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15. Creation and Theodicy in the Context of Climate Change

A New Cosmology for the Anthropocene?

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Abstract

The Bible was composed during the Holocene era, which was characterized by a stable climate enabling humans and human civilization to grow and flourish. The biblical cosmology, as expressed through its creation stories and other texts, is a product of that era. Now that we have entered a new geological era – the Anthropocene, as many scholars claim – which is characterized by anthropogenic climate change, the biblical cosmology raises questions of theodicy: Is the creation of God faulty? Is God ultimately responsible for the dire consequences and suffering that humans will experience as a result of climate change? This paper considers how the changing circumstances of climate change challenge the biblical cosmology, and whether the biblical cosmology remains relevant in the Anthropocene.

Keywords: creation, climate change, Anthropocene, theodicy, cosmology

Introduction

The Book of Job presents a classic example of theodicy. Job, who claims to have lived a righteous life, experiences various catastrophes for which he can identify no legitimate cause. His friends, drawing upon traditional theology, attempt to convince him that his suffering is justifiable, but Job will not be persuaded nor consoled by them and ultimately holds God responsible. When God responds to Job's accusations, God does so with a cosmology, which places Job's suffering and complaint within a larger, theocentric context. No satisfactory answer is given for Job's complaint, but the import of his suffering is diminished as he recognizes his own insignificance in God's creation.

In this essay, I suggest that the human situation in the context of climate change raises questions of theodicy that are similar to Job's, and traditional religious or theological understandings, like that of Job's friends, are not very helpful. But can the biblical cosmologies, like God's response to Job, continue to speak in the context of climate change or do we need a new cosmology to face this new challenge? In what follows, I will explore whether and how the biblical cosmologies may address the contemporary challenge posed by climate change, but, first, let me turn to our current environmental context.

Lynn White's Call for Religious Reform

In 1967, during the early years of the modern environmental movement, Lynn White, Jr., famously traced the historical roots of the environmental crisis to the biblical cosmology, which in the Western Christian world, he argued, provided the conditions for the development of science and technology, the fusion and use of which in a democratized world has resulted in excessive and deleterious environmental consequences. The historical problem, according to White, has been our understanding of the relationship between humans and nature. For its part, the biblical cosmology, as it was taken up in Western Christianity, desacralized nature, established a dualism between humans and nature, and assigned the natural world to humans as a divine gift to exploit for their own ends. Because Western science and technology, which has enabled and empowered humans to exploit the natural world, developed out of a particular Christian worldview and attitude toward nature, the solution to the environmental crisis cannot simply be more science and technology. White conceived of the environmental crisis as an inherently religious crisis because it is rooted in how humans perceive their relationship to the natural world. As a result, the solution for him must also be religious: it must entail a new understanding of the human–nature relationship. Thus, White raised the banner of religious reform, arguing that we must “find a new religion, or rethink the old one” (1206). Being a “churchman” himself, White preferred the latter option, suggesting that Western Christianity should be reformed along the lines of St. Francis of Assisi's radical theology.

Despite much criticism regarding White's understanding of the biblical cosmology and his historical arguments, White's linkage of religion to the environmental crisis nevertheless has been immensely influential. His argument that religion plays a prominent role in shaping human attitudes towards the natural world had been widely accepted, and it is a core assumption for much of the work done in the academic field of religion and ecology (see, e.g., the many volumes edited by Tucker and Grim). Whether or not religion determines how humans actually use, interact with, or treat the natural world, however, is less certain (see

Taylor, Van Wieren, and Zaleha). Nevertheless, this relationship between religion and the environment has led some to reject Christianity and the other Western monotheistic religious traditions as hopelessly anthropocentric and fostering attitudes of domination toward the natural world, while others have turned to reforming and greening their own religious traditions. The solution for some has been to adopt a new cosmology rooted in the scientific story of the universe, which is assumed to instill in humans a more profound sense of connection with the real world and thus produce motivation for better care of the environment (see Swimme and Berry; compare Sideris). Other solutions have focused on reading the religious tradition in new ways and recovering previously neglected environmental wisdom. The biblical commands to have dominion over the animals and subdue the earth, for example, have been recontextualized to mitigate their environmental impact (Fretheim: 48-53), and the anthropocentrism of Christianity has been ameliorated through the teaching of new environmentally-benevolent theologies. Many religious leaders, organizations, and denominations have issued formal statements in support of creation care or environmental stewardship (see the many statements collected by GreenFaith); *Laudato si'*, the encyclical promulgated by Pope Francis in 2015, is the most recent and thoroughly reformational of such statements.

