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The Dark of the Covenant: Christian Imagery, Fundamentalism, and the Relationship between Science and Religion in the Halo Video Game Series

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Received: 20 March 2018; Accepted: 10 April 2018; Published: 12 April 2018



Abstract: What do a bionic supersoldier, space stations and religious fanaticism have in common? They are all vital elements of the plot in Halo, a series of first-person shooter games developed by Bungie and published by Microsoft Games. One of the interesting things about Halo is that the developers made use of quite a number of religious images and themes, especially from the Christian tradition. In modern Western society, science and religion are often portrayed as polar opposites, and Halo appears to reaffirm this narrative. Yet it might still be interesting to look at how exactly this animosity is portrayed, and to see whether there is more to it. This paper is an inquiry into the significance of religious imagery and themes in Halo, as well as an attempt to place the game in the broader context of the geopolitical situation of its time. In short, this article is going to be a case study of how the relationship between science and religion can be explored through the medium of video games. For an overview of the current debate on how science and religion relate to one another in academia, I am going to look at the works of American physicist and scholar of religion Ian Barbour, American paleontologist and historian of science Stephen Gould, and British ethologist and evolutionary biologist Richard Dawkins. To justify the academic study of videogames I will be drawing from the writings of Dutch cultural theologian Frank Bosman. The analysis itself will consist of a summary of the game's main story, its portrayal of religion on the one hand and its depiction of science on the other, and its representation of how these two fields relate to one another. In the conclusion, finally, I will connect the dots between the different parts of the analysis and provide an answer to the main question.

Keywords: religion; science; science fiction; fundamentalism; religious violence

"There was only one ship."

"Yes," he replies "They called it, Pillar of Autumn."

- "Why was it not destroyed with the rest of their fleet?!" another demands.
- "It fled as we set fire to their planet," says the warrior on trial

"But I followed with all the ships at my command."

- "When you first saw Halo," one of the interrogators started "Were you blinded by its majesty?"
- "Blinded?" the warrior asks.
- "Paralysed? Dumbstruck?"

"No!"



[&]quot;One? Are you sure?"

A warrior in golden armour is being questioned by three creatures in floating seats.

"Yet the humans were able to evade your ships, land on the sacred ring, and desecrate it with their filthy footsteps!" said another of the seated creatures.

"Noble hierarchs," says the warrior "Surely you understand that once the parasite attacked ... "

The audience becomes disgruntled and there is unrest in the stands.

"There will be order in this council!" the second interrogator shouts. The third now comes forward

"You were right to focus your attention on the Flood," he says "But this demon, this 'Master Chief' ... "

"By the time I learned the demon's intent, there was nothing I could do." the warrior sighs. The first creature leans over to the third.

"Prophet of Truth," he whispers

"This has gone on long enough. Make an example of this bungler! The council demands it." The Prophet of Truth raises his hand.

"You are one of our most treasured instruments. Long have you led your fleet with honour and distinction. But your inability to safeguard Halo was a colossal failure."

"Nay!" yells someone from the stands "It was heresy!" The crowd starts jeering at the warrior. "I will continue my campaign against the humans!" he objects.

"No!" says the Prophet of Truth "You will not. Soon the Great Journey will begin. But when it does, the weight of your heresy will stay your feet, and you shall be left behind."

Thus concludes the opening cinematic of *Halo 2* (2004), the second instalment in the *Halo* video game series. Like its predecessor, *Halo: Combat Evolved* (2001), the game is of the so-called first-person shooter (FPS) genre, and was developed by Bungie and published by Microsoft Games. The main series continued with *Halo 3* (2007), *Halo 4* (2012) and *Halo 5: Guardians* (2015). Other storylines were explored in *Halo 3: ODST* (2009) and *Halo: Reach* (2010). All of these titles belong to the FPS genre, while *Halo Wars* (2009) and *Halo Wars 2* (2017) are real-time strategy (RTS) games.

One of the interesting things about Halo is that the developers of the game made use of quite a number of religious images and themes, especially from the Christian tradition. This immediately becomes apparent upon reading the 'thick description' (Heidbrink et al. 2014) of the opening scene described above. Words like 'sacred', 'desecrate', and 'heresy' have very strong religious connotations, which might seem rather strange in the context of classic science fiction tropes like aliens and spaceships. However, established franchises like *Star Wars* and *Star Trek* are readily associated with these themes, and modern science fiction continues to build on this tradition (McGrath 2011). In modern Western society, science and religion are often portrayed as polar opposites, and at first glance Halo appears to reaffirm that these two areas are mutually exclusive. It is, however, interesting to look at how exactly this animosity is portrayed, and to see whether there is more to it.

