



St. George Mivart as Popularizer of Zoology in Britain and America, 1869–1881

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Recent scholarly attentions have shifted from key actors within the scientific elite and religious authorities to scientific practitioners and popularizers who used science to pursue a wide variety of cultural purposes. The Roman Catholic zoologist St. George Mivart (1827–1900) has typically been cast as a staunch anti-Darwinian ostracized by Darwin's inner circle of scientific naturalists. Understood as a popularizer of science, his position can be re-thought. Mivart did not operate on the periphery of Victorian science. Instead, his notable contributions to the fields of zoology and anatomy and his participation in debates about the origin of the human mind, consciousness, and soul made him a central figure in the changing landscape of late-Victorian scientific culture. Through the popular periodical press and his anatomy textbook for beginners, Mivart secured a reputation as a key spokesman for science and gained authority as a leading critic of agnostic scientific naturalism.

Introduction

The zoologist and Roman Catholic convert, St. George Mivart (1827–1900), can be examined as one of the many popularizers of science during the Victorian period, although he has never been fully considered as such.¹

Mivart was mostly self-taught in science, and first encountered Charles Darwin's fiercest advocate and supporter, Thomas Henry Huxley, by attending his public lecture on "The Principles of Biology" at the Royal Institution in 1858, less than six months before Darwin and Alfred Russel Wallace's joint theory of evolution by natural selection was announced at the Linnean Society.² In 1861 Mivart became one of Huxley's students, and secured his first lectureship at St. Mary's Teaching Hospital in

London the following year with the aid of references from Huxley and the comparative anatomist Richard Owen.³ Through friendship with Huxley, Mivart developed close personal and professional relationships with many of the British scientific naturalists, including, Darwin. Yet, by the late 1860s, Mivart became one of Darwin's fiercest critics and a leading Roman Catholic apologist.⁴

Many scholars who have examined the reception of Mivart's works have focused on the period from the 1880s onwards when Mivart's theological and philosophical works gathered fierce criticism from within Catholic circles, resulting in him being denied the sacraments toward the end of his life.⁵ However, Mivart's work in the 1870s has not been fully considered in the context of the changing scientific and cultural landscape of this period. Influential work by Frank Turner and Robert Young interprets conflicts within science during the second half of the nineteenth century primarily as contents for cultural and intellectual authority waged by scientific naturalists like Huxley and their religious opponents like Mivart.⁶ Gowan Dawson and Bernard Lightman define scientific naturalism as "a label for a certain set of shared doctrines" by a group of intellectuals who aimed to establish themselves as a modern scientific and cultural elite.⁷ Founded upon "a common body of established truths" that included evolution and the material origin of consciousness, British scientific naturalists—including figures such as Darwin, Huxley, John Tyndall, and Herbert Spencer—

³ Don O'Leary, *Roman Catholicism and Modern Science: A History* (New York: Continuum, 2006), 79–80.

⁴ See Gruber, *A Conscience in Conflict* (ref. 2); John D. Root, "The Final Apostasy of St. George Jackson Mivart," *The Catholic Historical Review* 71, no. 1 (1985): 1–25; Adrian Desmond, *Huxley: From Devil's Disciple to Evolution's High Priest* (Reading, MA: Helix Books, 1994), 340–1, 407.

⁵ Mariano Artigas, Thomas F. Glick, and Rafael A. Martínez, *Negotiating Darwin: The Vatican Confronts Evolution, 1877–1902* (Baltimore: John Hopkins University Press, 2006), 267.

⁶ Frank M. Turner, "Rainfall, Plagues, and the Prince of Wales: A Chapter in the Conflict of Religion and Science," *The Journal of British Studies* 13, no. 2 (1974): 46–65; Frank M. Turner, "The Victorian Conflict between Science and Religion: A Professional Dimension," *Isis* 69 (1978): 356–76; Robert M. Young, *Darwin's Metaphor: Nature's Place in Victorian Culture* (Cambridge: Cambridge University Press, 1985).

