

DOMINION IN THE ANTHROPOCENE

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In the year 2000, Nobel Prize–winning atmospheric chemist Paul Crutzen together with Eugene Stoermer published a short article in a professional newsletter cataloging the manifold ways that humans as a species have affected the geology and atmosphere of the planet. They wrote, “The expansion of mankind, both in numbers and per capita exploitation of resources has been astounding” and then proceeded to list ways that humans have impacted the chemistry and functioning of local and planetary systems including the widespread transformation of the land surface, the synthetic fixing of nitrogen, the escape of gases into the atmosphere (including, importantly, greenhouse gases) by the burning of fossil fuels, the use of fresh water, increased rates of species extinction, the erosion of the ozone layer in the atmosphere, overfishing of the world’s oceans, and the destruction of wetlands.¹ They concluded, “Considering these and many other major and still growing impacts of human activities on the earth and atmosphere, and at all, including global, scales, it seems to us more than appropriate to emphasize the central role of mankind in geology and ecology by proposing to use the term ‘anthropocene’ for the current geological epoch.”² This was one of the first documented arguments for adopting the term *Anthropocene*, although others, including Stoermer, had used similar terms before.

The data Crutzen and Stoermer were using to describe the human impact on planetary systems are now almost two decades old, but even more recent data tells the same story about how humans continue to

1. Paul J. Crutzen and Eugene F. Stoermer, “The ‘Anthropocene,’” *Global Change Newsletter*, no. 41 (May 2000): 17–18.

2. *Ibid.*, 17.

fundamentally alter the functioning of both local and planetary systems. Will Steffen and a team of researchers, for example, published an important article in *Science* in 2015 that catalogs some of these changes and develops a framework for evaluating the collective stress human action places on the planet, referred to as the “planetary boundaries framework.”³ This approach is meant to complement other work done on local ecosystems, waterways, and airsheds by considering, as they put it, “constraints at the planetary level, where the magnitude of the challenge is vastly different.”⁴ They echo Crutzen and Stoermer in saying, “The human enterprise has grown so dramatically since the mid-twentieth century that the relatively stable, 11,700-year-long Holocene epoch, the only state of the planet that we know for certain can support contemporary human societies, is now being destabilized. In fact, a new geological epoch, the Anthropocene, has been proposed.”⁵

The notion of planetary boundaries, although controversial in some of its specific implications, is nonetheless very effective for illustrating one of the key ideas of the Anthropocene: it recognizes that humans have historically had and will continue to have an impact on the planet. Most major planetary systems have—to a greater or lesser extent—been affected by human activity. The planetary boundaries framework provides a means of thinking about these systems that recognizes human impact on them by establishing what are considered to be safe operating spaces in regard to freshwater use, land-system change, genetic diversity, climate change, biogeochemical (mainly phosphorus and nitrogen) flows, ocean acidification, etc. The planet is far past the point of considering how these systems function outside of human activity; now the focus must be on how pushing beyond certain thresholds in

3. Will Steffen, et al., “Planetary Boundaries: Guiding Human Development on a Changing Planet,” *Science* 347, no. 6223 (Feb. 13, 2015): 736–46.

4. *Ibid.*, 737.

5. *Ibid.*

any of these areas puts the planet at greater risk with high degrees of uncertainty about the future functioning of these systems. Insofar that the drivers of these changes are anthropogenic, we can begin talking about having entered into a new epoch: the Anthropocene.

This aim of this essay is to consider what might be some of the key theological implications of imagining ourselves as living in the Anthropocene. The term is unquestionably provocative for how it potentially normalizes human involvement in major planetary systems. Popular Latter-day Saint interpretations of the Judeo-Christian tradition has, especially in recent decades, most often demonstrated an indifferent (and among some even an outright hostile) attitude with regard to ecological concerns. A reevaluation of the unique Latter-day Saint doctrine about the Creation and its portrayal of human embeddedness in the world is long overdue.⁶ Specifically, I intend to look at the question of anthropocentrism and the doctrine of dominion in biblical Creation accounts and explore a potential LDS response that might work toward an interpretation that fosters an understanding of the risk and responsibility of living in a world that is increasingly changed by human activity.