This paper is an inquiry into the significance of religious imagery and science in Halo, as well as an attempt to place the game in the broader context of the geopolitical situation during its development. The main question that I will be trying to answer is as follows:

How do science and religion relate to each other in the Halo video game series?

To answer this question, I will list and analyse a wide range of in-game references to and imagery taken from Christianity through a close reading of the game (Grieve and Campbell 2014). I will then do the same with the way science is presented in the game. The focus of my analysis will be on *Halo: Combat Evolved, Halo 2,* and *Halo: Reach,* as these put together provide the backdrop for the rest of the franchise. The information one needs to fully grasp the story and its scale become apparent over the course of these three games.

Before this can be done however, it will be necessary to present a theoretical framework on the relationship between science and religion, which I am going to base on the works of Ian Barbour,

Stephen Gould, and Richard Dawkins. To support the academic study of video games I will be drawing from the writings of Dutch cultural theologian Frank Bosman.

The main body of this article will consist of a few different elements. In the first part I will give a short summary of the background story of the game world, as well as the context of the time in which the game was developed. Then I will present a thorough overview of the religious imagery and themes, based on an already existing analysis of the game made by Wisecrack (a group of dedicated pop culture enthusiasts that makes YouTube videos mainly about the philosophical implications, symbolism and social commentary in motion pictures, television series and video games). This will be followed by a similar account of the science in Halo, partially based on an already existing analysis made by planetary physicist Kevin Grazier. After that I am going to connect the two partial analyses, enriched with my own observations, and the theoretical framework, in order to reach my conclusion.

An important note I would like to make here is that although not all of the interpretations are mine alone, I adopted from others only those I can also see for myself. Some of the points made by Wisecrack in their video, for example, have been left out of this article because I could not discern them.

1. Theoretical Framework

In his book *Religion in an age of science*, Barbour argues that there are four different ways in which science and religion can relate to each other: conflict, independence, dialogue, and integration (Barbour 1989). According to Gould, science and religion are 'non-overlapping magisteria', by which he means that both realms have their own distinctive fields and that neither is suitable to study the subject matter of the other. The main principle of this model is that science should be concerned with the physical world and can be used to explain natural phenomena, while religion ought to be focused on the human experience and moral values. Moreover, if religion is no longer capable of explaining the natural world, then science can no longer claim any moral truth (Gould 2002).

Dawkins criticises the notion of non-overlapping magisteria. The division proposed by Gould, he says, is not maintainable. For Dawkins, the idea that religious doctrine can provide an absolute basis for morality is wishful thinking, because people choose to adopt the parts of scripture they like, while rejecting those they do not. Since scripture is subjected to this process of selection, it follows that there must be some source of morality outside of religion. Alternatively "it is completely unrealistic to claim, as Gould and many others do, that religion keeps itself away from science's turf, restricting itself to morals and values. A universe with a supernatural presence would be a fundamentally and qualitatively different kind of universe from one without. The difference is, inescapably, a scientific difference. Religions make existence claims, and this means scientific claims" ((Dawkins 1998, para. 15) "Religion on Science's Turf").

Bosman defines video games as "digital (interactive), playable (narrative) texts. As a text, a video game is an object of interpretation. As a narrative, it communicates meaning. As a game, it is playable. And as a digital medium, it is interactive" (Bosman 2016, p. 33). He also proposes a four-step methodology for close reading games, namely internal and external reading plus internal and external research.

2. The Background Story of Halo

The year is 2552. Humanity is at war with an alliance of different alien species known as the Covenant. The different species that make up the Covenant are bound together by the belief that they have been chosen as the instrument of the gods. Under the leadership of the Hierarchs, three self-proclaimed prophets named Truth, Mercy, and Regret, these aliens are driven to cleanse the universe of humanity in pursuit of some type of salvation that involves reaching a higher state of being. For the Covenant, ascension is reserved only for those who have been chosen. Because humans have not been promised salvation, they are seen as inferior and sinful creatures that are standing in the way of the aliens' divine destiny.

The object of their worship is an ancient space-faring civilisation known as the Forerunners, who have left behind a number of mysterious buildings and space stations throughout the galaxy. The Covenant sees itself as the successor to the Forerunners, and they believe these structures were made for them specifically. The most significant of these are the massive ring-shaped installations with simulated natural environments on the inside referred to as Halos. The Covenant seeks to activate these Halos because they wrongfully believe this will send them on 'the Great Journey' towards salvation. In truth, the Halo installations were built by the Forerunners to get rid of a parasitic alien species called the Flood. Since the only way to achieve that goal was to wipe out all sentient life in the galaxy in order to starve the Flood, the Halos were designed to do just that.

