# The Last Days Are Here Again

## *A History of the End Times*

Richard Kyle



Baker Books
A Division of Baker Book House Co
Grand Rapids, Michigan 49516

# 9

# The End without God: The Secular Apocalypse

How will the world end? With a bang or with a whimper? asked writer T. S. Eliot. By fire or by ice? wondered poet Robert Frost. "Is there hope for men?" asked economist Robert Heilbroner in *An Inquiry into the Human Prospect* (1980).[1] It is clear from *The Population Bomb* (1968) that doomsday ecologist Paul Ehrlich didn't think so: "The battle to feed all humanity is over. In the 1970s the world will undergo famines—hundreds of millions of people will starve to death." The population explosion, he contended, would be halted by "three of the four apocalyptic horsemen—war, pestilence, and famine."[2] Elsewhere Ehrlich was even more pessimistic. In a 1969 publication he pointed to a series of catastrophes to befall humanity during the 1970s. His hypothetical scenario envisioned the end of the oceans as coming in the summer of 1979: "By September 1979, all important animal life in the ocean was extinct. . . . Earlier in the year, the bird population was decimated." Humans do not escape these calamities—people die of malnutrition, pollution kills millions, diseases increase, and chaos breaks out.[3]

If this is not bad enough, consider what a few more scientists have said. In *Cosmos* (1980) astronomer Carl Sagan warned that "we may have only a few decades until Doomsday."[4] In 1975 biologist George Wald described himself as "one of those scientists who . . . still finds it difficult to see how the human race will get itself much past the year

2000."[5] In *Famine—1975! America's Decision: Who Will Survive?* William and Paul Paddock painted a grim picture: "Catastrophe is foredoomed . . . now it is too late."[6]

Does all of this sound like something in a doomsday sermon? Well, it did not come from Hal Lindsey, Jerry Falwell, or Pat Robertson. Instead, by the 1950s members of the scientific and economic communities began to use apocalyptic rhetoric—"the last days," "day of judgment," "the horsemen of the apocalypse," "atonement," and more.[7] As with religious people, not all scientists believe that doomsday is approaching. Still, many do. What's more, like prophets of the apocalypse, scientists differ over what the end will bring—total or limited destruction. Some see the end of all life on earth; others see a more limited catastrophe—segments of humanity will survive.

Thus in the late twentieth century the apocalyptic mind-set is no longer "the fringe phenomenon of a few marginalized people which we can ignore." Instead, people who "sit in seats of political and economic power" are embracing an apocalyptic worldview.[8] Also, end-time ideas are being accepted by members of the scientific and literary communities. Warren Wagar has examined the end-time ideas of over one hundred fiction authors, at least one-third of whom are generally regarded as men and women of the literary mainstream.[9]

For at least two thousand years there have been countless predictions regarding the end of the world. But now such prognostications are taken more seriously, largely because they are grounded in science. Our age is different from previous ages: "predictions of imminent catastrophe are far more justified [because they] are based on scientific observation rather than on religious inspiration."[10] In fact, in recent years the most significant apocalyptic outbreaks have been secular.[11]

## What Is the Secular Apocalyptic?

Some scholars see great continuity between the sacred and secular apocalypses; others regard them as strikingly different. As a general statement, it would seem that the secular apocalyptic grew out of the sacred, and that until the early twentieth century there existed considerable interaction between the two.[12] Even today the differences are not always clear. Consider, for example, that the end can come by any one of three types of causes—divine, natural, and human. Some prophets see God employing earthquakes and floods to punish humanity. Other people attach no eschatological significance to such events. Were a comet to destroy the earth, they would say that it just happened; God did not cause it. To a lesser degree, the same dilemma applies to human disasters. Will God use nuclear weapons, environmental pollution, or overpopulation to destroy humankind? Or will humanity be fool enough to do it to themselves?