The Challenge of Climate Change

Since White's day, the primary focus of environmental concern has shifted from issues of pollution and toxic chemicals, for example, to the consequences of climate change. White himself ominously refers to climate change as one of the many ways in which humans have adversely impacted the environment, though he does not develop the comment. In contrast to the smog produced in medieval London by burning soft coal, he briefly warns that "our present combustion of fossil fuels threatens to change the chemistry of the globe's atmosphere as a whole, with consequences which we are only beginning to guess" (1204). This is somewhat surprising for an essay published in 1967. Although the potential of human-produced global warming was recognized by the end of the 1800s, it was not until the late 1970s and 1980s that a consensus emerged among climate scientists regarding the dangers posed by climate change and that many confirmed that global warming itself was well underway (Hughes: 254-63). Now, in 2018, the reality of climate change is certain and the effects of which, so far occurring with relatively minor impact, have already begun (see IPCC).

Climate change poses a qualitatively different challenge to the biblical cosmology and Western Christianity than does the argument articulated by White. Whereas various forms of pollution and environmental degradation result from human exploitation and abuse of the natural world, accompanied perhaps by a corrupted and exploitive understanding of the human-nature relationship, climate change has resulted from an excessive release of naturally occurring gas, primarily carbon dioxide from the burning of fossil fuels, which is essential to both faunal and floral life on this planet. Moreover, the excessive release of carbon dioxide in the atmosphere has largely been the byproduct of energy production, beginning around 1800, which resulted in the first period of sustained per capita economic growth in human history (see Roser). With this previously unprecedented economic growth has come increased standards of living, economic and social mobility, the lowering of child mortality, better health

and longevity, and a rapidly increasing human population. In other words, in many ways, climate change is a natural consequence of the success of the human species on this planet.

The human success story, of course, has not been without its failures. In terms of the environment, humans have produced an immense amount of inorganic and toxic pollutants, fouling the earth's land, waterways, and air, and causing the extinction of innumerable species. Yet, as bad as this pollution and environmental destruction might be, it can be stopped and with time much of the effects can be reversed (the extinction of species being a notable exception). This is not the case with climate change. Once carbon dioxide is released, it can remain in the atmosphere for millennia. A large portion of the carbon dioxide may dissolve in the oceans within a hundred years, but other processes, such as photosynthesis, are much slower. Currently, too much carbon dioxide is being released for the earth's natural sinks to absorb, resulting in increasing levels of carbon dioxide in the atmosphere that will continue to warm the planet long into the future (Archer). Moreover, the global economy is dependent on an increasing level of energy (Brown et al.) so that a significant reduction of carbon dioxide in the atmosphere by reducing carbon-based energy production entails severe, even catastrophic, economic consequences (see Hueting) – not to mention difficult and unlikely political choices. Although clean renewable energy sources are gaining a larger percentage of the production of electricity globally, the total decarbonization of global energy production is not foreseeable given our current technology (Clark et al.). A further complication is that a large portion of the global population, especially in the underdeveloped world but also in parts of the developed world, are poor, malnourished, suffer from sickness and disease, and otherwise lack many of the necessities of life. Raising their standard of living will require much more energy, further increasing the level of carbon dioxide in the atmosphere. In other words, unlike many other forms of pollution and abuse of the natural world, the causes of climate change – the release of carbon dioxide into the atmosphere – cannot easily and will not entirely be reduced within sustainable limits; even if such limits could be obtained, the effects of the carbon dioxide already released could be felt for thousands of years.

The very success of the human species poses a problem for the long-term survival of human civilization: there are simply too many humans dependent on too much energy for the release of carbon dioxide to remain within sustainable limits. This problem – the reality of the human environmental situation – posits a world that is incompatible with the biblical cosmology in Genesis 1. White criticized the anthropocentrism of the biblical cosmology – that as the image of God, humans transcend the natural world and the entire creation has no purpose but to serve human purposes (1205). Numerous biblical scholars, however, have subsequently noted White's misreading of the text: humans remain part of the natural world and were created to be stewards of the creation (Trible; Barr; Anderson; Hiers). Instead of giving humans license to exploit the natural world, the biblical cosmology in Genesis 1 indicates that humans are responsible for the condition of creation, and, indeed, the pollution of the natural world is an indictment of our role as stewards of creation. Yet the excessive release of carbon dioxide in the atmosphere through the production of energy is not simply a human failure. On the one hand, it is a product of a high standard of living and an overly abundant human population, neither of which is contrary to the Genesis 1 cosmology. On the other hand, the release of carbon dioxide is excessive and therefore problematic because of the limits of earth's natural sinks to absorb it. The earth does not seem to be able to support

the flourishing of human culture and civilization that the production of energy has made possible.