The United Nations Space Command (UNSC) is mankind's last and only line of defence against the aliens. At the start of the series, the war is not going well for humanity. The technologically superior Covenant is able to keep up a relentless onslaught, spurred on by the promise of eternal salvation and under threat of exclusion from the Great Journey, and every rare human victory is a very costly one.

3. Halo Game Synopsis

After suffering a crushing defeat on the planet Reach, the crew of a human ship called the *UNSC Pillar of Autumn* uses navigation data from the Forerunners to escape. The data turns out to be coordinates to a Halo installation. Moments later, a Covenant ship follows, and another battle ensues. In an attempt to keep the ship's artificial intelligence, Cortana, out of enemy hands, an elite soldier codenamed John-117, also known as the Master Chief, is woken up from cryogenic stasis to fight off the Covenant and give the crew a chance to evacuate before boarding the last available escape pod himself.

Master Chief and Cortana must then work to reunite the scattered groups of human survivors on the surface, and save the ship's captain, Jacob Keyes, who is being held by the Covenant aboard their cruiser. After saving the captain and learning the installation is called Halo by the Covenant, Cortana hacks into the alien's communications and finds out that the aliens believe the installation is sacred, and that it is an immensely powerful weapon. It falls to Master Chief and Cortana to keep the Covenant from using Halo to wipe out the human race. It does not take long for them to find the control room, but when they get there, Cortana picks up new Covenant communications that reveal something is very wrong. While exploring the Halo installation, the Covenant found something they should not have, and the captain is about to make the situation far worse. Master Chief then goes to find Keyes, while Cortana stays behind to find out what she can about Halo. Upon arrival at the captain's last known location, Master Chief discovers that Keyes accidentally released the Flood, which was sealed away underground. This allows the parasite to consume UNSC personnel and Covenant forces alike, and turn them into mindless husks that are hostile to both sides. As he returns to the surface, Master Chief is suddenly drafted by the installation's artificial intelligence (AI) monitor, nicknamed 343 "Guilty Spark", to retrieve a key so that they can activate Halo's defences and get rid of the parasite.

After retrieving the key, Master Chief is transported back to the control room. Just as he is about to turn the key, Cortana stops him and tells him the truth. Instead of destroying the Flood, Halo will wipe out their food; sentient life, i.e., humans and aliens. Master Chief and Cortana eventually manage to destroy Halo, escape, and return to Earth to tell UNSC high command of their discovery. As Master Chief is being awarded a medal for his service, a small Covenant fleet suddenly arrives and begins to invade earth. UNSC forces are able to fend off the aliens, and when the Covenant tries to retreat, Master Chief decides to follow them. When they arrive at their destination, it turns out the aliens have found another Halo. As Master Chief and Cortana again try to stop both the Covenant and the installation's own AI from activating this Halo, they discover it is only one of seven such devices and that they can all be activated at once using another Forerunner station called the Ark. It now becomes a race against time to keep them from activating the Ark and wipe out all sentient life in the galaxy.

As the series is still ongoing, it is not possible to provide a much more satisfying conclusion to this overview of the game's narrative than this rather tense cliffhanger. However, it is my hope that it instead encourages readers to play the game for themselves.

4. False Prophets and the Galactic Apocalypse: Religious Imagery in the Halo Series

Some of the references to religion in Halo are quite obvious. Others require a more thorough analysis. In what follows, I will present a non-exhaustive overview of the most important references to Christianity.

4.1. Musical Score

The name of the game itself is of course taken from the Aureole, the golden disc used in medieval Christian art to represent Jesus, angels, or saints, which in English is often also called a Halo or Nimbus (Schiller 1971). Upon loading the game, there is another quite clear-cut reference: the musical score. It starts with Gregorian chanting, which lasts for about thirty seconds before switching to techno beats or electric guitars, depending on which game in the series one is playing. This juxtaposition of medieval devotional singing and contemporary music could be interpreted as either a confirmation of the religion-versus-science narrative or, since the two genres actually go surprisingly well together, as a musical counterargument.

