

As The Gods Themselves
by J. Daniel Sawyer

Footnotes and the paragraphs that referenced them

There's been a lot of talk in recent years of science fiction reaching the end of its tether¹. How can we project ourselves into the future, imagine possible worlds, and wow our audiences if not even the worlds best prognosticators can foresee technological developments more than fifteen years from now? Growth is accelerating – the singularity is near.²

This is the logic of sacrifice, and to an ancient mindset, where the pieces of the universe seem animistically connected, it makes sense. You can see it at work in the works of Homer,³ in the epic of Gilgamesh,⁴ in the Bible,⁵ and notably in the tales of chivalry from the era of Arthurian romances in the middle ages – particularly in the vows of chastity that the knights made to God, and the vows of devotion they made to the objects of their courtly love.

Of course, if bodily disposition can effect one's spiritual standing, it makes sense that the transverse would also be true. As children, many of us heard Grimm's fairy tales and became accustomed to a trope from Germanic folk religion that relies on precisely this intuition: that evil people become ugly because of their evil. Of course, if this is the case, then burning or torturing an effigy of a person you dislike might just might be an effective form of vengeance⁶ – and an evil man might be able to protect himself from that kind of magic by vesting his soul in an unrelated object. Then, even if his body were tortured or destroyed, his soul would live on and allow him to find another body – just as did Sauron in *Lord of the Rings*, or Voldemort in the *Harry Potter* series, or the Russian villain Koschei the Deathless (upon whose mythos both of the fictional villains draw heavily).

In a similar way, fertility cults in ancient societies served the magical purpose of encouraging the gods and the land to be bountiful. Sometimes, as in the case of the still-practiced Obando fertility rites in the Philippines, they centered around the fertility of the women of the tribe.⁷ In more agrarian

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- 1 See the essays, both entitled “The End of Science Fiction,” by James John Bell, David Louis Edelman, as well as similar essays available online by Bret Funk and Bruno Maddox.
 - 2 The Singularity is the point in the near future where the convergence of biotech, nanotech, medical technology, and artificial intelligence creates a massive technological takeoff resulting in changes so massive and unpredictable that speculating upon the future becomes pointless. For further information see the information available at <http://www.singinst.org>. See also the books *Liberation Biology* by Ronald Bailey and *The Singularity is Near* by Ray Kurzweil. Also worth a look is the artificial life project at biota.org. It's worth noting that project member Tom Barbalet told me in an interview recently that he believes the Singularity is no longer a point in the future – it is already upon us.
 - 3 Odysseus, in the *Odyssey*, sacrifices a ram to the spirits of the dead to gain entrance to the underworld. He also sacrifices to Poseidon to appease the god's wrath against him for blinding Polyphemus,
 - 4 Gilgamesh tablet XI Lines 146-147, 155
 - 5 The story above comes from Judges 11:31ff. Numerous other examples include the giving up of Samuel to the temple by his mother, the numerous instances of ritual sacrifice in the cult of Yahweh, and the origins of the practice of tithing among the patriarchs.
 - 6 A prime example of this kind of magic is the Voodoo Doll. It's worth pointing out that the practice of torturing a doll has roots in European folk magic as well as the Hoodoo religion (which Hollywood misnamed “Voodoo” in movies dating from the 1920s)
 - 7 “Sayaw Obando.” (*Fertility Dance*), *Obando, Bayang Pinagpala!* (Obando, Blessed Town!), *Pamahalaang Bayan ng*

cultures, such as Mesopotamia, they centered more around the fruitfulness of the land than the fertility of women.

In many ancient cultures, at the beginning of spring, a ritual orgy in which the priests or the common folk would engage in regular sexual intercourse for the length of the festival (the details and rules of the orgy varied from culture to culture) to remind the land (and the gods of the land) that it was now time to be genitive, to make the land abundant and fruitful, and bring life back after the long winter. In more ancient times when the King himself was considered to be a god-man and/or the embodiment of the land, he might be called upon to sacrifice himself, or a surrogate, so that his blood might re-fertilize the land, returning its fertility and reminding it what life felt like. This cycle of sex and death is reflected in the myth of Ishtar and Tammuz. In the story, Tammuz dies at the peak of the earth's fertility. As the land fails under the baking summer heat and then grows cold after the harvest, Ishtar descends into hell to resurrect her brother. It is only the following spring, after Tammuz is brought back to the world above and the couple are united in sexual intercourse that Tammuz's sacrifice to fertilize the earth with his blood is honored, and the world becomes fruitful again. Sex and blood sacrifice are seen as two essential parts of a ritual cycle that humans participate in to remind the spirits of the land of their job⁸

