no longer need to defend their place in the conversation, but should bring a unique and equal voice into this interdisciplinary conversation.

This is a palpable shift away from skepticism about religion, and naïve trust in the ability of data to produce ethical responses to a “crisis” like climate change, towards an appreciation of the possible value brought by the world’s religions, and by theological thinking in particular. This shift maps onto a similar shift which has been underway in scholarship more broadly, away from the early presumptions of secularisation scholars such as Peter Berger and Jürgen Habermas towards more complex post-secular approaches to religion. While I might dispute White’s claim that “the roots of our [environment-related] trouble[s] are so largely religious” I would not disagree with his related claim that “the remedy must also be essentially religious, whether we call it that or not” (White 1967: 1207).

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ⁱ Google scholar lists 4,439 citations for the article across all the various forms of publication and re-publication as of 5 April 2017.