4.2. The Covenant

Perhaps a less obvious reference, but still quite easy to see, is the alien Covenant. In both the Jewish and Christian traditions, the Covenant (Mendenhall and Herion 1992) is the sacred agreement between the people of Israel and God. Only the Noahic Covenant applied to all mankind (Gen. 9:8–10, 14–16), whereas later ones were only made with the Israelites (Gen. 15:18, 17:21; Ex. 2:24; Josh. 1:2–3, 21:43). It is possible the developers of Halo used this word not only to indicate the religious nature of the alien alliance, but also to highlight the way the aliens see themselves as superior over humans. The Covenant believes the Halo installations were built for them by the Forerunners, and only by activating the rings can they fulfil their destiny (Wisecrack Join 2015). As a science fiction game, Halo of course features space ships, and those used by the Covenant are often named after Christian concepts, such as Truth and Reconciliation. The same goes for Covenant vehicles available in the game. Seraph fighters, for instance, are named after the angelic beings (Mettinger 1999) that are supposed to accompany God in Heaven (Isa. 6:2–3; Rev. 4:8).

4.3. The Ark

Another piece of evidence found on the surface is the Ark. In the game, the Ark is the central control hub for the Halo installations, capable of activating all of them at once. There are two possible interpretations. Firstly, it could be a reference to Noah's Ark (Bailey 1992). After all, the Halos were built to eradicate the Flood by wiping out all life to starve the parasites to death. As strange as it may sound, this will ultimately save the galaxy because it gets a chance to start over. This mirrors the story in Genesis, in which God decides to destroy all life on earth to rid it of sin and begin anew (Gen. 6:13, 17, 7:10–12, 17–24; 8:1–2). Only the chosen may survive, and the ark saves them from the flood. The second possibility is that it is in fact a reference to the Ark of the Covenant (Seow 1992), which contained the Ten Commandments. On top of that it was also a powerful weapon, since it was used by the Israelites to bring down the walls of Jericho after making seven laps around the city (Josh. 6–8, 11, 14–16, 20). Similar to the Ark of the Covenant being regarded as holy, the alien Covenant reveres all Forerunner technology as sacred.

There are many direct allusions to scripture as well. The first clue comes from Master Chief's codename, John-117. In the New King James translation of the Bible, John 1:17 reads "For the law was given through Moses, but grace and truth came through Jesus Christ". Similar to Jesus enacting this law through grace and truth, Master Chief enforces it with guns. What's more is that he is symbolically resurrected multiple times throughout the series. For instance, at the beginning of the first game, he is awoken from cryostasis; he was artificially kept in a frozen state to be 'thawed' in a time of need. This is a figurative resurrection. Another more literal example is when Master Chief appears to drown in a lake and is transported to some sort of underworld before being revived. This matter will be analysed more thorough in a while.

In light of this analogy between Jesus and Master Chief, Captain Keyes may be compared to another important character in the stories about Christ: John the Baptist. The evidence here is that Keyes gives Master Chief his pistol after being woken up from cryogenic stasis, or resurrected, in the first game. In other words, he hands out the tool with which Master Chief enforces the law (Matt. 3:12–17; Mark 1:9–11; Luke 3:21). Moreover, when the captain becomes consumed by the Flood halfway through the first game, Master Chief ends his suffering by punching through his skull to retrieve an important bionic device from his brain. This is perhaps similar to the beheading of John the Baptist (Matt. 14:10; Mark 6:27), since Keyes also loses his head (Wisecrack Join 2015).

Yet there is more than one character that shows a resemblance to Jesus. After his failure to protect Halo, the commander of the Covenant fleet, Thel'Vadam, is punished for his so-called 'heresy' by being stripped of his rank and forced into the role of the Arbiter to atone for his quote-on-quote 'sins'. The Arbiter is a special kind of warrior who is only deployed in highly dangerous situations where it is almost certain he won't survive. Dying in battle is the only way for Thel'Vadam to make amends. The ritual that marks his transition to Arbiter is visually evocative of Jesus' crucifixion. Similar to Christ hanging on the cross, Thel'Vadam has his arms spread out as his golden armour is forcefully torn off, and the ritual culminates with him being branded with a mark to signify his shamed status. The way in which Tartarus applies this brand evokes the image of Jesus being stabbed with a lance by the Roman soldiers (John 19:34). With his old self figuratively dead, Thel'Vadam is resurrected as the Arbiter. Moreover, his passing through the lair of the Gravemind, the 'brain' behind the Flood, later on in the game is similar to when Jesus descended into the underworld (Eph. 4–9; 1 Pet. 3:18–19). Having learned the truth about Halo, the Arbiter returns from this journey with a new message, so that he may save his fellow Elites and stop the false Prophets. This is reminiscent of how Christ brought a new religious truth to mankind (John 8:31–32, 14:6).