Invocation is the second essential form of magic. When a priest or a believer calls upon a god or spirit – often exercising temporary power over it by speaking its name – to bless a loved son, or curse an enemy, or heal a sick person, that person is attempting to invoke the power of the god to serve his own ends. There are strictures on this kind of magic, as one does not wish to call up on the power of the god frivolously. This logic behind invocation can be seen plainly in the Biblical story of Jacob and Esau, where after Esau discovers Jacob's trickery and begs his father Isaac for something – anything – of his birthright, his father responds that he has already given Jacob everything. Isaac tells Esau “Your brother came deceitfully and took your blessing.”⁹

Witchcraft is the third form of magic, and is what springs to mind for most people when confronted with the term “magic.” Witches are divines for their local group – a tribe or a village – that preform healing rites and dole out miracles by use of ritual, symbols, and talismans – often in conjunction with alchemy (primitive chemistry and/or medicine) and invocation. These symbols are seen as potent nexes of spiritual power, and are used to direct natural forces or godly attentions in particular directions. Some frequent uses of witchcraft include healing in the absence of medical science, blighting the crops and herds of a rival, inducing a god to favor your side in combat, divining the future, and controlling the weather.¹⁰

Obando (Local Government of Obando), 2006/2007

8 Though only vestiges of these practices survive to the present day (maypole dances, Easter egg hunts, etc.), as of the late 19th century a handful of cultures which practiced this kind of fertility magic still survived, and are documented in James Frazier's *The Golden Bough*, Chapter 47, Section 3. Though some of his information and conclusions (including his meta-theory) are obsolete, his analysis of magic and his primary source reporting have so far held up to scrutiny by anthropologists and mythologists.

9 Genesis 27:32

10 Not an all-inclusive list.

The *doing* gods are those beings who are known by their attributes – in some cases, it is what they do that qualifies them as worthy of veneration. These are either beings whose being is the same as their doing (Yahweh the Creator in Judaism and Christianity, Christ the Redeemer in Christianity, Siva the Destroyer in Hinduism) or they are beings who, though born human, are elevated through their actions to godhood (Augustus in the Roman Imperial cult, Jesus in certain strains of Gnosticism, Heracles in the Greek hero cult, Guan Yu in Taoism). This second kind of god typically inspires more enduring fervor and devotion for the reasons advanced in the Book of Hebrews, 4:15 where it says “For we have not a high priest that cannot be touched with the feeling of our infirmities; but one that hath been in all points tempted like as we are, yet without sin.”¹¹ In other words, a god we can identify with is one we can understand well enough to worship easily. This second kind of “doing” god inspires devotion for another reason: it gives humans hope of achieving transcendence.¹²

Christianity's Triune God, though being of a different substance from mortal man, is known to believers primarily by his attributes and actions (he thus sits squarely in the center of the Venn diagram). He is omnipotent, omniscient, omnipresent. He is loving and patient, vengeful and wrathful, just and righteous. More importantly, he became human to create a bridge so that humans could become “children of God” - moving humans from their status as “a little lower than the angels”¹³ to beings whom the angels would eventually serve.¹⁴

It's hard to wrap our heads around this now, but as science and industry ascended, they created genuine theological problems and anxiety for Christendom. Vaccination and anesthesia, for example, were both vigorously opposed by the Church in Europe because both were seen to be mitigating the curse of Genesis, which brought both childbirth pains and disease and death into the world.^{15,16} In effect, church leaders of the time saw these scientific innovations as stealing power for ourselves that was rightly God's power, and then using it to negate God's will.

