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# Review: The New Celebrity Scientists. Out of the Lab and into the Limelight. Fahy, Declan. Lanham: Rowman & Littlefield, 2015.

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# Fahy, Declan. *The New Celebrity Scientists: Out of the Lab and Into the Limelight.* Lanham: Rowman & Littlefield, 2015. 287 pp. $38.00 hardcover (ISBN 978-1-4422-3342-3)

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In the last couple of decades, we have seen the widespread ascendancy of the phenomenon of celebrity in society. Celebrities as a cultural manifestation are not necessarily something new. We saw that notion in the twentieth century being exploited by Hollywood through their "star system" as well as by sports teams hungry to increase their revenues. Now that phenomenon has expanded into areas that we would not have imagined decades ago, and one of them is in the field of science. With the advent of social media and the relaxation of social views regarding stereotypes, we have seen the rise of the figure of the celebrity scientist.

In a very timely and well written book, Declan Fahy analyzes this phenomenon in depth and provides us with an understanding into this trend. His book is divided into ten chapters. The first one, "A Brief History of Scientific Celebrity," gives as a historical background that shows that the concept of scientific celebrity is not a new one. His first example is Charles Darwin. Before publishing his book *On the Origin of the Species by Means of Natural Selection* (1859) Darwin was unknown beyond some scientific circles. But by publishing a book that defied the conventional wisdom generated by Christian beliefs and written in a language that anybody could understand Darwin produced a firestorm to the point that the first edition composed of 1250 copies sold within the first few days. Darwin's ideas were not only hotly debated but his image through caricatures (often representing his head in a monkey's body) became commonplace.

However I do not think Darwin was the first scientific celebrity. We could mention that Galileo Galilei also received a great deal of notoriety in Europe because his ideas defied the Ptolemaic view of the universe. Galileo presented a new model in which the earth was not at the center of the solar system. That was a sharp contrast with the model supported by the church in which the sun was orbiting our planet. Further, Galileo presented his ideas with a provocative stance against authority in a very accessible way through the publication of his 1632 book

*Dialogo sopra i due massimi sistemi del mondo* (Dialogue Concerning the Two Chief World Systems).

Other examples of early scientific celebrities include people like Benjamin Franklin whose experiments with electricity made him the first internationally famous American scientist, although many forget his scientific contributions because of his great role in politics. In fact, he was known during his time as the U. S. ambassador in France as *L' ambassador electrique* because of his scientific experiments with electricity. Other countries developed their own scientific celebrities like the Spaniard Santiago Ramón y Cajal who by winning a Nobel Prize in Physiology and Medicine in 1906 launched him into national fame.

In any case Fahy does include other earlier scientific celebrities such as Albert Einstein, the British astronomer Fred Hoyle who reached great deal of fame because of his radio broadcasts on scientific topics, and Carl Sagan whose TV show *Cosmos* made him a star. Yet Fahy reminds us that celebrity has its costs for those who are scientists and probably Sagan was the clearest example of that. When Sagan became famous in the 1980s his colleagues started to criticize him for his notoriety talking about the "Sagan Effect" defined as "fame is inversely proportional to the quality of their research." That was highly unfair because he had had a solid scientific career with hundreds of publications in the scientific literature and his undeniable defense of science against the threats of pseudoscience and other beliefs. Not only that but his membership to the National Academy of Sciences was denied by his own peers because they were jealous of his public profile.

Although other scientists like the anthropologist Margaret Mead and the ecologist Paul Ehrlich are mentioned in this introductory chapter this section could have benefited further by discussing the cases of environmentalist Rachel Carson whose book *Silent Spring* had a great impact on environmental policy worldwide or the chemist Linus Pauling whose scientific and political stances made him a celebrity in his own right.

Fahy also discusses in this chapter what he calls the bases of "celebrification" which he describes as the result of three processes: (1) an individual whose physical appearance is easily recognizable (e.g. Einstein, Sagan), (2) becoming a cultural commodity (e.g. Einstein seen as a genius, Sagan because his numerous TV appearances, particularly on Johnny Carson's *Tonight Show*, as well as Darwin through the caricatures of him), and (3) becoming the face of science before the general public. In any case almost all of them seem to have used the media and/or images to express their views.