The journey through the Gravemind's lair is interesting for other reasons as well. On the one hand it is a significant event because it not only happens to the Arbiter, but also to Master Chief. It is where the two first meet; this figurative underworld is where both characters with a resemblance to Jesus are together in one place. What should also be mentioned here is the fact that, similar to Master Chief and his pistol, the word arbiter refers to law enforcement, albeit with a stronger emphasis on the judge rather than the executioner. This in turn is another reference to Jesus, who is also sometimes described as judge (2 Cor. 5:10; John 5:22, 27, 30, 9:39; Rom. 2:16).

4.5. Satan

The parallel between the Gravemind's lair and the underworld also allows for a comparison between the Gravemind himself and Satan. In the Christian tradition, Satan is often portrayed as a trickster who seduces people with false knowledge (Breytenbach and Day 1999). He is the primary antagonist of Jesus, who represents the Truth, and the Church represents him on earth, but with the Gravemind it is the other way around: he is in fact speaking the truth, whereas the Prophets are peddling lies. It should be noted, however, that the Gravemind, being the Flood, is also serving himself, similar to the devil (Riley 1999). After all, if the Halos were to be activated, he would die as well.

4.6. The Monitor

One more character that should be mentioned here is the AI monitor of the first Halo, 343—"Guilty Spark". The number is taken from the equation 7³ (each of the Halo monitors is numbered seven to one less the power of their respective installation and this one is in charge of the fourth). The numbers seven and three are, perhaps unsurprisingly by now, also significant in the Judeo-Christian tradition. The number seven appears over 400 times in the Bible and symbolises the rhythm of time, while the number three refers to the vertical and hierarchical structure of the cosmos (Labuschagne 2000). No official explanation is provided for the nickname "Guilty Spark", but fans have theorised that it refers to what transpired approximately 100,000 years before the events of the game. When the Forerunners had to use the Halos and wipe themselves out in order to keep the Flood from spreading, it just so happened that the one under 343's supervision was activated first. Thus he is fully aware of their destructive power and might feel guilty about what happened.

Although he initially comes across as a benign custodian of ancient technology, it turns out that his intentions are far more sinister. The Forerunners programmed him to make sure the Flood does not leave the installation if it ever breaks out of containment, but his first response is to resort to the most drastic option: activating Halo and wiping out all nearby sentient life. Since 343 has the same goal as the Covenant, it appears that he is aligned with the false Prophets. Moreover, the fact that he tries to trick Master Chief into activating the installation can be compared to the snake who tricks Eve into eating from the Tree of Knowledge (Gen. 3:3–6), which adds to his seemingly villainous nature. However, the monitor consistently refers to Master Chief as the 'Reclaimer', which is evocative of the epithet 'Redeemer' that is sometimes given to Christ (Gal. 3:13; 1 Pet. 1:17–19). This makes it sound more plausible that the AI is, in fact, also misguided in believing he is carrying out the will of the Forerunners.

4.7. How to Destroy a Planet

Another important theme in the game is the end times. The main motif of the whole series is the threat of total annihilation via the Halos, of which there are seven. This may refer to the seven seals of the apocalypse and the seven trumpet blasts signalling the beginning of the end times (Wisecrack Join 2015).

According to the Book of Revelation, the site of the final battle against Satan and the Antichrist is a place called Armageddon (Rev. 16:16). This, although it is a symbolic location, can be translated as "Mountain of Megiddo", and the opening and closing cinematics of *Halo: Reach* feature a broken mountain range. Christian apocalyptic literature also mentions that "fire came down from God out of heaven" (Rev. 20:9), and this be connected to the destruction of a different human colony on the planet Harvest. This invasion was the start of the conflict between the Covenant and humans, and ends with the Covenant unleashing the full might of their fleet to 'glass' the planet: they burn everything with laser beams that are so hot they turn everything into glass. The glassing of Harvest is reminiscent of the fire from God mentioned in Revelation, because from the Covenant's perspective, they are destroying the unworthy. It could also be argued that the Covenant represents the Antichrist instead, because he also has the power to call down fire (Rev. 13:13).

4.8. The Covenant and Manifest Destiny

The Covenant wrongfully believes that activating the Halos will send them on the 'Great Journey' towards salvation, and that whoever stands in their way must be annihilated. In conjunction with the name Harvest, the Great Journey suddenly sounds a lot like Manifest Destiny. This was the idea that the United States was destined to spread its influence across the whole continent, and that, as Christians, they had the right to take it from the native 'heathens' by force. These so-called 'civilising missions' were justified by stating that Native Americans were savages, and thus were inferior to white colonists. Projected onto Halo, the alien Covenant's extermination of humans can be seen as a

form of Manifest Destiny: the Covenant sees humans as primitive and therefore unable to go on the Great Journey, so their eradication is justified (Wisecrack Join 2015).