However, differences do exist between the sacred and secular apocalyptic. Religion no longer has a corner on eschatology. While new to the game, science has exerted considerable impact on end-time thinking. It has given us a depersonalized end: there will be no redemption, no survivors, and no paradise. Scientists warn us that forces are at work in the universe that can literally blow us out of existence.[13]

Like religious predictions, there is an extensive menu of scientific end-time projections. These doomsday scenarios wax and wane in popularity. In the 1950s and 1960s, nuclear destruction ranked first on the list. By the 1980s, environmental issues began to jump to the forefront. The greenhouse effect may melt the polar caps, drowning us all. Or perhaps the planet will experience another ice age. Another possibility is that doomsday may be brought on by pollution or the depletion of rain forests. The betting odds are that at some time Earth will be hit by another celestial body—this has happened before, but next time it may be far more catastrophic. Consider too that in the developing world humans are still breeding like rabbits. As a result, overpopulation may bring famine. Or pestilence could do us in: something like AIDS or the Ebola virus may get out of control, killing us all. Others talk of a global financial disaster ushering humankind into hopelessness and despair.[14]

No matter how the end will come, secular prophets take a different approach. Strictly defined, apocalypse connotes both disaster and triumph. Accordingly, most religious millenarians see doomsday as being followed by a golden age. At times they tend to get carried away with the impending calamity. Still, they maintain that recovery and victory will come. Secular prophets of doom, on the other hand, come up a bit short on the positive aspect. Their apocalyptic visions have "tended to be clearer and stronger on the coming catastrophe than on the new world that will arise from it." In fact, many scientists bleakly insist that the problems of the physical world are irreversible—no redemption will come forth. Some modern fiction writers have picked up on similar themes.[15]

Religious and secular thinkers also differ as to the cause of apocalyptic events. From a religious perspective, "the end of history will be brought about through external, divine intervention." The last days are tied to a divine design. Wars and natural disasters do not occur randomly, but are part of a divine plan "to separate good from evil."[16] Secularists move down a different path. Rather than regard a nuclear war, an environmental crisis, or natural disaster as being directed by God, secular prophets regard these events in themselves as potential causes

of doomsday. Human beings and natural forces, not God, are behind these events. This secular apocalypticism "grows out of a naturalistic world view, indebted to science and to social criticism rather than to theology."[17]

The secular apocalypse sprang from a growing disillusionment with the belief in progress, the notion that civilization would steadily advance. Sometime between the mid-seventeenth and early nineteenth centuries, the modern world arrived. Along with it came great optimism. Scientists and philosophers believed that science and human reason could improve the lot of humanity. Advances in agriculture, science, commerce, and industry bolstered such contentions and countered arguments that the world would end because of human evil.[18] By the nineteenth century the belief in progress had taken root in the Western world. It helped to justify humankind's dominance and exploitation of nature. Intoxicated with tremendous improvements in living standards brought on by the Industrial Revolution, most people did not notice the downside, namely, the potential for environmental disasters.[19]

But this gradually began to change. By the 1930s scientists, theologians, philosophers, novelists, and social critics warned about uncontrolled industrial growth. Unless humanity put limits on economic development, they would face extinction. Life on earth could be saved only by rejecting faith in the idea of progress.[20]

Thus was born the secular apocalypse. A number of scientists and social critics in the 1960s and 1970s built on this beginning. They warned that humanity's faith in science and industrial development was actually irrational, not scientific. This misguided faith came from a faulty understanding of the relationship between humankind and nature, an understanding that allowed humanity to exploit the environment with impunity.[21]

In some ways the sacred and secular apocalypses mirror each other. Millennial movements often grow out of disasters, social dislocations, and dashed expectations. The same seems to be true for the secular apocalypse. The hopes that the progress of science and industry would usher in a golden age (a secularized version of the Christian millennium) were dashed, and out of this disillusionment grew the secular apocalypse. Radical events in America during the 1960s and 1970s produced apocalyptic excitement that went beyond the religious community. Scientists and economists also joined in by depicting terrible end-time calamities—nuclear destruction, ecological disasters, financial collapse, and racial conflict. Indeed, many secular prophets were as gloomy as were some fundamentalists—but they did not have the rapture to bail them out.[22]





Some scientists came close to being date-setters. They insisted that life on earth could not survive beyond a particular year. Fortunately for their reputations, most of their projected dates for the end still lie in the future. Also, the secular prophets have not been quite as specific as some Christian date-setters have. Nevertheless, some of the years designated by scientists for global destruction have come and gone. On the whole, society has been more charitable to such disconfirmations than it has to similar failures by religious prophets.