The idea of the Anthropocene is controversial among geologists who govern the definitions of geological time units—the chrono-stratigraphic units that make up periods, epochs, and ages—yet the term has nonetheless gained tremendous cultural traction as a shorthand way of referencing the impact of human activity on various parts of the planet’s ecology. Among geologists, the debate about the Anthropocene has to do with more technical questions of classification and whether or not the stratigraphic trace of human activity is truly on par with the evidence of other past geological time units. The argument for this

6. See George B. Handley, “Toward a Greener Faith: A Review of Recent Mormon Environmental Scholarship,” *Mormon Studies Review* 3 (2016): 85–103.

permanent geologic trace focuses on the evidence remaining from the detonation of atomic weapons, artificial fixing of nitrogen, biodiversity loss, deforestation, diversion and use of fresh water, industrial accidents, burning of fossil fuels, anthropogenic climate change, and the emission of other forms of pollutions, all of which leave a legible mark in the lithosphere potentially detectable for millennia to come. *Homo sapiens* as a species has only existed for a mere two hundred thousand years and practiced agriculture for the last 11,500 years—time frames that are uncomfortably short, in the minds of some geologists, to use as a basis for defining geological time periods. The ultimate acceptance of the term by the scientific community hinges on the question: have humans in their relatively short existence as a species become a geological force at a scale that has objectively and fundamentally altered the course of geologic history? The start date for a proposed Anthropocene designation range from the rise of agriculture and the Neolithic revolution twelve thousand years ago (renaming the Holocene) to the start of the Industrial Revolution to the Trinity test of the atomic bomb in 1945 and the period after World War II known as the Great Acceleration. In May 2019, the Working Group on the Anthropocene (WGA) made a formal recommendation to the International Commission on Stratigraphy to designate the current epoch as the Anthropocene with a start in the mid-twentieth century. The final decision is pending. It is possible that we may wake up one day soon to find ourselves in a new epoch.

The idea of calling the current age the Anthropocene has been controversial not just for stratigraphers and geologists but also for some environmentalists. To illustrate why, one need look no further than an article authored by Crutzen in 2002 in *Nature* entitled “The Nature of Mankind” that was a follow-up and expansion of the article from 2000 quoted earlier. He concluded the new article by saying,

Unless there is a global catastrophe—a meteorite impact, a world war or pandemic—mankind will remain a major environmental force for many millennia. A daunting task lies ahead for scientists and engineers

to guide society towards environmentally sustainable management during the era of the Anthropocene. This will require appropriate human behavior at all scales, and may well involve internationally accepted, large-scale geo-engineering projects, for instance to “optimize” climate. At this stage, however, we are still largely treading on *terra incognita*.⁷

By recognizing the human species’ impact on the planet, Crutzen argued, one must likewise recognize the role of human beings going forward and take an active approach “to guide society towards environmentally sustainable management during the era of the Anthropocene.”⁸ Critics charge that this deliberate and managerial approach to nature through various forms of geoengineering smacks of the very technological hubris that fueled our environmental crises in the first place. Furthermore, encouraging future human involvement in these systems abandons the idea of a nature that exists outside of human agency and seems to justify human domination, exploitation, and destruction of the environment.

There are good reasons to be wary of geoengineering fixes, as these fixes seem to so very often to create other (sometimes worse) problems. Nevertheless, a benefit that comes with the idea of the Anthropocene is how the designation forces a recognition that humankind is not and never has been separate from nature—an ideological assumption that has informed much of modern Western culture, including many environmentalist movements. The origins of how humans began to think of themselves as being separate from nature is, of course, complex and a matter of some debate. Lynn White, in his oft-cited article from *Science* in March 1967 entitled “The Historical Roots of Our Ecologic Crisis,” saw modern science and technology as manifestations of a medieval Christian anthropocentric worldview that had reduced nature to a spiritless resource and justified heedless exploitation of resources. White claimed that Western Christianity “was the most anthropocentric

7. Paul J. Crutzen, “Geology of Mankind,” *Nature* 415, no. 6867 (Jan. 3, 2002): 23.

8. *Ibid.*

religion the world has seen” and that whereas “formerly man had been part of nature; now he was the exploiter of nature.”⁹ Central to White’s argument and critique is a reading of Genesis 1:26–28 that justifies the exploitation and subordination of nature to human interest, thereby granting humans unqualified dominion over creation.