Climate change is incompatible with the biblical cosmology in Genesis 1 because this cosmology presents the reader with a *good world*. At every stage in the creation, God proclaims his work to be good, and at the end, God evaluates the final product as “very good.” Yet, this good world cannot currently sustain the flourishing human community – it is not as good as it needs to be. Within the world of Genesis 1, humans, like Job, must question God and God’s ability to create a good world. The Genesis 1 cosmology in the context of climate change raises the specter of theodicy: Is the creation of God faulty? Is God ultimately responsible for the dire consequences and suffering that humans will experience as a result of climate change? Raising questions of theodicy is not itself problematic – the book of Job does exactly this. Where the Genesis 1 cosmology falls short, unlike the book of Job, is that it constructs a world that is unable to address the theodicy it poses. The Genesis 1 cosmology made sense of the world during the Holocene era, with its stable climate, but proves to be inadequate as the Anthropocene era dawns, where the effects of human flourishing are embedded in the very creation itself (see Steffen et al.). If other biblical cosmologies would continue to be relevant, they must be able to take into account the challenge posed by climate change.

Reading the Biblical Cosmologies in the Context of Climate Change

Psalm 104

Although Genesis 1 gets pride of place, the Bible includes numerous other cosmologies, incorporated into diverse genres. Psalm 104 presents a cosmology most similar to Genesis 1, but it is framed within a panoramic hymn praising God for continually sustaining the creation. Like Genesis 1, God constructs a habitable world: God stretches out the heavens like a tent (104:2); God sets the earth on its foundations, covers it with water, and then gathers the water within fixed boundaries (104:5-9); God makes the sun and the moon (104:19). Much of God’s activity can be likened to the forces of nature: God transverses the sky wrapped in the light of the sun (104:1-4); God waters the ground with rain and makes springs gush forth to fill streams (104:10); God causes the grass and plants to grow (104:14). Unlike Genesis 1, however, humans play little role in this cosmology. They are not created in the image of God, nor are they blessed with specific commands from God. Rather, like other creatures, humans are fed and sustained by God (104:14-15) so that they can live out their lives doing that for which they were created – namely, to work during the day until evening (104:23). Although the specific work of humans is not specified, the content of the psalm suggests it would include tilling the ground and sowing seed, as well as planting, grafting, and pruning of grape vines and olive trees. Nevertheless, the psalm emphasizes God’s role in creation at the expense of the role of humans, as is fitting for a hymn of praise to God.

By emphasizing God’s role in sustaining the creation, Psalm 104 places the burden for maintaining a stable world on God. Climate change would thus appear to be an indictment against God; contrary to what Psalm 104 claims, God has been negligent in sustaining the world from the deleterious effects of too much carbon dioxide in the atmosphere. Further evidence that Psalm 104 presents a world that is incompatible with climate change is found in the psalmist’s reference to Leviathan (104:26). Elsewhere in the biblical tradition, Leviathan is

a primordial sea-dragon that YHWH must defeat to secure the stability of the created world. Leviathan may represent primordial or historical foes, but it embodies an alternative divine power structure (Ballentine), which undermines God's creation and is a threat to human life. In Psalm 104, however, Leviathan is a creature, made by God, with which God plays. In this cosmology, not even Leviathan can pose a threat to the creation that God continually sustains. If Leviathan is harmless, how much less of a threat are humans? Yet, the psalm ends with the wish that "sinners be consumed from the earth" (104:35). Is this because humans when they sin against God pose a threat to creation? Probably not. The psalm presents God as too powerful and masterful to be threatened by humans; humans die and return to the dirt like all other creatures when God removes their breath (104:29). Rather, in the paean of God's wonderful creation, human sin is simply all that mars its beauty and splendor; it is analogous to human pollution that degrades the natural world. Such pollution can be stopped and the environment can be restored; thus, the psalmist wishes for there to be no sinners. In the end, Psalm 104, like Genesis 1, does not allow for a world with climate change because it does not envision a world beyond God's control nor a world which God does not adequately sustain. As such, Psalm 104 does not provide a cosmology that is relevant for the Anthropocene.

Yahwist Creation Myth

Whereas Psalm 104 suppresses the role of humans in the creation, the Yahwist creation myth in Genesis 2–3 focuses primarily on the role of humans. Humans are created to work the soil so that the earth will bring forth vegetation to sustain life. Moreover, humans are collaborators, or co-creators, with YHWH in creation. The myth begins with a dry barren earth with no vegetation because it lacks humans to till the arable land and God has not yet rained upon the earth. So, YHWH, through the birth process, first creates a human creature out of the dirt of the arable land, thus forever linking humans (*'ādām*) to the land (*'ādāmāh*) from which they were born (2:7; see Simkins 1998: 41-44). Then in an unanticipated move, YHWH plants a garden and gives the man the task of tending it (2:8-9, 15). At this point, the reader expects God to begin raining upon the earth so that the man can till and sow it, which is why he was created. And indeed, at the end of the narrative, when the man is banned from the garden, he is sent out to work the fields (3:23). But now, the man is in YHWH's garden, presumably because the man is not yet ready to fulfill his vocation. The garden proves to be liminal space: neither uncreated like the barren earth that surrounds it, nor a place created for humans. Instead, building upon the birth metaphor used in the man's own creation, it is a place where the human creature will grow up from childhood into adulthood, ready to live and create in the world on his own.