## Imaginary Apocalypses

Most of the ideas of how the world will end have come from the Bible, science, or the occult. But eschatology—particularly secular eschatology—has also been conveyed through fiction, especially novels and films. This is not totally surprising, for the imagination is not pure invention. It connects with one's perception of reality, or what one believes reality will be in the future. Perception fuels the imagination, and in turn imagination fuels ideas. So as perception changes, the imagination and ideas change. Novels and films with end-time themes signal something about their writers—they believe the world will come to a disastrous end in the future. Indeed, "the bulk of eschatological fictions . . . can be read as indicators of a growing consciousness within modern Western culture that its end is in view" and that a new civilization will replace it.[23]

By the late seventeenth century the notion of progress had pushed end-of-the-world ideas into the background. But during the nineteenth century things began to change. The Romantic movement cherished nature and resented what the industrial world was doing to it. Forms of irrationalism reared their heads and embraced apocalyptic ideas. Economist Thomas Malthus painted a dire picture regarding overpopulation and humankind's future. Charles Darwin's theory of evolution shook everyone's beliefs and in the mind of some people diminished God's power. Prominent philosophers such as Arthur Schopenhauer and Friedrich Nietzsche expressed pessimistic and irrational ideas. Following the boom in science came a rapid growth of science fiction, the major genre for eschatological fiction. Then World War I provided a real apocalypse for the imagination to feed on.[24]

Eschatological fiction began to pop up during the nineteenth century. For "it was in the nineteenth century in the West, that the vision of the total end of man appeared for the first time in a systematic and repeated fashion."[25] And fiction served as a major vehicle for communicating these end-time ideas. Prior to 1914 it was the forces of nature, not humankind, that were depicted as causing the collapse of civiliza-

tion: "the world most often ended in imagination because of some natural catastrophe."[26]

In 1805 a French priest, Jean-Baptiste Cousin de Grainville, published *Le Dernier Homme* (The last man). The world ends by a natural catastrophe—soil exhaustion and human sterility. Mary Shelley published *The Last Man* in 1826, the story of a plague that kills off all of humanity except three people. Two of them then die in a storm and the third is left to wander the earth in vain.[27]

In the first half of the nineteenth century end-time themes crossed the Atlantic. During this time several comets excited America, including the most famous of them all, Halley's comet. Inspired by these and other events, Edgar Allan Poe wrote three end-time stories. In "The Conversation of Eiros and Charmion" (1839), a comet strikes the earth, and humankind perishes in great agony. In "The Masque of the Red Death" (1842), a plague is the vehicle for destruction. Finally, in "The Colloquy of Monos and Una," the world ends because humankind, obsessed with the idea of progress, attempts to control nature instead of obeying natural law.[28]

During the middle decades of the nineteenth century few secular eschatological works were written. But apocalyptic excitement heated up by the 1890s. From the 1890s to the late twentieth century, Western civilization has been embroiled in serious problems—wars, economic crises, totalitarianism, and even psychological issues that damage self-esteem. Such a climate lends itself to doomsday thinking.[29]

The king of apocalyptic writers was English novelist H. G. Wells (1866–1946). He published numerous novels and stories regarding the future, many of them pointing to doomsday. In *The Time Machine* (1895), the world ends in three ways: biological degeneration, class conflict, and the dying of the sun. The short story "The Star" (1897) tells about a runaway star causing great havoc on Earth, killing all but a few people. In *The War of the Worlds* (1898), humankind is nearly obliterated by technologically superior Martian invaders. An early atomic bomb ends civilization in *The World Set Free* (1914), and *All Aboard for Ararat* (1941) describes a modern Noah.[30]

