
RELIGION & PHILOSOPHY

George railed against the evils of private property. The archbishop opposed priestly involvement in political and social issues, but he had also inherited considerable wealth from his father and identified himself with the propertied class. Moreover, he fretted over the threat that George's campaign posed to the city's Tammany Hall Democratic machine, which ran on Irish votes and which supported state aid for Catholic charities. When McGlynn defied Corrigan's orders and addressed a pro-George rally, the bishop suspended him from his priestly duties for two weeks. After George's defeat in November, Corrigan again suspended McGlynn for his continued support of George's views. He also publicly accused the rebellious priest of insulting Pope Leo XIII by preaching that the Church derives its power from the laity. The pontiff stepped in and excommunicated McGlynn in July 1887.

By 1891, George's reform movement had lost steam, and McGlynn was out of the news. Pope Leo restored McGlynn to the priesthood in 1892 — without consulting Corrigan. Dumfounded, the archbishop at first refused to receive McGlynn back into the diocese but subsequently decided to curry favor with the pope. He became a fervent defender of papal infallibility, then being questioned by many liberal European and American Catholics. In December 1894, Corrigan felt confident enough to exile the priest to a church in remote upstate New York.

Most American cardinals and bishops cheered Corrigan's victory over McGlynn. But Leo became disturbed at the turmoil in the New World and in 1893 sent to the United States a Vatican official with veto power over the appointment of bishops. By seeking Rome's aid in disciplining McGlynn, Corrigan and his supporters forfeited much of the American church's autonomy and never got it back.

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The Death of the Dinosaurs

"Extraterrestrial Cause for the Cretaceous-Tertiary Extinction" by Luis W. Alvarez et al., in *Science* (June 6, 1980), 1515 Massachusetts Ave., N.W., Washington, D.C. 20005.

What killed off the dinosaurs? Scientists at the University of California, Berkeley, hypothesize that a giant meteor struck the Earth at the end of the Cretaceous period, 65 million years ago, sending enough dust into the atmosphere to blot out the sun, suppress plant photosynthesis, and destroy prehistoric food chains.

As evidence, the authors cite dramatic increases in levels of iridium (a platinum-like metal) found in layers of the Earth's crust dated near the end of the Cretaceous period. Platinum family elements are rare in

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the Earth's crust and upper mantle but common in meteors, indicating an extraterrestrial source, the authors argue. Finds at sites as distant as Italy and New Zealand confirm that the phenomenon was worldwide. Moreover, the concentration of iridium in a narrow stratum suggests that the substance was deposited suddenly, not gradually by the countless meteors and meteorites that regularly bombard the earth.

The authors estimate that the meteor was roughly 6.2 miles in diameter and created roughly 1,000 times more atmospheric dust than the Indonesian volcano Krakatoa, which spewed about 11 cubic miles of material into the air in 1883. Krakatoa caused brilliant sunsets worldwide for two years; the meteor may have turned day into night for several years.

The fossil record supports theories of a killing global dust cover. Microscopic plants on which the ocean food chain is based were virtually wiped out at the end of the Cretaceous period, dooming higher life forms such as marine reptiles. Land plants stopped growing but later regenerated from seeds and spores. The large animals that lived on them, however, starved. Smaller animals, including early mammals, survived by eating insects and decaying vegetation.

If a meteor caused the Cretaceous extinction, where did it strike? Only three craters large enough (60 miles or more in diameter) to have been created by such an object are known—in Siberia, Ontario, and South Africa. But the first is too young and the others too old to qualify. There is a two-thirds probability that the meteor fell into the sea. The meteor's estimated diameter was twice the typical ocean depth; its impact could well have scattered pulverized rock into the atmosphere.

The Age of Anemia

"Female Longevity and Diet in the Middle Ages" by Vern Bullough and Cameron Campbell, in *Speculum* (Spring 1980), Medieval Academy, 1430 Massachusetts Ave., Cambridge, Mass. 02138.

Up until the 12th century, European men lived longer than women. Indeed, local censuses taken in 8th- and 9th-century France and Italy show that men outnumbered women by as much as 12 percent, even though at least 6 percent more female babies were born.

Many at the time accepted Aristotle's explanation—that the male is a "warmer creature than the female." The authors, historians at California State University, Northridge, blame the iron-poor diet of the early Middle Ages.

Early medieval peasants ate mainly rye, wheat, or barley bread, and a kind of "pot luck" broth. Their light protein and iron intakes were only occasionally supplemented by cheese, wine, meat, greens, and beans. Because of menstruation, women and girls past puberty require between 1 and 2 milligrams of iron per day in their diet—twice as much as men. During pregnancy, iron needs rise to between 3 and 7.5 milligrams per day—much more than the 0.25 to 0.75 milligrams per day