4.9. Corruption and (High) Charity

One more reference is the alien capital of High Charity. In the Christian tradition, charity is held to be the most important virtue. According to the Catechism of the Catholic Church, charity is "the theological virtue by which we love God above all things for His own sake, and our neighbour as ourselves for the love of God" (The Holy See 1993). In St. Paul's first letter to the Corinthians it says: "And now abide faith, hope, love, these three; but the greatest of these is love" (1 Cor. 13:13). The fact that the alien capital in Halo is named after the Christian notion of charity is quite ironic, since the Covenant is everything but charitable. What is more is that High Charity is eventually consumed by the Flood after the Gravemind manages to infect the human spacecraft *In Amber Clad* and crash it into the mobile city. Not only could this be interpreted as symbolic for the ultimate corruption of the Christian virtue, but it could also be seen as an inverse of the story of Sodom and Gomorrah (Gen. 19:24–25; Deut. 29:23; Luke 17:29). Rather than God destroying the corrupted cities of the sinful (2 Pet. 2:6), the Gravemind destroys the corrupted city of the faithful.

5. "AI Constructs and Cyborgs First!": Science in the Halo Series

The word halo is not reserved for the golden discs used to represent Jesus and saints in works of art. It is also used in the realm of natural science.

5.1. The Science behind the Fiction

Astronomers use the term galactic halo to indicate a round and 'flat' galaxy with relatively large distances between stars, such as the Milky Way (Naab and Ostriker 2012). In the game, a Halo is a vast, circular structure orbiting in space. Because of its size, a Halo appears to be what is known as a megastructure. A megastructure is an artificial structure with one of its three dimensions equal to or exceeding one hundred kilometres. The concept of a circular megastructure first appeared in a sci-fi novel by Larry Niven, called *Ringworld* (Niven 1971). Niven's design of the Ringworld is best explained as an intermediate stage between planets and Dyson spheres. In *Search for artificial stellar sources of infra-red radiation*, Freeman Dyson posed the hypothesis that it would be possible to build a megastructure around a star to capture most or all of its radiation energy (Dyson 1960).

Planetary physicist Kevin Grazier has attempted to analyse the science behind Halo. He begins by stating that although the installations are based on Niven's concept of a Ringworld, the Halos are in fact more similar in size to a Bishop Ring, an actual hypothetical space habitat that rotates to create its own gravity, named after its inventor Forrest Bishop (Yeffeth and Thomason). The megastructure in the video game has a metallic exterior, but its interior has the features of a habitable planet, with an atmosphere and water, as well as unique flora and fauna (Hiatt 1999). The exterior of a Halo is littered with what seem to be docking ports and even windows, which might indicate that the megastructure is partially hollow on the inside. This hollow space might be used for maintenance and power generation, or even as living quarters. Another problem is the fact that the Halos are exposed to high levels of radiation. Since earth has a magnetic field to protect it from this kind of radiation, Grazier hypothesises that the entire circumference of the rings may be lined with conductive cables. Running an electric current through these cables would create a safe atmosphere on the installations, allowing them to sustain life (Yeffeth and Thomason).

5.2. Mjolnir Kombat

Returning briefly to Master Chief, it should be noted that his armour is a highly advanced piece of technology. The Mjolnir Powered Assault Armor, named after the legendary hammer wielded by the Norse god of thunder, is a combat exoskeleton designed to enhance the strength, agility, and durability of the wearer. The armour is made of a multilayer alloy, augmented with a special coating that can

negate a limited amount of energy projectiles, and comes with a number of clips, belts, and magnetic holsters to carry additional weapons and ammunition. One of the layers in the armour is made from reactive metal crystal that allows an AI normally reserved for spacecraft to accompany a SPARTAN-II supersoldier. The SPARTAN project was set up by a scientist named Dr. Catherine Halsey, who also designed the Mjolnir armour, and was intended to create an elite class of soldiers capable of going toe-to-toe with the Covenant's strongest warriors, such as the Elites. These supersoldiers played a pivotal role during the defence of Reach, and Master Chief is the last remaining SPARTAN-II. Because of their prowess in battle and the illusion that they were invincible, the Covenant began to refer to them as Demons.