26 And God said, Let us make man in our image, after our likeness: and let them have *dominion* over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.

27 So God created man in his own image, in the image of God created he him; male and female created he them.

28 And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth, and *subdue* it: and have *dominion* over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.

29 And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat.

30 And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein there is life, I have given every green herb for meat: and it was so.

31 And God saw every thing that he had made, and, behold, it was very good. And the evening and the morning were the sixth day.

Mankind is set apart from the rest of creation in this passage by having the distinction of being the only creation made explicitly in the image of God.¹⁰ Furthermore, the human position at the center of creation is

9. Lynn White, “The Historical Roots of Our Ecological Crisis,” *Science* 155, no. 3767 (Mar. 10, 1967): 1205.

10. For summary of scholarship on *Imago Dei*, see J. Richard Middleton, *The Liberating Image: The Imago Dei in Genesis 1* (Grand Rapids, Mich.: Brazos Press, 2005).

underscored by the injunction to have dominion over the earth and to subdue it.

Research since the 1960s has suggested that White's characterization of medieval Christianity is somewhat reductive.¹¹ But even if White's thesis misses the mark in regard to some of the historical particulars of the current ecological crisis, the fact that he is cited as often as he is suggests that his basic argument about the exploitive mindset of Western culture vis-à-vis the environment somehow rings true in contemporary culture. Regardless of origins, White articulated the pronounced split today between humans and nature that pervades not only religious thought, cultural attitudes, and the practice of science but even, as indicated above, many environmentalist discourses. The colonialist mindset that sees nature only as a collection of inert resources to be exploited has its corollary in conservation movements (pace John Muir) that proclaim nature as sacred only when it has not been defiled by the presence of humans. In both cases, the view of nature is framed by a shared and faulty assumption that humans stand outside of nature. Whether or not Judeo-Christianity actually was the origin of this split, it has certainly been deployed by many, particularly in recent decades, to justify a certain indifference to key ecological concerns.

Lynn White concluded his critique of Western culture's devaluation of nature with an oft-overlooked second conclusion. White wrote, "Since the roots of our trouble are so largely religious, the remedy must also be essentially religious, whether we call it that or not. We must rethink

11. See, for example, Jeremy Cohen, *"Be Fertile and Increase, Fill the Earth and Master It": The Ancient and Medieval Career of a Biblical Text* (Ithaca, N.Y.: Cornell University Press, 1989); Elspeth Whitney, "Lynn White, Ecotheology, and History," *Environmental Ethics* 15, no. 2 (1993): 151–69; Peter Harrison, "Having Dominion: Genesis and the Mastery of Nature," in *Environmental Stewardship: Critical Perspectives—Past and Present*, edited by R. J. Berry (New York: Continuum, 2006), 17–31.

and refeel our nature and destiny.”¹² White recognized the important role religious traditions played in changing the human attitudes and behaviors necessary to improve the health and resiliency of local and global ecologies. For him, the human-nature divide and subsequent anthropocentrism was a major stumbling block to getting at the root of the problem. A significant step in overcoming the challenge he outlines is to revisit Judeo-Christianity’s anthropocentrism. LDS doctrine on the Creation is particularly well situated to reimagine anthropocentrism not as an impediment to creation care but as a means of renewing ecological thinking in the Anthropocene.

