

## Science on Television: Stereotypes and Truths

In the broadcast media as in print, editorial decisions, both implicit and explicit, affect the portrayal of science. The following papers explore aspects of this portrayal on television.

**Hornig S. Television's "NOVA" and the construction of scientific truth. Crit Stud Mass Comm 1990;7:11-23.**

The author argues that the PBS documentary series *NOVA* is designed to dramatize science for an elite audience, making science less accessible to the average person. Having examined two episodes broadcast in 1988 ("The Race for the Superconductor" and "The Hidden Power of Plants"), the author identifies three sets of oppositions in the series: scientist vs nonscientist, scientific vs mundane, and "hard" science vs "soft" science. The importance of that finding, according to the author, is that it unveils how *NOVA* affects the political aspect of science—alienating the common person from scientific truths, helping to ensure proper respect and reverence for the scientist as a special person, and helping those in power to maintain it through their better access to knowledge.

**Long M, Boiarsky G, Thayer G. Gender and racial counter-stereotypes in science education television: a content analysis. Public Underst Sci 2001;10:255-69.**

"A scientist is a white male who wears a lab coat with a pocket full of pens and pencils. He's middle aged and is either bald or has wild hair framing his myopic eyes. . . ." That description, from a study of 682 students, shows a common stereotype of scientists in western children, according to the authors. Their study analyzes characters in four children's science-education television programs: *Bill Nye The Science Guy*, *Beakman's World*, *Magic School Bus*, and *Newton's Apple*. Although in these programs males and females were equally likely to be scientists

and were on screen for the same amount of time per episode, male characters outnumbered female characters. Status, as measured by clothing worn and character knowledge, did not differ by sex or ethnicity; however, members of minority groups were significantly less likely to be labeled as scientists.

**Nisbet MC, Scheufele DA, Shanahan J, and others. Knowledge, reservations, or promise? a media effects model for public perceptions of science and technology. Comm Res 2002;29:584-608.**

The public's perceptions of science are shaped by the mass media, especially television, which has a prevailing impact, according to the authors of this paper. Negative images of science on television create reservations (for example, science threatens traditional values), but television's portrayal of science as omnipotent (for example, concern curing diseases and offering hope for the future) creates confidence in the "promise" of science. The authors found that reservations are more common in people with less previous knowledge of science (that is, with a lower level of education).

**LaFollette MC. A survey of science content in U.S. television broadcasting, 1940s through 1950s: the exploratory years. Sci Comm 2002;24:34-71.**

This well-researched descriptive paper follows one by the author (in the same issue) on science programming in US radio from the 1920s through the 1940s. The paper shows how innovations of the 1940s and 1950s in showing science on television led to practices common in today's science documentaries: the use of storytelling and fiction techniques to make science entertaining.

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