5.3. Cortana

A final scientific element of the game that needs to be addressed is Master Chief's AI companion: Cortana. Cortana was created from the cloned brain of Dr. Halsey by using her synaptic networks as a template for Cortana's processors, which is why she also sounds like her. Unlike the monitor of a Halo such as 343 "Guilty Spark", Cortana is a so-called smart AI, which means that she can learn new things and is not limited by basic pre-programmed parameters. The downside of this limitless ability to adapt is that smart AI's have a relatively short lifespan of only seven years. This is because they eventually slip into rampancy, which is a permanent state of being where the AI starts thinking it has godlike powers, as well as developing contempt for its makers. Cortana has no physical form, but she can speak via existing communication systems and even project a holographic image of herself onto certain interfaces (Nylund 2001). Since the game was developed by Microsoft's video game division, the software company decided to name its voice-activated computer assistant after Cortana as a tribute to the character.

6. Halo and Its Geopolitical Context

It is important to view Halo in its historical context. Since the first game was released in November of 2001, it seems very likely that the terror attacks of 9/11 influenced at least some parts of its development. The ideological politics surrounding terrorism are interwoven with certain elements of the storyline. For instance, the Covenant sees itself as the successors of the Forerunners, by which they elevate themselves over everybody else. In their view, they are the only ones able to attain salvation. Humans, on the contrary, are seen as unworthy of being saved. Moreover, with humanity they are confronted by other claims to divinity, and this leaves the aliens with two options; they can either accept there are multiple truths, or they can exterminate the heretics to protect theirs. Needless to say they chose the latter (Wisecrack Join 2015).

6.1. The Covenant and Religious Violence

In the context of a post 9/11 world, it becomes difficult to deny that the alien Covenant is a metaphor for religious violence. American scholar of religion Mark Juergensmeyer (2017) states that although religion is often used as an after the fact moral justification for this type of violence, it is not the cause of it. The blame usually falls on a variety of political and social issues. Religion can, however, provide a symbolic dimension to acts of terrorism.

Moreover, religious violence is not reserved for one single tradition. Nearly every major religion has the potential for religious violence, and even secular movements can inspire it. Still, it is important to note that acts of terrorism committed in the name of religion are different from those motivated by secular aspirations. Some differences are easy to see, such as the transcendent moral justification and the almost ritualistic manner in which attacks are carried out, while others go deeper: "familiar images of struggle and transformation—concepts of cosmic war—have been employed in this-worldly social struggles. When these cosmic battles are conceived as occurring on the human plane, they result in real acts of violence" (Juergensmeyer 2017, p. 9). Similar to the way the Covenant justifies their extermination of humans by referring to themselves as successors to the Forerunners and

thereby interpreting their conflict as part of the legacy of ancient and powerful species, so too do the perpetrators of religious violence (from here on referred to as religious fanatics) justify their actions by interpreting their struggle in terms of cosmic war. Both the aliens in Halo and those who commit religiously motivated acts of terrorism in the real world believe they are chosen by a higher power, both believe they are guided by divine will, and both believe they are therefore justified in the killing of innocents.

Religious violence is also often spoken about in terms of purification. Those who do not conform are seen as a danger to the status quo and must therefore be eliminated. Once they have been removed from society, such individuals or groups can then be framed as either having fallen victim to their own evil, which allows their removal to be viewed as cleansing, or as having sacrificed themselves for the greater good (Ellens 2007). This is another thing the Covenant and religious fanatics have in common: the idea that violence is necessary to root out heresy. The only way to begin the Great Journey is by destroying those who stand in the way, and to perish while fighting for this cause means to be guaranteed salvation. This mirrors the promises made to those who carry out acts of terrorism in the name of religion, because both the Covenant and religious fanatics believe that dying in the name of their faith will absolve them of their sins.

6.2. The UNSC and the U.S. Military

Terrorism motivated by religion is often linked to religious fundamentalism, which is in turn seen as threatening to 'our way of life', whatever that may be. So-called Islamic fundamentalism in particular is seen as the most urgent threat to Western civilisation. In this discourse, the secular West is spearheaded by the United States of America, placing this nation at the forefront of the perceived fight against Islamic fundamentalism (Larsson 2017). In the fiction of Halo, the United Nations Space Command fights to protect humanity from the Covenant. It might be possible then to compare the UNSC to the U.S. Military, which is currently often presented as defending Western values from religious fundamentalism in and out of the Middle East. Yet if I take my theoretical framework into account this leaves me with a new question, namely: does the UNSC then represent science?