In eschatological fiction before 1914, natural forces were the usual means of destroying humankind. However, around 1900 a shift could be detected. Nature continued to perform its evil deeds, but more often humanity became the chief cause of world-ending catastrophes. Of these human-made disasters, most were brought on by world wars fought with doomsday weapons.[31] Wells's *Shape of Things to Come* (1933) envisioned a new order after a global war that wrecked civilization. In Edward Shanks's *People of the Ruins* (1920), the cause of humanity's downfall is a global series of socialist revolutions. Shaw Desmond's *Ragnarok* (1926)





and Stephen Southwold's *Gas War of 1940* (1931) focus on the horrors of modern weaponry. In J. B. Priestley's *Doomsday Men* (1938), a mad scientist nearly blows up the world.[32]

Annihilation by war became the subject of many modern films as well, especially in the 1950s and 1960s. Nikita Khrushchev's threat to bury the United States precipitated a flurry of movies. *On the Beach* (1959) shows us an Australia where people wait for a nuclear war's radiation to reach them. In *The Day the Earth Caught Fire* (1962), accidental nuclear detonations by the United States and the Soviet Union knock the earth into a lower orbit around the sun. *Dr. Strangelove* (1963) portrays the way in which the final war begins. *The Planet of the Apes* (1967) and *Beneath the Planet of the Apes* (1969) depict how nuclear war wipes out civilization first on Earth and then on a future earth.[33]

Several other films follow the theme of nuclear destruction but take a different approach. In some, radiation enlarges animals or insects to monster proportions and they terrorize humanity. Examples include *Food of the Gods* (wasps, rats), *Them* (ants), and *Night of the Lepus* (rabbits). Other films portray a morally slack postnuclear world in which roving bands rule. Some examples are *The Road Warrior*, *Mad Max: Beyond Thunderdome*, and *Lord of the Flies*. Apocalyptic themes can be found in many other films: *Star Wars*, *The Poseidon Adventure*, *Battlestar Galactica*, *Earthquake*, the *Star Trek* series, *The Towering Inferno*, *The Invasion of the Body Snatchers*, *Judgment Day*, *The Omen* films, the *Terminator* series, *Waterworld*, *Outbreak*, *Independence Day*, and *Asteroid*.[34]

To sum up, the modern world has been a time of unprecedented social change. The Industrial Revolution and now the postindustrial world have brought new hopes, new fears, and new visions of the end. And literature and the film industry responded quickly and with great imagination. Among their plot lines are that aliens will turn us into pod-people, computers will take over the world, scientists will mess up the natural order, and our robots will run amok.[35]

## The Big-Bang Theory

The world may not have begun with a big bang, but it could certainly end with one. Consider what some people have to say. "As the bomb fell over Hiroshima and exploded, we saw an entire city disappear. . . . 'My God, what have we done?'" wrote Robert C. Lewis, an American aviator.[36] According to Andrei Sakharov, Soviet nuclear scientist: "All-out nuclear war would mean the destruction of contemporary civilization."[37] And as J. Robert Oppenheimer, father of the nuclear bomb, watched the

first mushroom-shaped cloud over the New Mexico desert, he was heard to say: "I am become death, the destroyer of the world."[38]

Revelation 6 speaks of the four horsemen of the apocalypse. The red horse denotes war. Of course, war is not new, and today humans are not more evil or cruel. In fact, people have fought wars of unspeakable ferocity since ancient times. The nature of war has changed, however; weapons are far more efficient. The most sadistic Roman soldier could not have killed in a lifetime what a modern pilot can do on one mission. And on August 6, 1945, warfare became even more efficient as the United States dropped the first atomic bomb on Hiroshima.[39]

In searing heat and a blinding light, the nuclear age opened with awesome destructiveness. From 100,000 to 200,000 people died directly or indirectly at Hiroshima. But even worse, those early bombs look like firecrackers when compared to modern weapons. Today, one bomb is from five to fifty times more powerful, and ten or more can be fired from a multiple warhead missile.[40]

While everybody agrees that a nuclear war would be cataclysmic, the inevitability of nuclear war is subject to debate. The probability of such a conflict has waxed and waned since 1945. The bomb ended World War II in short order. We had won the war, and only we had the bomb; no one would dare attack us. But this sense of euphoria ended in 1949 when the Soviets tested their first nuclear weapon. The United States and the Soviet Union were already embroiled in the Cold War, and many thought a nuclear war inevitable. At various levels of intensity this feeling prevailed until the late 1980s. About fifty thousand nuclear weapons existed, and somebody was bound to use them—so many people thought.[41]