A good place to start is back in the passage from Genesis 1 quoted earlier. Much literal and virtual ink has been spilled over the interpretation of the words *dominion* (*radah*) and *subdue* (*kavash*). These verses certainly have been used to justify mankind’s superiority over nature and the license taken to heedlessly exploit natural resources with scant concern for the long-term consequences of such abuse. No matter how one squints to look at these words, they (and indeed the chapter as a whole) set up a clear anthropocentric hierarchy. Comparing the use of the word *radah* in Genesis to other instances in the Old Testament, Theodore Hiebert summarizes the situation well: “The entire picture of human beings in Gen. 1:28 in particular and in this creation account as a whole is one of power and authority. The human race is positioned at the top of a hierarchy of creation by virtue of its divine image and its divine mandate to rule over the earth and its life.”¹³ Depending on one’s understanding of *dominion* and *subdue*, these verses from Genesis 1 have been used alternatively to critique as well as to justify human exceptionalism, exploitation, and indifference to nature.

12. White, “Historical Roots,” 1207.

13. Theodore Hiebert, “Rethinking Dominion Theology,” *Direction* 25, no. 2 (Fall 1996): 19.

Lynn White's argument summarized above indicates how these terms might be used to justify exploitation. In contrast, reading this passage from Genesis as a critique of human exploitation of creation must begin with a careful reevaluation of dominion as call to stewardship. Hugh Nibley—for a long time one of the only significant environmentalist voices among LDS scholars—makes this argument forcefully in his article “Subduing the Earth,” in which he wrote, paraphrasing Brigham Young, “The dominion God gives man is designed to test him, to enable him to show to himself, his fellows, and all the heavens just how he would act if entrusted with God’s own power.”¹⁴ Furthermore, he claimed, “The Ancients taught that Adam’s dominion was nothing less than the priesthood, the power to act for God and in his place.”¹⁵ This understanding of dominion has been echoed more recently by other non-LDS scholars such as William Brown,¹⁶ J. Richard Middleton,¹⁷ and others. While this reading of dominion as stewardship is convincing, the fundamental inequity built into the hierarchy it established between humans and the rest of creation highlights a daunting problem. After all, dominion, according to Doctrine and Covenants 121, almost inevitably leads to *unrighteous* dominion.

While hierarchies can be problematic because of inequitably distributed power, in this case the very fact that the hierarchy is also a relationship forces women and men to recognize what might be termed an ecological embeddedness in nature. To underscore this point, it will be illustrative to reference an important correlative to Genesis 1’s so-called priestly account with Genesis 2, the Yahwist or J account (referred to as

14. Hugh Nibley, “Subduing the Earth,” in *Nibley on the Timely and the Timeless: Classic Essays of Hugh W. Nibley* (Provo: Religious Studies Center, Brigham Young University, 1978), 90.

15. *Ibid.*, 88.

16. William P. Brown, *The Seven Pillars of Creation: The Bible, Science, and the Ecology of Wonder* (New York: Oxford University Press, 2010).

17. Middleton, *Liberating Image*.

such because of frequent repetition of the name divine name YHWH), in which God is portrayed not as transcendent but within what William Brown has described as a “drama of dirt” in which God comes down to Adam and Eve in the Garden so that they might collectively get their hands dirty in the work of the garden.¹⁸ The dominion granted to Adam and Eve puts them in inevitable contact and community with nature. Norman Wirzba argues that it was imperative that the first humans be involved in maintaining the Garden “because it is through the tending and serving of fellow creatures that the ‘*adam*’ practically proves and potentially learns to appreciate the range, depth, and responsibilities of interdependent life. . . . According to this story, it is crucial we keep our hands familiar with soil so that we don’t forget our need and dependence, but also our responsibility to care for the bodies we live through.”¹⁹

Reading Genesis in the context of the Anthropocene forces us to acknowledge that humans are indeed part of nature and affect—and are in turn affected by—nature, sometimes in disproportionate ways. This acknowledgement and rereading of Genesis’s anthropocentrism rejects attempts to ignore the facts of how we as a species have changed the local and planetary ecosystems. Many of these changes are disastrous both for human life as well as for the lives of the other creatures over which we are invited to have care. A call to embrace the Anthropocene should not be misinterpreted as a further justification of human abuse of the environment nor as resignation that it is too late or hopeless to act to save what is left. It is, however, about recognizing a fundamental fact of connectedness and a call to become more conscious and deliberate about how we live in and transform the world in which we and other living beings inhabit. Embracing the Anthropocene allows for us

18. Brown, *Seven Pillars of Creation*, 79.

19. Norman Wirzba, *From Nature to Creation: A Christian Vision for Understanding and Loving Our World* (Grand Rapids, Mich.: Baker Academic, 2015), 103–04.

to think around some of the fundamentally misanthropic implications of many environmental movements of the late-twentieth century that rightly mourned the disappearance of healthy ecosystems but had difficulty imagining a space for the human, as evidenced by the emphasis placed on such misanthropic propositions as population control or radical versions of wilderness preservation.

