Facets of Huxley

Thomas Henry Huxley. Communicating for Science. J. VERNON JENSEN. University of Delaware Press, Newark, 1991 (distributor, Associated University Presses, Cranbury, NJ). 253 pp., illus. $38.50.

Huxley at Work. With the Scientific Correspondence of T. H. Huxley and the Rev. Dr. George Gordon of Birnie, near Elgin. MICHAEL COLLIE. Macmillan, New York, 1991. xii, 158 pp. + plates. $40.

Historians of science have come to know Thomas Henry Huxley as a perplexing individual, at once a vigorous public controversialist and a conservative, almost timid scientific theorist. These two books successively bring out both sides of Darwin's ambivalent bulldog. J. Vernon Jensen, whose field is speech communication, has written a study emphasizing Huxley as a public speaker. The book is loose-jointed, incorporating a number of Jensen's articles on Huxley, but it does achieve a certain rough unity. Jensen begins by describing the young Huxley's relationship to three women, his sister Eliza, his wife Henrietta, and his friend Ellen Busk, all of whom encouraged him in important ways. He goes on to describe Huxley's earliest public address before the Royal Institution in 1852 and continues with an investigation of the famous exchange with Bishop Wilberforce at the British Association meeting of 1860. There are chapters on Huxley's lecture tour of the United States in 1876, his later controversial exchanges with religious spokesmen, and his membership in the scientifically powerful X Club.

Jensen observes that although public speaking made him nervous, Huxley was a witty, sarcastic polemicist, who, like many of his religious opponents, saw stark contrasts between right and wrong. He frequently employed a warfare metaphor to describe relations between religion and science or a roadblock metaphor to describe religion as an obstacle to scientific progress. Jensen thoroughly examines Huxley's clash with Bishop Wilberforce, showing that traditional accounts of their remarks were essentially correct. At the same time Jensen finds that both men felt they had triumphed in the debate and that the majority of the audience probably sided with Wilberforce. Yet despite his care in examining such events, Jensen takes the warfare metaphor too seriously himself: he devotes disproportionate attention to religious debates at the expense of Huxley's other public concerns. Jensen mentions Huxley's arguments for scientific education, funding, and professionalism, but the topics do not seem to interest him.

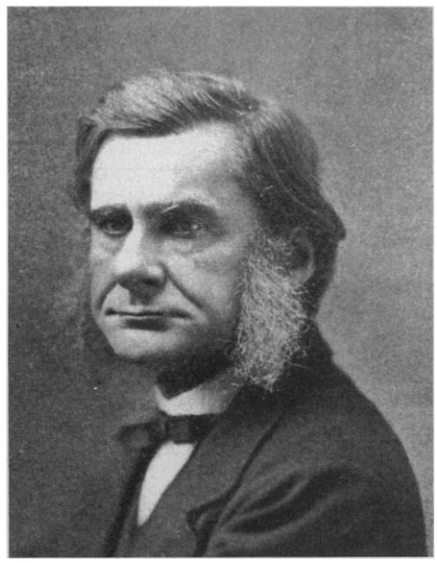
In general, Jensen's treatment of Huxley's rhetoric offers only limited insights. He notes that Huxley was a direct, informal speaker who relied on clarity of presentation rather than oratorical flamboyance for effect. He fails to consider the ways in which Huxley may have adjusted his rhetoric to particular topics or circumstances, however. He also ignores the general context of Victorian rhetorical practice, so it is hard to see how Huxley fits into any wider picture. Popular lectures on scientific topics had a respected place in Huxley's day, but Jensen gives us little help in understanding his contribution to this tradition.

Turning away from partisan controversies, Michael Collie has written about a very different Huxley, the cautious, fact-obsessed researcher who investigated the Elgin reptiles. The story begins in the 1850s when the Reverend George Gordon (whose revealing correspondence with Huxley is published in the book) and other scientifically interested neighbors began to unearth some unusual fossils near the Scottish town of Elgin, just south of Moray Firth. Gordon sent his first discoveries to Sir Roderick Murchison, head of the Geological Survey, who passed them on to Huxley, the Survey paleontologist. Murchison and other geologists had assigned the sandstones around Elgin to the Devonian, but Gordon's specimens upset this conclusion, for Huxley found them to be reptiles, some of them closely related to known Triassic forms.

Ironically, Murchison, who was a strong believer in geological progressionism and had nothing to gain from any discovery of "Devonian" reptiles, was slow to convert. Gordon, hoping that his fossils had revolutionary significance, likewise held out for the original Devonian dating. Huxley immediately told Gordon of his belief in the Triassic dating but refrained from contradicting Murchison in his publications. He apparently felt that dating strata was a geologist's task and that as a paleontologist he should limit himself to describing and classifying the fossils.

Huxley's restraint was understandable: Murchison was his superior on the Geological Survey and a powerful scientific administrator. However, Collie also emphasizes Huxley's utter lack of interest in pursuing the evolutionary implications of his fossils. Despite his public defense of Darwin, Huxley was inclined to view his reptiles as "persistent types." In his opinion, both lizards and crocodiles spanned the geological periods essentially unmodified, contributing nothing to the evidence for evolution. It was only after his visit to the United States in 1876, where he had a chance to inspect O. C. Marsh's evidence for evolution in fossil horses, that Huxley began to pay attention to modifications in lizards and crocodiles that drew them apart over time.

The scientist described by Collie behaved very differently from the public spokesman described by Jensen, hewing closely to the facts and risking no flights of theoretical speculation. Collie goes so far as to describe his subject as a repressed Victorian, an assessment that would probably trouble Jensen. Nevertheless, both authors do identify one trait in Huxley's makeup that helps to explain his behavior. They both agree that Huxley worked fast: he had a quick mind and turned out an enormous quantity of work. Collie notes that Huxley published quickly too, frequently leaving loose ends in his papers that had to be tied up in later publications. He had little inclination to reflect on the broader implications of his work; the facts sufficed.



T. H. Huxley

Collie's book suffers from his failure to make use of Adrian Desmond's *Archetypes and Ancestors* (University of Chicago Press, 1984), which surveys paleontology in the Darwinian era and comes to very similar conclusions about Huxley. For example, Desmond thinks that Huxley's very tentative attitude toward evolution derived in part from his continuing devotion to the antiprogressivism of Charles Lyell. Indeed, Desmond shows that Huxley continued to think in terms of a largely static fossil past even after Lyell himself began to abandon the idea. By contrast, Collie explains Huxley's conservatism as the result of his devotion to the principles of Cuvier, an assertion that would no doubt have outraged Huxley, who vehemently repudiated Cuvier's concept of correlation as a guide to reconstructing fossils. Nevertheless, Collie has accurately represented Huxley's circumspect style of research, and his book provides striking testimony to the often contradictory personality of a great scientific figure.

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