It is not long before the man is surrounded by other dirt creatures. In order to find a helper for the man – one who corresponds to him (*kěnegdô*) – God creates all the animals and birds out of the dirt, just as he created the man, but none of the creatures match up with the man (2:18-20). So, YHWH tries a different approach; YHWH takes part of the man – flesh and bone from his side (*šēlā'*) – and builds another creature from it. This new creature indeed corresponds with the man, and she will be a wife (*'iššāh*) to him and he will be a husband (*'iš*) to her (2:21-23). Together, they form the beginning of a family. Yet, the human couple are still like children: they are both naked and not ashamed (2:25). They have no awareness of their sexual differences, the sexual significance of their genitals, and thus have no reason to cover

or hide them. Like Enkidu before he encounters the harlot (Epic of Gilgamesh I), the man and woman are more like animals than humans – at home with all the other dirt-creatures formed out of the arable land.

At the center of the garden is the tree of the knowledge of good and evil. God prohibits the consumption of the tree's fruit on penalty of death, yet the fruit is also what transforms the human couple from children into adults and distinguishes them from all other dirt-creatures. In a dialogue with the woman, a serpent challenges God's prohibition against eating the fruit: eating the fruit will not cause death and it will make one wise like God. For her part, the woman demonstrates intelligence in her understanding of God's prohibition, but then reasons that the fruit is worth eating: it is good for food, a delight to the eyes, and it makes one wise. So, she eats it, gives some to her husband who agrees with her reasoning, and they are transformed. They now understand the sexual significance of their bodies and seek to cover and hide their genitals (3:1-7).

What has happened to the human couple? Eating the forbidden fruit has given the human couple knowledge. The "knowledge of good and evil" is a merismus, in which two contrasting parts – good and evil – represent the whole. The "knowledge of good and evil" is simply an all-inclusive expression for knowledge (see Wallace: 115-32). With knowledge, the human couple have become like God. At the same time, they have become unlike other dirt-creatures, which do not have knowledge. The human couple are also like God in their sexual awareness; they understand the procreative potential of their bodies and will be able to create new life. Because the ancient Israelites, like all other ancient Near Eastern peoples, understood procreation in terms of agriculture (Simkins 2014), the man now also knows how to till and sow the arable land, just as he will inseminate his wife, to fulfill the vocation for which he was created.

Although the man and woman rebel against YHWH's prohibition, eating the fruit of knowledge is also good for the human couple. Becoming adults with knowledge is necessary if humans are to be collaborators with God in creation. However, adulthood is not without its share of pain and suffering. In articulating the consequences of their newly gained knowledge, YHWH not only affirms the benefits of knowledge but also the real-life hardships that come along with it (3:14-19). Human relations with the animals – the other dirt-creatures – will not be what they once were. Human knowledge has changed the situation and there will now be hostility between humans and animals. Humans will use animals for their own ends – for food, wool and hair, leather and parchment, and labor – but animals will also fear humans and attack them. The myth labels this transformation in their relationship as a "curse," which is not the way God had intended the creation to be. As for the woman, she will realize her knowledge by bearing many children, but this will be accompanied with much toil – life for an Israelite woman was not easy, with many tasks required for subsistence in addition to child care. The childbirths themselves will be painful, and even though she will still long for more children with her husband, her need for his seed will make her dependent upon him (cf. Meyers: 95-121). The man will also experience much toil but in the fields that he will work all the days of his life. Surprisingly, YHWH also decides to withhold the much-needed rain, which makes the man's work less productive and supportive of life. The rain was part of YHWH's responsibility in collaborating with humans in creation, but now YHWH is going to let the human couple manage on their own for a while. The myth also labels this as a "curse," but YHWH decides

against withholding the rain after a few generations (Genesis 5:29; 8:21), though not without devastating consequences. Finally, YHWH affirms their new adult status by clothing the human couple with animal skins, and then sends them from the garden to live and work in the world for which they were created (3:21-24).