By not insisting that the only real nature is “pure” nature, cordoned off in a remote corner of the world, we can begin to inhabit the nature in and around us more fully. We can better deal with our own complicity in imbrication in the functioning of natural systems. Jedediah Purdy, in his book *After Nature*, writes:

The Anthropocene finds its most radical expression in our acknowledgment that the familiar divide between people and the natural world is no longer useful or accurate. Because we shape everything, from the upper atmosphere to the deep seas, there is no more nature that stands apart from human beings. There is no place or living thing that we haven't changed. Our mark is on the cycle of weather and seasons, the global map of bioregions, and the DNA that organizes matter into life. It makes no sense now to honor and preserve a nature that is defined by being not human, that is purest in wilderness, rain forests, and the ocean. Instead, in a world we can't help shaping, the question is what we will shape.²⁰

We are not left stuck between nostalgia and misanthropy but can move forward thinking about what is best for both the more-than-human world as well as the humans that make up an important part of this planet and our ethical stewardship, whether they be my neighbor in the city or state in which I live or my neighbor in cyclone-ravaged Mozambique, the warming Arctic, the disappearing islands of Kiribati in the Pacific, or post-Katrina New Orleans.

20. Jedediah Purdy, *After Nature: A Politics for the Anthropocene* (Cambridge, Mass.: Harvard University Press, 2015), 2–3.

At least since Lynn White, many Judeo-Christian environmentalists have been embarrassed by the undeniably anthropocentric underpinnings of Judeo-Christian Creation accounts. But denying the anthropocentrism that is so obviously there is at best disingenuous and at worst quite dangerous in that it doesn't force us to confront the dangerous power humans collectively have. As Wallace Stegner wrote concerning anthropocentrism, "The Deep ecologists warn us not to be anthropocentric, but I know no way to look at the world, settled or wild, except through my own human eyes. I know that it wasn't created especially for my use, and I share the guilt for what members of my species, especially the migratory ones, have done to it. But I am the only instrument that I have to access to by which I can enjoy the world and try to understand it."²¹ Stegner's point is that to deny our unique way of seeing the world is to reject a fundamental truth about how we exist in the world and how our actions have consequences. Anthropocentrism does not necessarily lead to environmental degradation if it can be tempered by moderation, gentleness, meekness, respect, and reverence.

Elder Marcus Nash seemed to concur with this basic premise in a groundbreaking talk presented on behalf of the Church at the Wallace Stegner Center Annual Symposium at the University of Utah in 2013. Nash was unapologetic about the anthropocentrism that he claimed to be at the core of LDS doctrine. After quoting Doctrine and Covenants 49:16–17 and 1 Nephi 17:36 he stated, "[A]ccording to LDS doctrine, men and women are not mere interlopers or a side-show on this earth; rather, they and the children they bring into this world are central to its purpose."²² He continued by explaining that although the creation is "ordained for the use of man" (D&C 49:19–21) that "humankind

21. Wallace Stegner, "The Sense of Place," in *Where the Bluebird Sings to the Lemonade Springs: Living and Writing in the West* (New York: Modern Library, 1992), 201.