⁷ Gowan Dawson and Bernard Lightman, "Introduction," in *Victorian Scientific Naturalism: Community, Identity, Continuity*, ed. Gowan Dawson and Bernard Lightman (Chicago: University of Chicago Press, 2014), 5.

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¹ Bernard Lightman, *Victorian Popularizers of Science: Designing Nature for New Audiences* (Chicago: University of Chicago Press, 2007).

² Jacob W. Gruber, *A Conscience in Conflict: The Life of St. George Mivart* (New York: Temple University Publications, 1960), 22–23.

promoted a shared secular ideology in the years following Darwin's *On the Origin of Species* (1859).⁸ Using empirical methods the scientific naturalists interpreted nature.⁹ By the end of the nineteenth century scientific naturalism had come to denote "a particular set of principles antithetical to the supernatural or spiritual."¹⁰ In recent years scholarly attention has shifted from elite practitioners to a wider array of actors.¹¹ Historians have identified a number of different groups and individuals which incorporated science in their struggle to gain cultural authority and assert their claims to speak on behalf of science.¹²

In 1960, Jacob Gruber published a biography of Mivart.¹³ However, the 1870s, when Mivart succeeded in shaping his own scientific position and reputation independently from Huxley and the other Darwinians, has not been fully examined. By bringing Mivart to the forefront of these debates, he can be reconsidered as an important cultural and scientific actor during the Victorian period. Mivart, while seeking to popularize science, acted to reshape scientific beliefs through his contributions to a range of periodicals. From his diverse scientific and intellectual interests, he used various British and American periodicals to reach diverse audiences. Mivart was also concerned with resisting the notion, propagated by the scientific naturalists, that science could be conceived outside of a religious framework. I will argue that Mivart has wrongly been depicted as a marginal figure, especially after his sharp dispute with Darwin and Huxley. It is important to note, however, that what counted as peripheral for the actors was always contested, and that Mivart's publishing endeavors were therefore one attempt to redefine what might be considered peripheral to scientific inquiry and authority during this period.

Mivart's estrangement from the inner circle of scientific naturalists, and his debut as a Catholic apologist, is traditionally believed to have occurred in the late 1860s, with his 1869 publication of a series of unsigned articles entitled "Difficulties of the Theory of Natural Selection" in the Catholic periodical *The Month*.¹⁴ Here Mivart first laid out the scientific and religious framework that he would develop in *On the Genesis of Species* (1871). He first alluded to his concerns, not just regarding natural selection, but also its proponents: "the theory need not be involved in the fault of its supporters . . . the generalizations at which they have arrived are such as to raise difficulties against received doctrines or interpretations of Scripture, and to use their discoveries as weapons against religion."¹⁵

The tensions between Mivart and Darwin began following the publication of *Genesis of Species*. This technical and expert attack on Darwin's theory of natural selection was published a month earlier than Darwin's *Descent of Man*.¹⁶ Mivart followed his book with a highly critical anonymous review of Darwin's *Descent* in the *Quarterly Review*.¹⁷ From its "skill & style," Darwin in a letter to Wallace in July 1871, determined that "there can be no doubt it is by Mivart & wonderfully clever."¹⁸ Huxley had also suspected Mivart, and was "grieved" to hear that he was the author.¹⁹

In response, Huxley rallied to Darwin's defense and published a derisive review of Mivart's book, and Darwin arranged to have the American Chauncey Wright's paper criticizing Mivart's work republished in Britain.²⁰ Huxley however at this point maintained that, although Mivart's mind had been tainted by "accursed Popery and fear for his soul," he had "done good work" and was "by no means a bad fellow."²¹

Following *Genesis of Species*, Mivart published several articles reinforcing the notion that scientific naturalism may result in both moral and sexual deviancies. In his "Evolution and its Consequences" (1872), Mivart claimed that Huxley's "system" would result in "horrors worse than those of the Parisian Commune."²² Mivart declared however that he had no intention of "deprecating obliquely Mr. Darwin."²³ Yet, the relationship between Mivart and Darwin broke down irretrievably by 1872 following a heated exchange of letters, in which both believed that their personal integrity had been questioned and their beliefs distorted. Darwin, in one of his final letters to Mivart, instructed Mivart not to write to him again. "Your several articles have mortified me more than those of any other man," he complained.²⁴