Unlike Genesis 1 and Psalm 104, the Yahwist creation myth limits God's role in the creation. YHWH does not create alone but gives a substantial role to humans; God is not solely responsible for the state of the creation. Similarly, whereas Genesis 1 and Psalm 104 focus on God's role in creation, the Yahwist cosmology gives only brief attention to God's role: God creates the humans (and the animals and birds as a byproduct), plants a garden, and then does nothing else. The focus of the Yahwist cosmology is on humans – their status and development – and at the center of that focus is the human couple eating the fruit of knowledge, the meaning and significance of which is ambiguous. On the one hand, eating the fruit of knowledge enables the human couple to mature as adults – for the woman to bear children and for the man to work the land. This is clearly good for the humans and makes possible the development of human civilization. On the other hand, eating the fruit is a violation of God's prohibition, and the human couple's knowledge also includes some negative consequences, such as pain and suffering. This ambiguity, which is inherent in the cosmology, enables the Yahwist cosmology to continue to be relevant in the context of climate change. The current situation that humans face with the excessive release of carbon dioxide during the production of energy is analogous to the human couple eating the fruit of knowledge in the myth. In both cases, that which is necessary for human development and success – the fruit of knowledge and energy – turns out to have unintended consequences that call into question the very success of the human project.

One notable dissimilarity between the human situation in relation to the production of energy and the human situation in the Yahwist myth is that the fruit of knowledge was forbidden to the human couple, whereas nothing analogous to a prohibition marks the production of energy from carbon-rich fossil fuels. But this difference between the two situations is more superficial than it initially seems, for a close reading of the Yahwist creation myth suggests that God intended, or at least expected, the human couple to eat the fruit of knowledge despite the prohibition. Several textual clues point in this direction. First, the garden includes another notable tree, namely, the tree of life. YHWH does not prohibit the humans from eating its fruit, but at the end of the story it is unambiguously clear that YHWH does not want the humans to eat from the tree of life under any circumstances. It is for this reason, and this reason alone according to the text, that YHWH expels the humans from the garden and places cherubim with a flaming sword at its entrance to prevent access to the tree of life (Genesis 3:22-24). YHWH accepts that the humans eat the fruit of knowledge but cannot accept and will not allow the humans to eat the fruit of life. Yet, whereas YHWH prohibits eating the fruit of knowledge, no prohibition is stated regarding the tree of life. Second, YHWH does not appear to be upset that the humans eat the fruit of knowledge. In what follows after their eating of the fruit, YHWH simply explains to the human couple the natural and expected consequences of their new knowledge. There is no punishment for eating the fruit except, perhaps, God's temporary withholding of rain. But even here, the reason YHWH withholds the rain is unclear: Is YHWH making life more difficult for the humans because they ate the fruit and now have knowledge? Or, is YHWH simply letting the humans experience the world on

their own, without YHWH's own contribution of rain, because they rebelled against him? If the former, then presumably God thought that it was wrong for the humans to eat the fruit; if the latter, then God is more concerned about the rebellious nature of humans and perhaps seeks to curb it – this theme is developed further in the Yahwist narrative that follows the garden scene. Third, the text is silent on why God prohibits the fruit of knowledge, yet the consequences of such knowledge are intrinsic goods: the creation of life through procreation and agriculture. Moreover, YHWH's threat of death upon eating the fruit is hollow, as the serpent realizes; the humans do not die.¹ In the end, YHWH's prohibition against eating the fruit does little more than signal the ambiguity of eating it, the consequences of which are both good and bad.

When read within the context of climate change, the ambiguity of eating the fruit of knowledge invites the reader to ponder the similar ambiguity of the production of energy. A continual abundant supply of energy has enabled human civilization to flourish in ways which were unimaginable even a century ago, but such energy has also made possible the production of weapons of mass destruction. No century has seen more human development and technological advancement than the twentieth century – and we might expect similar progress for the twenty-first century – yet no century has seen more death and destruction caused by human hands than twentieth century. Energy can empower humans to achieve unimaginable dreams or bring about horrific terror.

Eating the fruit of knowledge produces a further ambiguity in the Yahwist cosmology regarding the status of humans. The child-like human couple are transformed from simple dirt-creatures into adult humans who are like God. They are no longer like the animals, yet they are not gods either. Being like God has its limits, and these limits are explored in the Yahwist narrative beyond the garden scene (Genesis 4–11). Beginning with the expulsion of the human couple from the garden, YHWH's purpose in the narrative at every turn is to limit humans who repeatedly seek to transgress divine boundaries – through murder, intercourse with divine beings, and assaulting the dwelling of God in heaven. Given the rebellious nature of humans – whose every inclination of the human heart is evil continually (Genesis 6:5; 8:21) – they are not content simply to be like God but seek divine status themselves. Hence, YHWH reminds the human couple after eating the fruit of knowledge that, despite their new status and potential, they are still dirt-creatures and will return to dirt in the end (3:19). The current challenge of climate change has similarly exposed the limits of the creation for human growth and development. A stable, inhabitable world can only tolerate so much carbon dioxide in the atmosphere, after which the flourishing and success of the human species itself can only diminish.

¹ The assumption of the narrative is that the humans were always mortal, created from the dirt. Moreover, the presence of the tree of life in the garden and God's explicit desire that the humans not eat from it further attests to the mortality of the humans. The tree of life plays no role in the story until after the humans eat from the tree of knowledge because until their acquisition of knowledge, the human couple were perhaps unaware of their own mortality. Only with their "eyes open" does YHWH fear that the human couple might eat of the fruit of the tree of life and live forever.

