A Brewing Storm: Hale, Gale, and Researcher Selection at the Mount Wilson Observatory

R. S. Brashear (Huntington Library)

When the Mount Wilson Solar Observatory was founded on December 20, 1904, its Director, George Ellery Hale, had a broad research program in mind for it: the study of stellar evolution. Hale assembled a staff of astronomers and physicists to attack the problem of stellar evolution on many fronts. Due to the limited resources of the Observatory, however, Hale found that had to supplement his staff on many occasions. This he could through the use of volunteers, visiting scientists, and Carnegie Research Associates. If Hale could not afford to hire a researcher full-time, he might offer to pay for the person to work for a few months when the person could take a short leave from their home institution. Such was the case with Henry Gordon Gale, a physicist at the University of Chicago. In 1905, Hale was unsuccessful in luring Charles E. Mendenhall to Mount Wilson to do research in the Physical Laboratory. Needing a spectroscopist to supplement his work on sunspot spectra, Hale turned to Gale for assistance. Gale agreed to come to Mount Wilson for a few months in 1906 and perform laboratory studies on sunspot spectra. Gale’s work was appreciated by Hale, and the latter arranged for Gale to come to Mount Wilson regularly as a Research Associate of the Carnegie Institution of Washington. By 1912, however, with his Physical Laboratory well staffed, Hale had to ease Gale out of the picture so that he could invite other researchers, particularly Carl Störmer, to Mount Wilson. Unfortunately, Hale did not handle Gale’s removal well and ended up professionally alienating the Chicago physicist. This episode is part of a larger study of the patterns of research activity at the Mount Wilson Observatory.

The True Identities of Professor Moriarty and Colonel Moran

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Professor James Moriarty is the archetypal scientific criminal mastermind in the immensely popular Sherlock Holmes epics. Moriarty was a mathematical astronomer who wrote such works as “The Dynamics of an Asteroid”. As such, Moriarty has a strong claim to being the best known astronomer of all time.

Let me summarize the career of the Professor: He was a mathematical genius of the highest order whose primary scholarly study was in astronomy (with particular interest in eclipses). He wrote treatises on the binomial theorem (about the age of 20) and the dynamics of an asteroid (in the 1860’s). Apparently he was interested in the catastrophic explosion of the prismatic asteroidal planet and the end of the world. He was a Professor of Mathematics at a small university until he as forced to resign his position. He flourished in the late 1800’s, and reached a peak at which he was likely to be the most renown astronomer in the world. His leadership was based on his repeated successes, his intimidating personality, and the fear of his associates.

This paragraph also almost describes Simon Newcomb. (Ron Schorn was the first to identify Moriarty with Newcomb, although I have added many parallels). The many detailed and striking coincidences argues strongly that Moriarty was actually modelled on Newcomb.

But how did Arthur Conan Doyle know about Newcomb? The answer is that one of Doyle’s closest friends was a mathematical astronomer with identical professional and outside interests as Newcomb. This friend, Col. Alfred Drayson, was a career army officer who served with distinction in India, until his retirement in the middle 1890’s. He wrote two books on big game hunting and during retirement made his living at whist. In fact, his career and physical description are identical to those reported for Colonel Sebastian Moran, the criminal chief-of-staff for Moriarty’s gang. Thus I conclude that Professor Moriarty and Colonel Moran were both based on prominent members of the astronomical community.