

THE • RHETORIC • OF • SCIENCE

THE • ART OF USING LANGUAGE EFFECTIVELY SO AS TO PERSUADE OR INFLUENCE OTHERS •  
OF • THEORETICAL OR INTELLECTUAL UNDERSTANDING

New York University School of Engineering  
Department of Technology, Culture and Society  
STS-UY 2624W  
Spring 2015  
Mondays & Wednesdays, 12:30-2:20  
RGSB 604

**The Professor**

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Office hours: DBN 142, Mondays & Wednesdays, 2:45-3:45, or by appointment

**The Course**

Pre-requisites: Completion of first year writing requirements

Description: The *rhetoric of science* is an emerging subdiscipline within science studies. The subdiscipline seeks to understand the ways in which scientists and non-scientists use language and argument to persuade others of their scientific beliefs. To accomplish this goal, rhetoricians of science employ methods and principles drawn from the fields of English, history, sociology, philosophy, and other cognate areas.

Objectives: When your boring Aunt Sally comes to dinner and asks, “How’s school?” you’ll be able to hold a legitimately interesting conversation with her in which you masterfully answer the following questions:

- What are rhetorical figures, and how can they help clarify, strengthen, and qualify scientific arguments?
- What is the relationship between the organization of a scientific discipline and the language in which that discipline is discussed?
- How have the social norms in science communication changed over the past 500 years?
- What can the study of composition teach us about scientific claims to objective truth?
- How can we become more critical recipients and more effective communicators of scientific knowledge?

Structure: Class will be conducted in a seminar format. Discussion will address both the assigned reading materials, and supplementary science writing handed out for in-class analysis. The rhetoric of science is an essentially communicative field, and for this reason, it is especially important that you attend class, and that you have read and absorbed the reading for each meeting date well enough to follow and participate in class discussions.

**Required Books**

Gross, A. G. (2006). *Starring the text: The place of rhetoric in science studies*. SIU Press.  
Kuhn, T. S. (2012). *The structure of scientific revolutions*. University of Chicago press.  
Tabery, J. (2013). *Beyond Versus: The Struggle to Understand the Interaction of Nature and Nurture*. The MIT Press.

**Optional Books**

Darwin, C. (1859). *On the origin of species by means of natural selection*.  
Einstein, E. (1954). *Ideas and opinions*.  
Lamarck, J. P. (1809). *Zoological Philosophy*.

**The Assignments**

*Attendance, participation, and office hours: 10% of final grade.* Students who are uncomfortable speaking in class may instead attend office hours once before and once after midterms to fulfill the participation requirement.

*Evolution portfolio: 15% of final grade. Paper due 2/18; presentation on 3/2.*

One 2-3 page essay plus one 5-10 minute presentation on the effects of framing, language, and argument on Darwin's thinking, and how they set him apart from Lamarck. The portfolio will be graded holistically.

*Gattaca paper: 25% of final grade. Due 3/25.*

4-5 pages on the interaction of nature and nurture

*Heliocentrism paper: 15% of final grade. Due 4/13.*

2-3 pages of correspondence capable of convincing a reader to adopt heliocentrism.

*Contemporary analysis: 35% of final grade. Due date TBD.*

5-7 pages analyzing the use and effects of rhetoric in popular science journalism.

**The Policies**

All papers must be printed out in size 12 Times New Roman font, double-spaced, and handed in at the start of the class in which they are due. Late papers will be penalized one fraction of a letter grade for every day they are late. An 'A' paper handed in one day late becomes an 'A-'; after two days, it becomes a 'B+'; etc. All papers not handed in at the start of the class in which they are due are considered at least one day late.

Papers will be checked online for plagiarism. If any part of an assignment is not the student's own work, the entire assignment will be assigned an F and the incident will be handled in accordance with NYU's plagiarism policy.

One grade point will be taken off of the final grade for every unexcused absence. Using your cell phone during class will negatively affect your participation grade.

If there is a pressing reason you will need to pull out your phone during class, you may tell me at the start of class.

Exact details of the readings, assignments, and schedule are subject to change.

**Class Readings**

- 1/26 *Neural Correlates of Interspecies Perspective Taking In the Post-Mortem Atlantic Salmon*  
1/28 Gross, Chapter 1
- 2/2 (Selections from) Darwin, *On The Origin of Species*  
2/4 Gross, Chapter 4
- 2/9 (Selections from) Lamarck, *Philosophie Zoologique*  
2/11 Gross, Chapter 6
- 2/16 *Presidents' Day: No Class*  
2/18 (Selections from) Darwin, *Red Notebooks* – **DARWIN PAPERS DUE**
- 2/23 (Selections from) Darwin, *On The Origin of Species*  
2/25 Gross, Chapter 12
- 3/2 No reading – **LAMARCK AND DARWIN PRESENTATIONS**  
3/4 Tabery, Chapter 2
- 3/9 Tabery, Chapter 5  
3/11 Tabery, Chapter 6
- 3/16 *Spring Break – No Class*  
3/18 *Spring Break – No Class*
- 3/23 Tabery, Chapter 7  
3/25 Tabery, Chapter 8 – **GATTACA PAPERS DUE**
- 3/30 Kuhn, Chapter 2  
4/1 Einstein, *Johannes Kepler*
- 4/6 Kuhn, Chapter 7  
4/8 Gross, Chapter 8
- 4/13 Kuhn, Chapter 8 – **HELIOCENTRISM PAPERS DUE**  
4/15 Einstein, *The Problem of Space, Ether, and The Field*
- 4/20 Kuhn, Chapter 9  
4/22 Maxwell, *Ether*
- 4/27 Kuhn, Chapter 13  
4/29 Weisberg, *The Seductive Allure of Neuroscience Explanations*
- 5/4 Aspinwall, Brown, and Tabery, *The Double-Edged Sword*