The Conflict Myth

Simply put, the conflict myth is a topos that encompasses a battle between a divine warrior – most often a storm god – and his alternative – a personified sea, an aquatic monster, or even historical foes. The myth is about the divine warrior’s kingship, and it is made universal through the creation of a cosmos. Several long narrative versions of the conflict myth have survived from the ancient Near East, the Enuma Elish with Marduk’s battle and victory over Tiamat being the most well know today, but the Bible lacks any narrative expression of the myth. Instead, the biblical scribes utilized specific motifs of the conflict myth in many, varied contexts and genres, but largely to make the same ideological point: YHWH is supreme over all other foes, divine and human (see Ballentine). The conflict myth is the single most referenced cosmology in the biblical tradition (see Batto).

One of the fullest expressions of the conflict myth is found in Psalms 74, the relevant portion of which reads as follows:

God is my King from of old,
working salvation in the midst of the earth.

You divided Sea with your might;
you broke the heads of the sea monsters in the waters.

You crushed the heads of Leviathan;
you gave him as food for the desert creatures.

You cut open spring and stream;
you dry up ever-flowing rivers.

The day belongs to you, and also the night;
you established the luminaries and the sun.

You fixed all the boundaries of the earth;
you made summer and winter (Psalm 74:12-17).

According to this psalmist, God’s creation entailed primarily a primordial battle against an aquatic foe, referred to here as Sea, sea monsters (*tannînîm*), and Leviathan, but elsewhere also as Rahab, rivers, and waters. Based on parallels with more fully articulated Near Eastern versions of the conflict myth, we can presume that the aquatic foe in the Bible stands in opposition to God’s kingship and is a threat to the stability of the world, though little attention is given to this in the biblical analogues. Instead, the focus of the biblical cosmology is on God’s certain defeat of the foe and the stability of the world God creates from it.

This cosmology, which in Psalm 74 seems to be set in primordial time, gives the impression that God’s aquatic foe was vanquished at the beginning of the world and so the world is created free from the threat it imposes. Indeed, this is how Genesis 1 developed out of the conflict myth, where the primordial aquatic foe is reduced simply to the inert “deep” (*têhôm*, related to the Mesopotamian Tiamat) and the sea monsters (*tannînîm*) are created on the fifth day with the other sea creatures. In the worldview of Genesis 1, no forces stand in opposition to God; this is not the case with the biblical use of the conflict myth. Although God’s ability to defeat the aquatic foe is never in doubt, the foe is neither killed nor purged

from the creation. Rather, God's victory entails primarily the binding of the aquatic foe, restricting its effects within fixed limits. The sea and the waters are thus confined within boundaries that enable human, animal, and plant life to flourish; Leviathan remains bound by God like a fish on a hook (see Levenson: 14-25). This cosmology thus imagines an inherently unstable world in which the aquatic foe is latent within the creation and may yet again break out in opposition against God. The world remains stable only because God vigilantly maintains the binding of his foe until God finally kills the beast at the end of time: "On that day, YHWH with his fierce, great, and mighty sword will punish Leviathan the fleeing serpent, Leviathan the twisting serpent, and he will kill the monster in the sea" (Isaiah 27:1).

Although God's aquatic foe remains bound from the creation of the world, its continual presence within the creation enables it to embody historical foes who may challenge God's sovereignty over the world. Within the biblical tradition, the conflict myth is used in association with two primary foes of Israel: Egypt, from whom God delivers the Israelites at the sea, and Babylon, who raises the question of God's supremacy by defeating Judah and destroying Jerusalem. Regarding the former, the conflict myth transforms God's historical deliverance of the Israelites from Egypt into a cosmology in which YHWH's supremacy is unrivalled. Early poetic and narrative traditions (Exodus 15:1-12 and the Yahwist [J] portions of Exodus 14) present the Exodus event as a conflict between Yahweh and the Pharaoh of Egypt, and the sea is simply the geographical location where the conflict takes place. But later mythologized traditions transformed the physical sea into YHWH's aquatic foe. Egypt is identified with the sea or simply fades into the background. Thus, for example, the psalmist describes the event at the sea with the language of the conflict myth:

When the waters saw you, O God,
when the waters saw you, they writhed;
even the depths trembled.

Clouds poured out water;
the skies thundered;
your arrows flew about.

The sound of your thunder was in the whirlwind;
your lightening lit up the world;
the earth trembled and shook.

Your way was through the sea,
your path, through the mighty waters;
but your footprints were not seen.

You led your people like a flock
by the hand of Moses and Aaron (Psalm 77:16-20).