In the fiction of the Halo universe, humanity in the 26th century has unlocked the secrets of long-distance space travel, can build advanced power armour capable of withstanding energy projectiles, and is able to construct smart AI from people's brains. Thus science is clearly an important part of human society. Yet if the comparison to the US military is supposed to hold up to scrutiny, I would argue that the rival claim to divinity is equally important. After all, the United States is still quite a religious nation, which means their ideology has to have at least some religious elements. In the context of American civil religion, the military has a very important symbolic function (Baker et al. 2014). Those who serve in the U.S. military are seen as the defenders of not only American values like freedom and democracy, but also Christianity; there is a double religious dimension. What is then interesting about Halo is that a rather dark part of the role Christianity has played in U.S. history, the civilising missions that resulted in the displacement of Native Americans, can be connected to the Covenant, which serves as the main antagonist to UNSC. Perhaps this could be interpreted as an attempt to present an antithesis between 'good' Christianity and 'bad' Christianity.

The problem with this interpretation, however, is that the UNSC is not solely intended to protect humanity from outside threats. Before the conflict with the aliens, extremely poor socio-economic conditions in some of the outer colonies led to uprisings, and the UNSC used military action to suppress them. Moreover, the training methods they use on new recruits are harsh, almost to the point of being inhumane, especially when it comes to the SPARTAN program. This second theme in particular is explored in some of the short (animated) films set in the Halo universe, such as *Halo: The Fall of Reach* (2015). Drawing a comparison between the UNSC and the U.S. military might still be possible, but it is very important to take these factors into consideration as well.

7. Conclusions

However, does Halo say anything about the relationship between science and religion? On the one hand there is the apparent dichotomy between humans portrayed as rational thinkers and the aliens that are presented as religious fanatics. Yet on the other hand the fact that the Covenant is technologically superior shows they are also engaged in science. Take for example the weapons used by the aliens. Whereas the UNSC still equips its soldiers with weapons that require 'old-fashioned' bullets, such as pistols and assault rifles, the Covenant issues armaments like plasma rifles and energy swords to its warriors. What is more is that the aliens see the Forerunners as gods, and fancy themselves to be their successors. Since the Forerunners were able to build the Halo installations, it is safe to assume they were a highly advanced species. The fact that the Covenant holds the technology left behind by this ancient civilisation to be sacred might mean that it is in fact technology itself they are worshipping. A final thing to add here is that human religion plays a role in why the aliens see humanity as an inferior race of heretics.

In short, the theory I put forward in the introduction that Halo appears to reinforce the idea that science and religion are polar opposites, and appears to be too short-sighted. Especially from the perspective of the Covenant, the relationship between science and religion presented here is, as Barbour would have put it, dialogue. There is overlap between the two domains, but the idea that they complement each other is rejected as well. Although the Covenant is quite technologically advanced and worships Forerunner technology, they still refuse to accept the truth about the Halo installations and do not cease their pursuit of the Great Journey and their crusade against the unworthy humans. This fits into the narrative that although we have an open society and value dialogue over conflict, science and religion are ultimately at odds with one another. We are able to co-exist peacefully, at least most of the time, but we find it difficult to fully reconcile the two domains. Perhaps the developers of Halo wanted to remind us that science and religion have a more complicated relationship than we like to think.

Comparing the UNSC and the US military to each other is more difficult, and I think additional research is in order here. This question thus has to remain unanswered for now. What I can say is that humanity does not adhere to pure science, nor does the Covenant represent pure religion. This means that the Halo series seemingly rejects the theory put forward by Gould that science and religion are separate magisteria, and instead appears to affirm the objection to that theory given by Dawkins that religion cannot avoid stepping on science's turf.

In conclusion, the relationship between science and religion presented in Halo is dialogue; there is overlap between the two domains, but there is no interconnection. Even though the Covenant does not represent pure religion, its claim to religious truth is the main reason behind the conflict with humanity. Moreover, the Covenant's fundamentalist rhetoric also means there is no room for hesitation when it comes to destroying the unworthy, and that failure is tantamount to heresy.

This comparison is exemplified in the case of the Arbiter. Because he was unable to prevent the destruction of Halo and defeat the humans, Thel'Vadam is stripped of his rank, shamed, and branded as a heretic. To atone for his failure, he is then sent on a suicide mission, and if he dies, all his past sins will be forgiven. If not, he will not be eligible for salvation: "Soon the Great Journey will begin, but when it does, the weight of your heresy will stay your feet, and you shall be left behind."

Conflicts of Interest: The author declares no conflict of interest.

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