In time, and with a lot of theological wrestling, humans made peace once again with their gods.¹⁷ After all, we could move mountains, we could penetrate space, but at the end of it we were, after all, merely human. We could learn everything in the world, but we'd never be able to see into the mind of another person. We might even be able to go anywhere, but we'd still be constrained to live out our lives in mortal bodies bounded by Einstein's universal speed limit. We might conquer disease, but we'd never escape our nature as flawed, mortal, and destructive beings. In response to the rise of science and industry, Western thought shifted from concentrating mostly on what God does to emphasizing what God IS.¹⁸

11 American Standard Version

12 This theology appears in many religions, and is usually reserved for the very great in spirit or stature.

13 Pslams 8:5, King James Version

14 The Greek Orthodox church's theology of “theosis” articulates this notion most fully, though it is found in Catholicism's cult of the saints, in Luther's doctrine of the Priesthood of all Believers, and in other flavors throughout the Christian and Muslim worlds. The Mormon church goes one step farther, promising not only heaven or participation in the trinity, but literal godhood and the ruling over individual worlds in the afterlife.

15 “I will greatly increase your pains in childbearing; with pain you will give birth to children. Your desire will be for your husband, and he will rule over you.” Genesis 3:16, ASV

16 “[The ground] will produce thorns and thistles for you...for dust you are and to dust you will return.” Genesis 3:17 and 19, ASV (selected portions).

17 Of course, some religions with “doing” gods, such as Islam, have not yet actually grappled with the rise of science, preferring instead to spurn scientific inquiry as theologically dangerous and merely enjoy the fruits of its labor (i.e. technology).

18 As with any sphere of life where there are intellectuals and laity, many believers still experience and/or think of God as a “doing” god rather than a “being” god, but that's beyond the scope of this article.

However, since the mid-twentieth century, by inches, the *being* gods have also had problems as we found ever more ways to understand the universe, and to extend our power. We have even found ways to control our own bodies and evolution, to change our fundamental psychological nature,¹⁹ and to create life from scratch. Very few people not at least passingly familiar with the current state of research in biotech, nanotech, aerospace, and neuroscience receive such a statement with an incredulous scoff. This scoffing is not just unwarranted, it's downright wrong.

Genetic engineering is already creating viruses that can target cancer cells and induce apoptosis,²⁰ and genetic screening allows us to pre-select which pregnancies will come to term or not based on genetic defects or gender. As more of the human genome is mapped, the selection options will expand to include both cosmetic factors (such as hair color) and, to a certain extent, intelligence, athleticism, and even the number of limbs. By the time humans are living independently on the moon (currently expected by 2020, as no less than three separate governments are planning semipermanent moon bases between 2015 and 2025), we will have the power to re-engineer humans to optimize them for lunar living, or to remove from our nature the destructive impulses and tribalism that plague us. The only questions left are: Will we exercise that power? If so, then how?

Since the early 1970s, computing has closed steadily in on the creation of artificial consciousness. The endeavor has been so successful that, as Ray Kurzweil pointed out in his address to the Singularity Summit in 2006, the Turing test is now an obsolete measure of sentience. The notion of artificial intelligence is now obsolete – computers are artificially intelligent in ways that far surpass human intelligence. What they lack is consciousness. For reasons too lengthy to go into here, I'm skeptical that they'll be able to pull it off on silicon hardware, but if the research program on artificial intelligence succeeds in creating a self-conscious computer or cyberorganic, humanity will have intruded a step further into God's presumed domain, by creating souls.²¹

Beginning with ancient mythology and moving forward, beneath the sword and sorcery tropes, the grand quests, and the strange beings, fantasy literature has been often preoccupied with the triumph of men (at this stage of history, it was men in the gendered sense particularly) over their gods – at first with the aid of other gods, then as the beneficiary of the gods infighting, and finally as the one who brings about the death of the gods. Whether it is Odysseus outwitting Polyphemus, Circe, and Poseidon and winning his way home, or Gilgamesh killing Humbaba and the Bull of Heaven, or Beowulf slaying Grendel and Grendel's mother, or Sigfried slaying the Dragon, or the unmaking of the

19 The first documented case of a person's nature changing by external intervention is the case of Phineas Gage, who, after an injury to the frontal lobes of his brain, experienced a severe personality change to the point where his loved ones insisted that he was “no longer Gage.” Later work in neurology, including lobotomies, severing the corpus callosum, and selective application of electricity all showed alterations in personality and the experience of consciousness, occasionally spawning multiple semi-independent personalities. Additionally, electroconvulsive therapy has been shown to erase and alter memories, and occasionally psychedelic drugs can induce spiritual experiences that can alter a person's outlook on and approach to life permanently. These tools, while crude, have been known to us for over 100 years. Current advances in neurology and neural imaging, along with advances in microelectronics, mean that our tools for altering mental processes through direct physical interference are getting sharper and more adaptable.