YHWH is presented as the storm-god who defeats the aquatic foe and thereby delivers his people from Egypt. The vestiges of the conflict myth are still detectable in the later Priestly (P) portion of the narrative in Exodus 14, where God splits the sea for the Israelites to cross on dry ground.

Later in Israel's history, in the context of Babylon's onslaught and destruction of Jerusalem, Egypt is again identified with God's aquatic foe. In two oracles, Ezekiel identifies the Pharaoh of Egypt as the sea monster (*tannin*), which God will hook in its jaws and throw onto the open field as food for the wild animals (Ezekiel 29:3-5; 32:2-5). Whereas the use of the conflict myth in these texts emphasizes God's supremacy over Egypt, the historical reality of Jerusalem's destruction by the Babylonians would seem to challenge God's supremacy. Does Nebuchadnezzar's victory demonstrate that Babylon's god, Marduk, is superior to YHWH? According to the prophets and the biblical scribes, the answer is a resounding "No," but whether God would act on behalf of his people is less certain. Thus, the author of Psalm 74 uses the conflict myth to remind God, who had defeated Leviathan and created the world, of his universal supremacy and to call upon God to remember his covenant and deliver his people from the devastation caused by the Babylonians (cf. Psalm 89, which makes the same argument on behalf of Jerusalem's king). Other texts use the conflict myth to announce the inevitable and certain defeat of Babylon (see Jeremiah 51:34-37; probably also Habakkuk 3). With the defeat of the Babylonians by the Persians, an anonymous prophet of the Exile could proclaim that Yahweh was once again defeating the aquatic foe and restoring stability to the creation:

Awake, awake, put on strength,
O arm of YHWH!

Awake, as in days of old,
generations of long ago!

Was it not you who cut Rahab in pieces
who pierced the sea monster?

Was it not you who dried up the sea,
waters of the great deep;

who made the depths of the sea
a way for the redeemed to pass over?

So the ransomed of YHWH will return and enter Zion with rejoicing,
and everlasting joy will be on their heads;

They will obtain joy and gladness,
sorrow and sighing will flee (Isaiah 51:9-11).

YHWH's deliverance of the Judean exiles from Babylon is viewed as a replication of Yahweh's previous deliverance of the Israelites from Egypt and YHWH's primordial defeat of the aquatic foe, all of which are expressed with motifs from the conflict myth.

Because the conflict myth presupposes an inherently unstable world, it may continue to be relevant in a world that is being transformed through climate change. Although YHWH is supreme in the conflict myth, YHWH is not without opponents, whether they be mythical or historical. Unlike Genesis 1 and Psalm 104, which also emphasize God's supremacy, the conflict myth is able to address a world in which humans can destabilize the climate by producing too much carbon dioxide, even to the point of surpassing a planetary boundary (Rockström et al.), by recognizing that the creation itself is vulnerable to forces not in service

to God's purposes. In the conflict myth, these forces are represented by the aquatic foe, which may be either primordial, suggesting that the creation is inherently unstable, or an historic foe, indicating a particular group of people, such as Babylon or Egypt, is in opposition to God. The latter understanding of the aquatic foe, however, constructs an imprecise analogy for the human situation in climate change; it would suggest that God's battle for the creation is a battle against humans – that humans have transgressed the limits that God established at creation, suggesting similarities with the Yahwist creation myth. This analogy breaks down in two significant ways. First, unlike the humans in the garden, who rebel against God's prohibition, modern humans have not rebelled against God in their production of energy, which has produced greenhouse gases in dangerous amounts. Instead, the production of carbon dioxide is an unintended byproduct of energy production, and the quantities of the produced gas were initially benign, transgressing no planetary boundaries nor threatening the stability of the climate. Only with the increasing demands of the previous century for energy to meet the increasing needs of an ever-growing and affluent population, which mark the success of the human species, have the consequences of too much carbon dioxide begun to have an effect. Second, God's role is significantly different in the conflict myth when compared to God's role in the Yahwist creation myth. In the latter, where human rebellion is ambiguous, God yields to the disrupting role that humans play in the creation, and acts to curb their rebellious behavior rather than destroy them (though God does eventually destroy them with the flood). The conflict myth, on the other hand, emphasizes God's mastery over creation: God cannot tolerate rebellion and will defeat all foes, restoring the order of creation. Thus, if the human role in climate change is likened to God's aquatic foe, then the conflict myth holds out the expectation that God will address the human threat to the creation, humans will suffer the consequences of their transgressions, and God's restoration of the creation may entail an alteration and reconfiguration of the human community. The conflict myth according to this interpretation, when read in the context of climate change, offers hope for the creation as a whole, but not for humans, whose success has become a threat to the creation itself.

