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STS.003 The Rise of Modern Science  
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## Week 5: Science, Technology, and the Human Body

### Readings:

- James Clerk Maxwell, “The Telephone: The Rede Lecture Delivered to the Senate House of the University of Cambridge, 24 May 1878,” in *Empires of Physics: A Guide to the Exhibition* (Cambridge: Whipple Museum of the History of Science, 1993), 15-27.
- Jonathan Sterne, *The Audible Past: Cultural Origins of Sound Reproduction* (Durham, NC: Duke University Press, 2003), chap. 1, “Machines to Hear for Them,” 31-85.
- “I am the Edison Phonograph,” the first recorded promotional message on the Edison phonograph, recorded at the Edison Studios, New Jersey, 1906. Reproduced in "Great American Speeches of the 20th Century", Rhino Records, 1991.  
[http://commons.wikimedia.org/wiki/Image:Spencer\\_-\\_I\\_am\\_the\\_Edison\\_Phonograph.ogg](http://commons.wikimedia.org/wiki/Image:Spencer_-_I_am_the_Edison_Phonograph.ogg)

### Additional Background:

- Bowler and Morus, “Science and Technology,” MMS, pp. 391-414.

This week’s readings offer different perspectives on the new technologies of sound reproduction of the nineteenth century. The readings illuminate the close connections between these technologies and contemporary developments in science, medicine, and general culture.

Maxwell, “The Telephone”: Maxwell (1831-1879), the great hero of theoretical physics and electrodynamics, here pontificates about a hot new item, the telephone. What is the purpose of this lecture? Why is it so important for him to explain how the telephone works? What is the relationship between science and technology here? Between education and research? What is the symbolic meaning of the telephone for Maxwell?

Jonathan Sterne is a media historian at McGill University in Montreal. His book, *The Audible Past*, examines the social and cultural conditions that gave rise to such sound reproduction technologies as the telephone, phonograph, microphone and radio. He ties together developments in acoustics, human physiology, medicine, music, and many other fields to illustrate the broad scientific and cultural connections of these technologies. Focus on pp. 31-35 and 51-85. How did the human ear become a technology? What is the relationship between the scientific conceptualization of the human body and the technologies reproducing various sensitive functions? What is the role of scientific instruments in the story? Compare these developments to today’s scientific and technological views of the human body.

“I am the Edison Phonograph”: Listen to the original 1906 recording. Pay attention both to the content and the sound of the message. Analyze the meaning of sound reproduction technology as a consumer product. What does it tell us about broader culture? How does this meaning relate to scientists’ and engineers’ understanding of this technology?

Apply Sterne’s analysis to one of today’s important technologies. How does this technology relate to general culture? How does it affect or is affected by science? Has the relationship between science and technology changed since the nineteenth century?