22. Marcus B. Nash, "Righteous Dominion and Compassion for the Earth" (lecture, 18th Annual Stegner Center Symposium, University of Utah, Salt

are stewards over this earth and its bounty—not owners—and will be accountable to God for what we do with regard to His creation. . . . So, how we care for the earth, how we utilize and share in its bounty, and how we treat all life that has been provided for our benefit and use is part of our test in mortality. . . . The unbridled, voracious consumer is not consistent with God’s plan of happiness, which calls for humility, gratitude, and mutual respect.”²³

Nash underscored that the anthropocentricity inherent in this doctrine must be tempered by a recognition that all living things have a material and spiritual creation and are “living souls”: “Since both plant and animal life are living souls, they are capable of experiencing happiness as they fulfill the measure of their creation. . . . Plainly, all forms of life . . . have great value in the eyes of God, for they are the workmanship of His hand, and will be blessed by His redeeming power. This doctrine leads one to view plant and animal life differently, as living souls created by God.”²⁴

Thus, Lynn White’s claim that “by destroying pagan animism, Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects”²⁵ does not hold true within the unique LDS interpretation of Christianity in which all living things, indeed perhaps even the earth itself (see Moses 7:48), has a spirit and place within a creation ordained by God. The anthropocentrism of dominion clearly does not justify exploitation; rather, it reminds us of our responsibility for creation. Nash concluded, “To the degree that religion teaches reverence for God, for His creations, for life, and for our fellowman, it will teach us to care for the environment. In short,

Lake City, Apr. 12, 2013, available at <https://newsroom.churchofjesuschrist.org/article/elder-nash-stegner-symposium>).

23. *Ibid.*

24. *Ibid.*

25. White, “Historical Roots,” 1205.

the state of the human soul and the environment are interconnected, each affects and influences the other.”²⁶

In summary, I return to Crutzen, where I started. In an article written for the online magazine *Yale Environment 360*, he wrote the following together with Christian Schwägerl:

Geographers Erle Ellis and Navin Ramankutty argue we are no longer disturbing natural ecosystems. Instead, we now live in “human systems with natural ecosystems embedded within them.” The long-held barriers between nature and culture are breaking down. It’s no longer us against “Nature.” Instead, it’s we who decide what nature is and what it will be.

To master this huge shift, we must change the way we perceive ourselves and our role in the world. Students in school are still taught that we are living in the Holocene, an era that began roughly 12,000 years ago at the end of the last Ice Age. But teaching students that we are living in the Anthropocene, the Age of Men, could be of great help. Rather than representing yet another sign of human hubris, this name change would stress the enormity of humanity’s responsibility as stewards of the Earth. It would highlight the immense power of our intellect and our creativity, and the opportunities they offer for shaping the future.²⁷

There is still reason to be wary of Crutzen’s bullishness on the human capacity to manage planetary systems, but he articulates well the power of recognizing human participation and involvement in these systems—the very involvement that seems to be articulated in God’s first commandments to the only creatures made in his image.

As a religion, Christianity as a whole and Mormonism in particular, is decidedly anthropocentric. But rather than be embarrassed by this anthropocentricity in the face of environmental crisis, we actually need to learn to lean into it—not to consume and exploit more but to

26. Nash, “Righteous Dominion.”

27. Paul J. Crutzen and Christian Schwägerl. “Living in the Anthropocene: Toward a New Global Ethos,” *Yale Environment 360*, Jan. 24, 2011, https://e360.yale.edu/features/living_in_the_anthropocene_toward_a_new_global_ethos.

recognize how our consumption and use of resources is connected to our own physical and spiritual health as well as to the human and non-human worlds around us and to then take better care of the stewardship with which we have been entrusted. There is simply no firm theological grounding for a discourse that exploits the uniqueness of the human relationship to God to provide license to impoverish the health and vitality of creation. We have a unique stewardship over something of which we are also a part.

As individuals and as a species we have always been active participants in natural systems; we come from the earth, we depend on the earth, and one day our bodies will return to the earth, the very creation that God declared “good” (Gen. 1:31; Moses 2:31). Embracing the idea of the Anthropocene simply means being more deliberate about acknowledging and leveraging this participation. At its core, the Anthropocene is a model for understanding humanity’s emergence as a planetary agent and steward with an emphasis on scale and interdependency. It confronts facile segmentations of space and history by linking the local to the global, by stretching the temporal imaginary to incorporate geological epochs and eons, and by forcing a recognition of the intertwined relationships between God, his human children, and the creation.

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