If God's aquatic foe in the conflict myth is understood in terms of a primordial enemy, then reading the conflict myth in the context of climate change shifts the problem from the success of the human species to the inherent limits of the creation. Humans are not absolved of responsibility for climate change – at the very least, humans have collectively transgressed a planetary boundary with their production of energy; in mythic terms, they have unleashed the sea monster from its bindings. However, the burden is placed on the deficiency of the planet's natural sinks to absorb sufficient carbon dioxide for the continuing flourishing of the human community. According to this view, the stability of creation for humans cannot be taken for granted; it teeters on whether its numerous natural systems remain within the limits of the planet's ability to sustain human life. God's mastery over creation is challenged not by human flourishing per se but rather by the creation's limitation in supporting such flourishing.

Humankind's release of carbon dioxide through energy production has destabilized the climate; the flourishing of human life has transgressed a planetary boundary, posing a risk for the long-term sustainability of the human community. The use of the conflict myth in the biblical tradition provides an appropriate cosmology for understanding the contemporary human situation facing the challenge of climate change because the conflict myth can make sense of an inherently unstable world. Moreover, the conflict myth can address the theodicy

posed by the convergence of a flourishing human community, a flawed world unable to sustain it, and God's inaction on behalf of the creation. When God's foe was historical, the conflict myth offered hope to God's people by reminding God of his past victories over his foes. They call on God to "awake, as in days of old" (Isaiah 51:9); they question how long God will hide his face (Psalm 89:46); they plead for God to "rise up" and "remember" (Psalm 74:18, 22). Such texts express confidence that God will eventually destroy the historical foe who is disrupting God's creation. The response to this theodicy is different when the foe is primordial, for such a foe is embedded in the very structure of creation itself. In some texts, the conflict myth offers an eschatological hope: that God will eventually kill the sea monster (Isaiah 27:1) so that the creation itself will be transformed anew. The conflict myth may articulate not only the creation of the world but also the consummation of the world (compare the *Urzeit-Endzeit* pattern argued by Gunkel). A different response to this theodicy is offered by YHWH's speech to Job, which employs motifs from the conflict myth to affirm that YHWH alone remains supreme over creation even though the creation is inherently unstable. In questioning Job about the creation, YHWH ends his speech by confronting Job with the terror of Leviathan:

Its sneezes flash forth light,
Its eyes are like the glow of dawn.
Flaming torches go from its mouth,
Sparks of fire escape.
Smoke comes out from his nostrils,
Sparks, blown and blazing.
Its throat kindles coals,
Flames pour out its mouth. . .
Gods are afraid at its terror,
They cower from its rampage (Job 41:18-21).²

Although YHWH makes very clear in his speech to Job that YHWH (and YHWH alone) can control Leviathan, the ferocious sea monster nevertheless remains within the creation. In the context of the book of Job, Leviathan's continual presence in the creation explains how innocent suffering is possible: it is neither incompatible with God's mastery over creation, nor necessarily the result of human sin. Similarly, when read in the context of climate change, the conflict myth, as utilized in the book of Job, acknowledges God's mastery over creation without putting the burden of the climate's instability on humans. Like Leviathan in Job, the climate's inherent instability is neither a flaw in God's creation, nor an indication of God's failure to maintain the order of creation. The cosmology of the book of Job, when read in the context of climate change, enables us to hold God's mastery over creation in tension with the reality of an unstable climate.

² The Hebrew text of Job is notoriously problematic to read. This translation is based in part on Pope: 335-45.

Conclusion

Cosmologies are some of the myths by which we live our lives. They shape our thinking and values, they give structure and purpose to our lives, and they invite us to explore our place within the world. But a changing world requires a reassessment of whether the cosmologies continue to resonate in our new context. The biblical cosmologies were written during the stability of the Holocene era, and for over 2500 years they have defined who Jews and Christian are in the world created by God. Lynn White argued that the biblical cosmology in Genesis 1, in particular, needed to be rejected or reformed because it was a root cause of human abuse of the natural world, but he largely misread the biblical text. Nevertheless, climate change poses a challenge for the biblical cosmologies that not even White anticipated. Climate change is the result of too many people releasing too much carbon dioxide through the production of energy, which is needed to build and sustain human society. It is the consequence of human success on this planet, and as such, it poses an unprecedented challenge for the biblical cosmologies.

Read within the context of climate change, Genesis 1 and Psalm 104 raise questions about God's creation and God's continuing role in sustaining creation. Because these cosmologies place the burden of creation on God, they are unable to address questions of theodicy in the face of climate change, which suggest that God created an inadequate world or is unable to sustain it. The assumptions of these cosmologies are incompatible with a world experiencing climate change. Other cosmologies in the Bible either place the burden of creation on humans (the Yahwist creation myth) or assume that the world is inherently unstable (the conflict myth). These cosmologies may continue to prove relevant as we address and live with the consequences of a crisis of our own making, which is the character of the Anthropocene Era.

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