20 Preprogrammed cell-death.

21 By saying this I'm setting my flag firmly on one side of the P-zombie debate in philosophy. For the two definitive books on the subject, see David Chalmers *The Conscious Mind* (arguing elegantly in favor of dualism) and John Searl's *The Rediscovery of the Mind* (arguing, in my view, convincingly against dualism). Daniel Dennett offers a third view in the very readable *Kinds of Minds*.

divine realm in *Götterdämmerung*,²² fantasy is preoccupied with the death or fading of the gods, and it's not surprising that this is the case. Ancient mythology – that which survives – was first written as civilizations were rising and the fickle gods of cloud and air were less feared than once they had been. As humans acquired mastery over the soil, they found gods more suited to their concerns than were the gods of the nomads – but the nomadic gods had to go somewhere. They had to fade or be conquered so that there would be room for humans and their new dominion, aided by their new gods of agriculture.

This is, I believe, why fantasy enjoyed such a resurgence during the industrial revolution. In the early Enlightenment, particularly in Florence, intellectuals tended to push Christianity and the folk mythologies of the people to one side in favor of the more symbolic mythologies of Golden Age Athens – when (according to the thought of the time) people didn't really believe in the gods, but they did use them for symbols. And for the early Enlightenment mind, they were fine symbols. The gods were manifestly men in divine clothing, wielding easy mastery of nature, personifications of natural forces and attributes at work in the world and in the human soul. But as the industrial revolution progressed, humanity shifted radically in a way that it had not shifted since the agricultural revolution: it became less and less dependent upon the rhythms of nature and more and more dependent upon the rhythms of the machines. Over the course of two generations (and in some areas, one generation), the population went from being powerless before nature to being enslaved by the instruments of humanity's power over nature. The sociological trauma must have been immense – far more immense than we, who are accustomed to rapid continual paradigmatic change, can easily imagine. During this time, a mountain of fantasy literature was produced, particularly in the British Empire, much of it concerned with relegating the old gods and demigods of nature to the nursery. In that same time, a few works – *Die Ring des Nibelungen* by Wagner, *Phantastes* by MacDonald, *The Waste Land* by Eliot, and *The Lord of the Rings* by Tolkien²³ – dealt with the death of the nature gods on an adult scale, allowing the grief and confusion that accompanied the triumph of man to well up and mix in a mature, bittersweet fashion.

Could it be immortality? Perhaps not. At the time of this writing, the first experiments in telomeric regeneration²⁴ have just been completed, with mixed but promising results. Even without advances in anti-aging therapies, medical science if progressing fast enough that is is very possible, even probable, that the first human to live to the age of 160 years is already living. And, if medical science continues to progress, living to 160 might be just long enough to give that person the option to live forever. This isn't a certainty, but it is far from wild speculation. It is a very conservative extrapolation of historic trends – far more conservative than the most conservative futurists²⁵ are currently projecting.

*“We begun in chaos, too primitive to make our own decisions. Then we were manipulated from outside by forces that thought they knew what was best for us. And now now we are finally standing on our own. Lorien was right, it's a great responsibility. This is ours now...”*²⁶

22 Though not properly ancient mythology itself, *Götterdämmerung* draws this and many other plot points from Norse mythology.

23 Again, not an inclusive list.

24 Telomeres are the “aging markers” at the ends of chromosomes that govern cell life. The shortening of telomeres are one of the causes of aging.

25 Ray Kurzweil (who sees this as desirable) and Francis Fukuyama (who does not)

26 Sheridan to DeLenn, “Into the Fire” Season 4, Episode 6 of *Babylon 5*, J. Michael Straczynski

“Now we make our own magic. Now we create our own legends. Now we build the future. Now we stop being afraid of shadows.”²⁷

²⁷ DeLenn to Sheridan, *ibid.*