

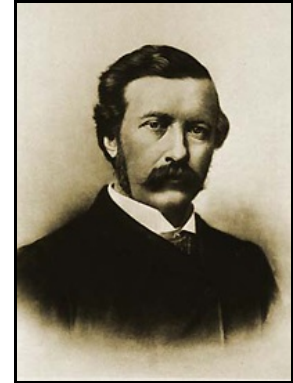
GEORGE JOHN ROMANES

(20 May 1848–23 May 1894)

Courtesy of Wikipedia, with emendations

George Romanes was a Canadian-born English evolutionary biologist and physiologist who laid the foundation of what he called comparative psychology, postulating a similarity of cognitive processes and mechanisms between humans and other animals. It was a postulation that led him to some conclusions that late-19th-century feminist and later observers would judge to be remarkably myopic.

Romanes was born in Kingston, Ontario, the third son of George Romanes, a Scottish Presbyterian minister. When he was two years old, his parents returned to England, where he spent the rest of his life. Like many English naturalists, he nearly studied divinity, but instead opted to pursue medicine and physiology at Cambridge University, from which he graduated with a BA degree in 1871. Although he came from an educated home, his school education was erratic, such that he entered university with little knowledge of the ways of the world.



George Romanes 1894

It was at Cambridge that he first met Charles Darwin, who remained a friend for life. After graduating from Gonville and Caius College, Cambridge, with a BA degree in 1871, and guided by Michael Foster, Romanes continued to work on the physiology of invertebrates at University College London under William Sharpey and Burdon-Sanderson. In 1879, at 31, Romanes was elected a Fellow of the Royal Society on the basis of his work on the nervous systems of medusae. However, his tendency to support his claims by anecdotal evidence (rather than empirical tests) prompted Lloyd Morgan's warning known as Morgan's Canon:

“In no case is an animal activity to be interpreted in terms of higher psychological processes, if it can be fairly interpreted in terms of processes which stand lower in the scale of psychological evolution and development” (*Journal of Mind and Behavior* 5: 119–130).

Although Romanes's wife claimed he had regained his Christian faith later in life, he acknowledged that his work with Darwin and evolutionary theory had led him to abandon religion.

While for the most part Romanes supported Darwinism and the role of natural selection, he did perceive three problems that Darwinism could not account for: (1) the differences in fertility between natural species and domesticated varieties; (2) the apparent lack of utilitarian significance in the structures differentiating allied species; and (3) the “swamping” influence on inherited traits from free inter-crossing of species [Mendelian genetics was later able to explain this last conundrum]. Romanes pointed out that Darwin had not actually shown how natural selection produced species, despite the title of his

famous book. Natural selection could be the “machine” for producing adaptation, but the mechanism for splitting species was still in question. Romanes’s own solution to this was called “physiological selection”; his idea was that variation in reproductive ability, caused mainly by the prevention of inter-crossing with parental forms, was the primary driving force in the production of new species. The majority view then (and now) was that geographical separation is the primary force in species splitting (or allopatry) and secondarily was the increased sterility of crosses between incipient species.

Romanes is commemorated at Caius College, Cambridge, by a stained glass window in the chapel. He founded a series of free public lectures—the Romanes Lectures—that are still running today; his friend and luminary Thomas Henry Huxley gave the second Romanes lecture. Romanes was a highly regarded scientist in his day, but after his death the tendency he had to leap to broad sociological conclusions based on isolated scientific facts damaged his reputation.



G. Romanes 1880s