Then came the end of the Cold War. The upheaval of 1989 ended Soviet rule in Eastern Europe, and the Soviet Union came unraveled in 1991. In the minds of many, nuclear war was no longer likely. The hands of the Doomsday Clock in Chicago, where 12:00 symbolizes the dreaded nuclear apocalypse, were moved back from 11:58 to 11:43—the farthest the hands had been from midnight since the clock was introduced in 1947.[42]

The specter of a nuclear war has disappeared, so many believe. The red horse of the apocalypse has faded to a shade of pink. Yet the world still has about fifty thousand nuclear weapons, and the technology to make more continues to exist. To some extent the mushroom-shaped cloud still hangs over the world. Doomsday may only have been postponed. With all these weapons around, some madman will probably push the button.[43] The big questions are who, when, why, and where.

The most devastating nuclear holocaust would come in an American-Russian conflict. The old Soviet Union may be dead, but Russia still pos-





sesses thousands of nuclear weapons. In the late 1990s, Russian nationalism is on the rise. Also, Russia has tremendous natural resources and massive potential strength. While a resurgence of Russian power may not come in the near future, it is possible somewhere down the road. And along with this recovery will come a renewed possibility of a nuclear confrontation.

But Russia is merely the most obvious threat. A small power or a terrorist group could also provoke a nuclear confrontation. The technical know-how to build nuclear weapons is here to stay. Despite well-meaning arms-control treaties and sanctions, this technology has spread. Officially, five nations have the bomb; but many smaller nations either have secret nuclear weapons or the capability to build them in short order. And most frightening, nations like Iraq, Libya, and Iran have had very unstable rulers—modern-day Neros who would push the button with no regard for the consequences.[44] In *Thinking about the Unthinkable* nuclear-war expert Herbert Kahn presents a scenario in which a smaller power or even a terrorist group provokes the larger powers into a nuclear exchange. The renegade launches a first-strike nuclear attack in the hope of drawing the major powers into the conflict. They go for the bait and proceed to demolish each other. Meanwhile, the rogue power is left standing and gains control after the war.[45]

Or a nuclear debacle could come by an accident. The world has seen a number of lesser episodes such as the 1979 partial meltdown at Three Mile Island, Pennsylvania. The worst nuclear disaster came at the Chernobyl power plant in the Soviet Union. This and perhaps a future meltdown could have devastating consequences. Humanity lives in fear of such an accident. And even if such a catastrophe does not happen, we still have the problem of nuclear waste, the most dangerous pollutant on earth. Currently we have no safe way to dispose of it, and it takes thousands of years to lose its radioactivity. Even in minute amounts plutonium—the waste product of nuclear fuel—can be deadly to human, animal, and plant life.[46]

Still, the most likely scenario for a nuclear holocaust is war. War is endemic to the modern world-system. Despite much idealism and efforts to curb belligerence, war will continue to be a fact of life. If a conflict ever escalates to merely the use of "low-yield 'tactical' or 'battlefield' nuclear weapons, limiting its further escalation up the ladder to thermonuclear doomsday" may be impossible.[47]

How destructive would a nuclear war be? This would depend on the nations involved, the number of warheads detonated, their destructive power, and the targets selected. Still, even best-case scenarios are catastrophic. Moreover, students of nuclear war agree that the long-term ef-

fects will be at least as disastrous as the immediate destructiveness of the nuclear weapons themselves.[48]

