

T.H. Huxley

British biologist in full **Thomas Henry Huxley**

born May 4, 1825, Ealing, Middlesex, Eng. died June 29, 1895, Eastbourne, Sussex

Power and “Pope Huxley”

Huxley’s controversial positions in the 1860s and ’70s won the support of an increasing number of his contemporaries, while his research established him as one of the leading scientists of his era. As a scientific popularizer he was without peer, and he was an energetic organizer and political infighter. These qualities gave Huxley the levers necessary to elevate the position of science in British society, and he helped to build a [social order](#) in which science and professionalism replaced classics and patronage.

He did not fight alone. With the [Kew Gardens](#) botanist [Joseph Dalton Hooker](#), the philosopher [Herbert Spencer](#), the physicist [John Tyndall](#), and other former outsiders, Huxley formed the X-Club in 1864 to advance science. Within a decade they were parceling out Royal Society posts. Their mouthpiece was the *Reader*—in which Huxley, answering Conservative leader Benjamin Disraeli’s criticism of Darwinism, notoriously claimed that science would achieve “domination over the whole realm of the [intellect](#)”—and *Nature* (founded in 1869 by Huxley’s team). Huxley also served as president of the Geological Society (1869–71), the Ethnological Society (1868–71), the British Association for the Advancement of Science (1870), the Marine Biological Association (1884–90), and the [Royal Society](#) (1883–85). With seats on 10 Royal Commissions, deliberating on everything from fisheries to diseases to vivisection, he had clearly penetrated the labyrinthine corridors of power.

Those corridors shuddered at the growing strength of the rival industrial powers Germany and the [United States](#). Huxley and his circle argued that better scientific education and support for [scientific research](#) would produce the workers and innovations necessary to maintain British supremacy. Huxley spent much of the 1860s and ’70s immersed in educational reform and institution building. He joined the [Eton College](#) governing board and the [London School](#) Board (1870–72), devising a modern curriculum suitable for both the sons of privilege and the capital’s “street arabs.” He likewise served as rector (1872–74) of the ancient University of Aberdeen and principal (1868–80) of the new Working Men’s College in south London. As a member (1870–75) of the Royal Commission on Scientific Instruction, he recommended the fusion of his Government School of Mines with the [Royal College](#) of Chemistry; they were moved to South Kensington and renamed the Normal School of Science (ultimately the [Imperial College](#) of Science and Technology, now part of the [University of London](#)). He advised on the founding of a vocational Central Institution for Technical Education (opened in London in 1884), for which he was made a freeman of the [City of London](#) in

1883. To fill the demand for science teachers (driven in part by the Education Act of 1870), he taught courses at South Kensington for schoolmasters and mistresses (the latter did so well that he was inspired to fight for the admission of women to [universities](#)), and he set the Department of Science and Art's public exams. His exam invigilators were Royal Engineers (the construction workers at South Kensington), which gave his "warfare" image of science with theology its deeper military aura. Not for nothing did the students nickname him "the General."

His popularity grew with his political influence. Huxley's talks were headline grabbers. The provocation and the handsome looks drew enormous crowds; once, in 1866, as he gave a talk on blind faith as the ultimate sin, the evangelist of science saw 2,000 people turned away from the crammed hall. A bequest of £1,000 from a Quaker supporter financed Huxley's American tour in 1876, on which he gave talks about the birds' dinosaur ancestry, made the succession of fossil horses in America the "Demonstrative Evidence of Evolution," and was dubbed "Huxley Eikonoklastes" by a [New York City](#) paper. (Huxley's whistle-stop tours led his children to call him "the lodger" at home.) No less popular were his writings. He took readers through time tunnels to experience exotic past worlds. An [essay](#) on protoplasm as the substrate of life sent the *Fortnightly Review* into seven editions in 1869. His numerous introductory textbooks were well received. Such prodigious activity on so many fronts led to continual breakdowns and recuperations in Egypt, Germany, Italy, and France. In addition, his pay never quite sufficed, as he financed the children of his broken-down brother James and drunken sister Ellen. And the more he upheld family values and denied that skepticism and evolutionism led to debauchery, the more he worried about scandals breaking around his ne'er-do-well relations.

In 1869 he coined the word [agnostic](#), meaning that one could know nothing of ultimate reality, whether spiritual or material. For him morality rested not in reciting creeds but in weighing evidence for events; it was a consecration of doubt that vested his new professionals with the priests' old power. (For such messianic pronouncements he was nicknamed "Pope Huxley.") His research, meanwhile, became increasingly influenced by [evolution](#). He used the fishlike lancelet (amphioxus) to plumb the origin of all vertebrates, tackled crayfish evolution, showed that Mesozoic crocodiles progressively developed a secondary palate (which allowed them to drown newly evolved mammalian prey), and wrote the section on evolution in biology in the article "Evolution" for the ninth edition of the *Encyclopædia Britannica* (published 1878); for extracts from the article, see the Britannica Classic: [evolution](#). Finally, in creating a package that the teachers could take to their hometowns, Huxley forged the discipline of biology—based on structural (rather than evolutionary) anatomy, stripped down to a few exemplary animal and plant "types."

Citations

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"T.H. Huxley." *Encyclopædia Britannica*. 2009. Encyclopædia Britannica Online. 25 Jun. 2009 <<http://www.britannica.com/EBchecked/topic/277746/T-H-Huxley>>.

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T.H. Huxley. (2009). In *Encyclopædia Britannica*. Retrieved June 25, 2009, from Encyclopædia Britannica Online:
<http://www.britannica.com/EBchecked/topic/277746/T-H-Huxley>