This is a good introduction to the next eight chapters in which Fahy analyzes one living scientific celebrity per chapter. First is the cosmologist Stephen Hawking for whom timing and physical appearance combined to make him famous. His research on cosmology coincided with an increasing public interest in the 1970s not only for that topic in general but also for black holes and the origin of the universe in particular. Because of that he became a media favorite. Part of the public interest in scientific developments in cosmology was because there were obvious religious implications of his work. Hawking was diagnosed as a twenty-one-year-old undergraduate with of amyotrophic lateral sclerosis or Lou Gehrig's disease and between 1978 and 1984 there was an explosion of articles about him in the media emphasizing contrasts between his mind and body. The media portrayed Hawking as an icon of a brain independent from his physique. But what really launched him was the publication of his 1988 book *A Brief History of Time*. Thanks to the wise advice of the editor, his book was written in a way that was palatable to the general public, making it a best seller for many months and selling more than nine million copies. Fahy claims that despite his physical disabilities (he was always in a wheelchair and incapable of speaking except through a computer) or even because of them, Hawking not only welcomed his celebrity status but also has always been very image conscious as documented by the professional photographers that have had picture sessions with him.

The next chapter is dedicated to the British evolutionary biologist Richard Dawkins. He was known early on for his contributions in the area of behavioral ecology but gained prominence by emphasizing the centrality of genes in evolutionary processes, something he explained with both rigor and fluidity in his 1977 best seller *The Selfish Gene*. There he proposed that genes tend to increase their own chances of survival in competition with other genes. In his case timing also helped since two years earlier the Harvard evolutionary biology Edward O. Wilson had created a firestorm by proposing that genes had a great deal of influence on animal behavior. The premise was hotly criticized by many of his colleagues (particularly at Harvard) on the belief that such a proposal justified the idea that behavior (particularly among humans) was predetermined and that nothing could be done to change it. Dawkins also achieved notoriety for the development of the concept of a "meme," that is, that ideas, behaviors, or styles spread through society as part of the culture with memes behaving just as genes would do in the biological arena. He later became a strong defender of evolutionism against creationism as well as atheism though his book *The God Delusion* (2006).

Other cases of scientific celebrities detailed in the book are those of the Canadian-American psychologist and linguist Steven Pinker, the paleontologist and evolutionary biologist Stephen Jay Gould, the British neuroscientist Susan Greenfield, the British environmentalist and futurist James Lovelock, the theoretical physicist Brian Greene, and the astrophysicist Neil deGrasse Tyson. Although Fahy makes an effort to present these examples as a diverse pool, one wonders why he did not include other scientists who are better known to the general public such as the British primatologist Jane Goodall. In any case, the author makes his points with the examples he selected. For example, he says that the process of "celebrification" occurs in two steps: developing into a public intellectual and the course of being transformed into a celebrity. He contends that scientists need to be available to the media because they work in areas of concern and/or interest to the general public. Yet it is clear through these examples that these celebrity scientists many times face conflicts with their private lives and public revelations, since some press like to focus on more or less "scandalous" disclosures.

In chapter ten titled "A New Scientific Elite" Fahy concludes that now many scientists are common features in the media, including social media, and recognizable beyond their own scientific circles. "When scientists are celebrities, they give science a face, force, and an impact in public life" he writes. Fahy also says that we sometimes forget that unless a scientist has been born with a silver spoon in his or her mouth they need public support to do their work, whether from government agencies or private sources. Given the decreasing financial support from the public sector, private ones have become more and more important; hence, the need for celebrities to attract that kind of attention.

Other points made in the book are well substantiated such as that of scientists carrying ideas to communities beyond science, that the celebrity scientists show how science works and the joy of doing science despite personal fights among scientists exhibiting that they are humans after all. Also that scientific celebrities develop the power to influence citizen understanding, public culture, and scientific life. These scientific celebrities tend to be brilliant synthesizers of science and celebrities draw a crowd. Fahy finally concludes that "The Sagan Effect" has almost vanished and that now a legion of scientists seek to have a strong media presence and that can only be positive.

Given that a number of studies show that scientific literacy in the United States is below of that of many other developed countries in the world, we need more scientists engaged with the public so they can attract more interest in

science instead of pseudoscience and the case studies presented in this book are good examples of that.

In summary, this is a book that is judicious, well researched and written, and balanced in its appreciation and understanding of the people portrayed in the case studies. I particularly liked the graphs that show how many times his subjects were the object of citation in the media related to events in their lives. I recommend this book to anyone interested not only in science and its protagonists or communication studies but also in a field that has been little considered but can provide us with many insights into today's culture: the sociology of science.