In the first few days, millions of people will perish. The initial blast, firestorms, heat, radiation, hurricane-strength winds, and choking smoke and dust will cause an unprecedented number of casualties. Even if civilian centers are not targeted, the deaths will be in the millions, for military, industrial, and government centers are often in densely populated areas.[49] In the worst-case scenarios far more people will die in the months and years thereafter. Almost all urban centers will be destroyed. While not everyone will perish, a large percentage of the total population will be burned or poisoned by radiation. The very fabric of life might unravel. With transportation and communication systems severed, power plants destroyed, governments incapacitated, and medical supplies unavailable, the necessities of life will be lacking in many regions. And if several industrial nations were destroyed, there would be little chance of aid from the outside, just as there was after World War II. Indeed, with farmers no longer growing food or unable to transport it to urban areas, the Western world would be threatened by famine, pestilence, and civil disorder not seen since the Middle Ages.[50]

But even worse is the "nuclear winter" scenario, which has come under attack by respected scientists. However, if the doomsday ecologists are on target, global temperatures would plunge, especially in the Northern Hemisphere, to at least –10° F. The world would be in an artificial winter from three months to two years. As a result, the food cycle would be disrupted and millions of people would die.[51]

## The Wrath of Mother Nature

"Oh, my God! Los Angeles has vanished! . . . Wait a minute. There's more. Orange County is gone too. And most of San Diego. And . . ." So goes the book *The Last Days of the Late Great State of California* (1968) by Curt Gentry, a California journalist.[52]

Will the end come at the hands of Mother Nature? Today very few scientists believe that natural causes—earthquakes, volcanoes, floods—can precipitate a global catastrophe. To be sure, nature can still get angry and cause great havoc on a regional level. Thousands of people could still die because of one of these upheavals. And for others caught up in such a calamity, their world may in effect come to an end.

Throughout history people have viewed nature with great awe. Earthquakes, volcanoes, tidal waves, floods, and the like have roused terror. Most often the forces of nature were viewed as the instruments of God, but some people saw nature as acting without God. Today a collection





of scientists, prophets, psychics, astrologers, and eccentrics predict widespread natural catastrophes, if not the absolute end of humanity. The calamities that most frequently arouse an apocalyptic excitement include earthquakes, volcanoes, an ice age, and a polar shift.

Earthquakes head the list. Why? A sense of the havoc they can wreak is deeply imbedded in the human psyche. In the Middle East, where much of our thinking is rooted, earthquakes are the most common natural disaster. The Old Testament prophets, Jesus, and John of Revelation spoke of them, as did Nostradamus. And in our day a host of soothsayers including Edgar Cayce and Jeane Dixon have predicted them. Semiscientific seers like Jeffrey Goodman and Immanuel Velikovsky refer to them apocalyptically.[53]

History has witnessed a number of devastating earthquakes. The most deadly earthquake occurred in central China in 1556; approximately 830,000 people perished. The Lisbon earthquake of 1755 killed about 60,000 people. The 1811–12 quake in New Madrid, Missouri, killed few people because of the sparse population. But it shifted the topography of the entire area. Chile experienced a major earthquake in 1960, killing 3,000 people and sinking about 5,000 square miles of land. The worst natural disaster of the twentieth century occurred in Tangshan, China, in 1976 when 242,000 people perished.[54]

Could earthquakes endanger life on earth? Probably not. But one theory conjectures that gigantic earthquakes could impact the rotation of the earth. Scientists know that the earth's rotation wobbles and that this wobble is related to earthquakes and volcanoes. Moreover, even minor variations in the rotation axis can affect climate on the earth's surface and stresses within the earth. But scientists don't know whether an axis shift causes earthquakes or earthquakes cause axis shifts, which could be catastrophic. If the latter, an earthquake might well be indirectly connected with the end of the world.[55]

Volcanoes may be nature's most spectacular expression, but they have not evoked much apocalyptic excitement. While they had a role in the end-time scenario of the Norseman, they play little role in the Christian and Western traditions. Moreover, unlike earthquakes, which strike without warning, volcanoes send a clear signal before erupting. Thus, if humans perish, it is usually because they failed to evacuate the area.[56]

Still, there have been at least two doomsday explosions in modern times. Perhaps the most devastating eruption took place in 1883 on Krakatoa, an island in what is now Indonesia. The explosion could be heard nearly 3,000 miles away, and about 37,000 people perished. In 1902 Mount Pelée blew up on Martinique in the Caribbean. About 40,000 died, largely because they failed to heed the ample warnings.[57]