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Romanes, G. J.

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Without Abstract

Basic Biographical Information

Romanes (1848–1894) was born in Kingston, Ontario, Canada. His Scottish father, a minister and professor at Queens University, received a large inheritance and moved the family to England before Romanes was a year old. He lived thereafter in England and died in Oxford at age 46 of a cerebral hemorrhage following a long illness. He earned an A.M. degree at Cambridge University, specializing in physiology and evolutionary biology. While he made significant contributions in neuroanatomy, physiology, and physiological evolution, including work that contributed to Sherrington's development of the concept of the synapse, Romanes is best remembered in psychology for his work on behavioral and mental evolution. Impressed by something Romanes published in *Nature* (1873), Charles Darwin contacted Romanes, initiating a close friendship until Darwin's death in 1882. Darwin's chapter on "Instinct," originally intended for *Origin of the Species*, was given by Darwin to Romanes to publish as he saw fit, and Romanes included it as an appendix to his most important book, *Mental Evolution in Animals* (1883).

Major Accomplishments/Contributions

Romanes legacy in psychology is mainly embodied in *Animal Intelligence* (1882), the aforementioned *Mental Evolution in Animals* (1883), and *Mental Evolution in Man* (1887). David Murray (*A History of Western Psychology*, p. 262) wrote that *Mental Evolution in Animals* "is now being recognized as one of the most important books in the history of psychology."

Unfortunately, Murray's appreciation of Romanes is a minority view among current authors of history of psychology textbooks (Thomas [2007](#)).

Romanes reputation has long been unjustifiably and, occasionally, sarcastically diminished, and it is appropriate to consider this in some detail. When developing his views on mental evolution, relatively few scientific data were available. *Animal Intelligence* was intended to be a compendium of data to be used as a basis for his theoretical views to be developed in the other two books. Most of the available data were anecdotal. Unfortunately, readers such as E. L. Thorndike, Wilhelm Wundt, and Margaret Washburn who criticized Romanes for his use of anecdotes overlooked Romanes' carefully prescribed criteria for using anecdotes and his acknowledgement that their use was fraught with difficulties (see Preface to *Animal Intelligence*).

Worse, most critics failed to distinguish the anecdotes' authors' interpretations of the behavior from Romanes' more carefully considered interpretations. One example used by Wundt and Washburn involved the burial habits of ants. Romanes was merely interested in documenting that some ant species bury their dead, and he reported several anecdotes confirming that. However, as stated in the Preface to *Animal Intelligence*, Romanes felt obligated to quote anecdotes fully often including far-fetched interpretations by the original observers. Wundt and Washburn criticized, even ridiculed, Romanes for such interpretations while failing to note that they did not represent Romanes' views. Consider his very reasonable interpretation of why some ant species bury their dead. It was "no doubt due to sanitary requirements, thus becoming developed as a beneficial instinct by natural selection" (*Animal Intelligence*, p. 89).

The gravest injustice done to Romanes was done by authors who argued that Morgan's canon was aimed at Romanes. Morgan's canon:

In no case may we interpret an action as the outcome of the exercise of a higher psychological faculty, if it can be interpreted as the exercise of one which stands lower in the psychological scale. (*Introduction to Comparative Psychology*, 1894, p. 53)

As early as 1896 and persistently thereafter, Morgan's canon was misrepresented in several ways that continue to be perpetuated in too many current histories of psychology textbooks (Thomas, [2007](#)). Two misrepresentations have been that Morgan aimed the canon at Romanes' use of anecdotes and anthropomorphic reasoning. Quotations from Morgan contemporary with his formulation of the canon show that he understood that anthropomorphic reasoning with respect to animal behavior and intelligence was the only path available, and Morgan described Romanes' collection of anecdotes to be valuable in the context of the way that he used them. It is true that in Morgan's later years, perhaps, having derived so much fame from the *misrepresentation* of his canon, he was somewhat critical of Romanes' use of anecdotes. In any case, the applicability of Morgan's canon to Romanes must be seen in the light of Morgan's views of Romanes at the time he wrote the canon.

Criticism of Romanes occurred mainly after his death, and it seems likely that had he lived to address them, he would have done so effectively as he did criticism by his contemporaries. At times, Romanes may have gone too far in some of his interpretations, but some of his

questionable interpretations by past standards appear more compatible among some of those offered by researchers in animal cognition today.

Morgan eventually found it necessary to clarify that “the psychological scale” mentioned in the canon referred to a psychological scale of evolutionary development, but Morgan did little to specify what such a scale might be. Romanes developed an evolutionary scale of intellectual and emotional evolutionary development that may be one of his greatest theoretical legacies. It may be seen in a foldout chart in *Mental Evolution in Animals* (reproduced in Murray’s textbook mentioned above and in Robert Boakes’s *From Darwin to Behaviourism*, 1984).

See Also

Morgan, C. Lloyd

Wundt, Wilhelm

References

Thomas, R. K. (2000). George John Romanes (1848–1894). In A. E. Kazdin (Ed.), *Encyclopedia of Psychology*, Washington: American Psychological Association.

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