Mivart continued to condemn the evolutionary science of Darwin for its perceived links to immorality. For example, in his series of articles on "Contemporary Evolution" (1873) published in the *Contemporary Review*, Mivart associated Darwin's evolutionary theory with

¹⁶ St. George Mivart, *On the Genesis of Species* (London: Macmillan & Co, 1871); Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, 2 vols. (London: John Murray, 1871).

¹⁷ [St. George Mivart], "The Descent of Man, and Selection in Relation to Sex," *Quarterly Review* 131 (July 1871): 47–90.

¹⁸ Charles Darwin, letter to Alfred Russel Wallace, July 12, 1871, letter no. 7858, Darwin Correspondence Project, accessed October 3, 2016, <http://www.darwinproject.ac.uk/DCP-LETT-7858>.

¹⁹ Thomas H. Huxley, letter to Charles Darwin, September 28, 1871, letter no. 7973, Darwin Correspondence Project, accessed October 3, 2016, <http://www.darwinproject.ac.uk/DCP-LETT-7973>. See also Thomas H. Huxley and Henrietta Anne Huxley, letter to Charles Darwin, September 20, 1871, letter no. 7953, Darwin Correspondence Project, accessed October 3, 2016, <http://www.darwinproject.ac.uk/DCP-LETT-7953>; Charles Darwin, letter to Thomas H. Huxley, September 21, 1871, letter no. 7958, Darwin Correspondence Project, accessed October 3, 2016, <http://www.darwinproject.ac.uk/DCP-LETT-7958>.

²⁰ Thomas H. Huxley, "Mr. Darwin's Critics," *Contemporary Review* 18 (1871): 443–76; Chauncey Wright, "Darwinism: Being an Examination of Mr. St. George Mivart's 'Genesis of Species,'" *North American Review* 1, no. 13 (1871): 64–103.

²¹ Thomas H. Huxley, letter to Charles Darwin, September 20, 1871, letter no. 7953, Darwin Correspondence Project, accessed October 3, 2016, <http://www.darwinproject.ac.uk/DCP-LETT-7953>.

²² St. George Mivart, "Evolution and its Consequences," *Contemporary Review* 19 (1872): 168–97, on 196.

²³ Mivart, "Evolution and its Consequences," (ref. 22), 196.

²⁴ Charles Darwin, letter to St. George Mivart, January 8, 1872, letter no. 8149, Darwin Correspondence Project, accessed October 3, 2016, <http://www.darwinproject.ac.uk/DCP-LETT-8149>.

⁸ Thomas H. Huxley, "Prologue," in *Essays Upon Some Controverted Questions. Collected Essays V* (London: Macmillan & Co, 1892), 40; Lightman, *Victorian Popularizers of Science* (ref. 1), 7; Dawson and Lightman, "Introduction," (ref. 7), 1–3.

⁹ Lightman, *Victorian Popularizers of Science* (ref. 1), 7.

¹⁰ Dawson and Lightman, "Introduction," (ref. 7), 8.

¹¹ Anne Secord, "Science in the pub: artisan botanists in early nineteenth-century Lancashire," *History of Science* 32 (1994): 269–315; James A. Secord, *Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation* (Chicago: University of Chicago Press, 2000); Lightman, *Victorian Popularizers of Science* (ref. 1).

¹² Dawson and Lightman, "Introduction," (ref. 7)

¹³ Gruber, *A Conscience in Conflict* (ref. 2).

¹⁴ [St. George Mivart], "Difficulties of the Theory of Natural Selection," 3 pts., *The Month* 11 (1869): 35–53; 134–53; 274–89.

¹⁵ Mivart, "Difficulties of Natural Selection," pt. 1 (ref. 14), 35.

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