

# The Rhetoric of Science

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Fall 2014

# What is rhetoric?

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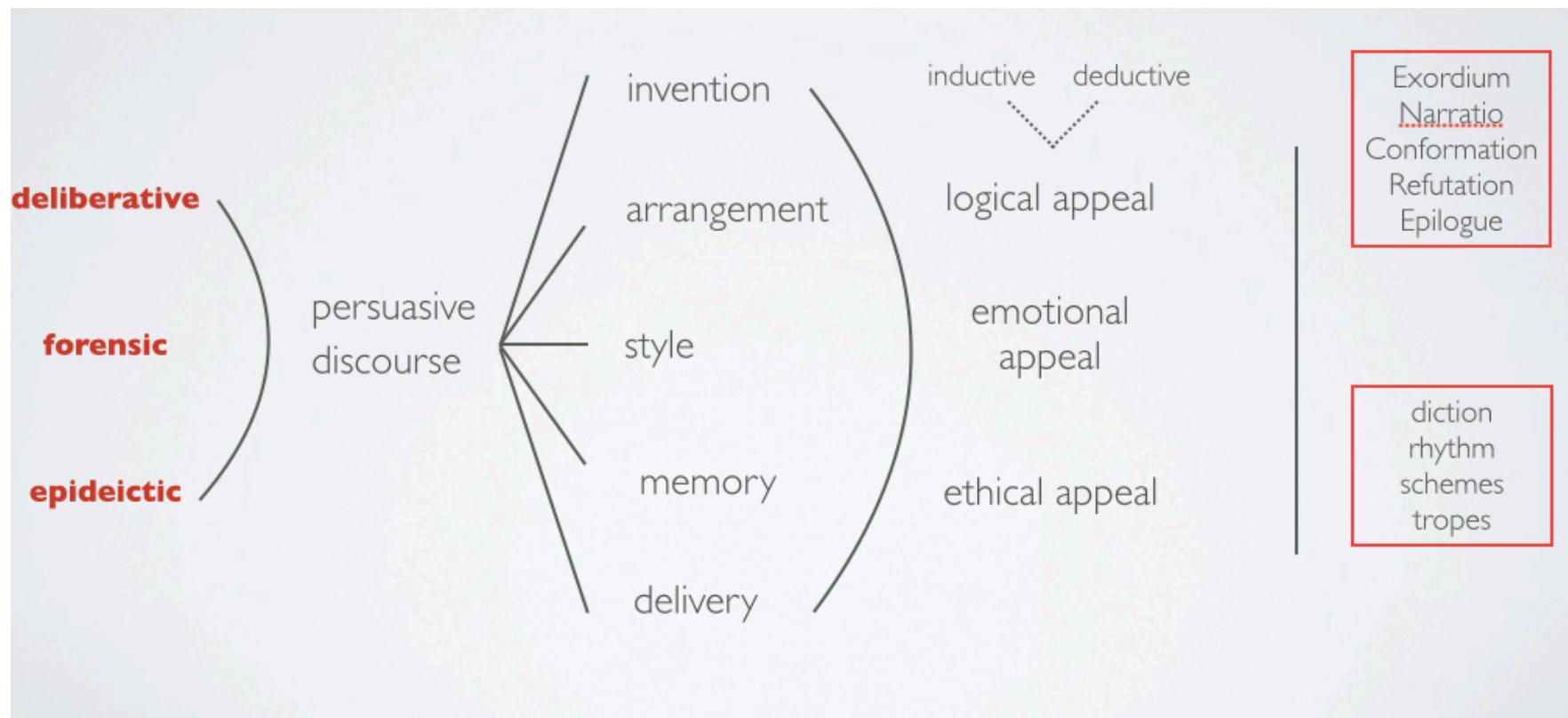
“The **art** of using language effectively so as to persuade or influence others”

The **analysis** of language as a means of persuasion.

# Aristotle's Rhetoric

- Aristotle:  
384 – 322 BCE
- “Classical Rhetoric”
- Dealing primarily with persuasive oratory
  - Deliberative (of public assembly)
  - Forensic (of the courtroom)
  - Epideictic (of public occasions)

# Aristotelian Schemata



# Quintilian & Cicero

- To inform
- To move
- To please



“The dreariest and least profitable part of the waste that the unfortunate travel through in freshman English”

- I. A. Richards

“A survey of the history of rhetoric does indeed reveal that this discipline, which was very much alive and which engaged the attention and talents of some of the best minds, has for a number of years been moribund, if not door-nail dead.”

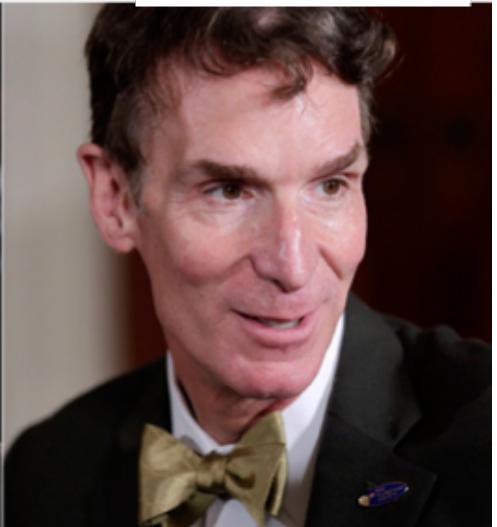
- Edward P.J. Corbett



# POLITICS



# JOURNALISM

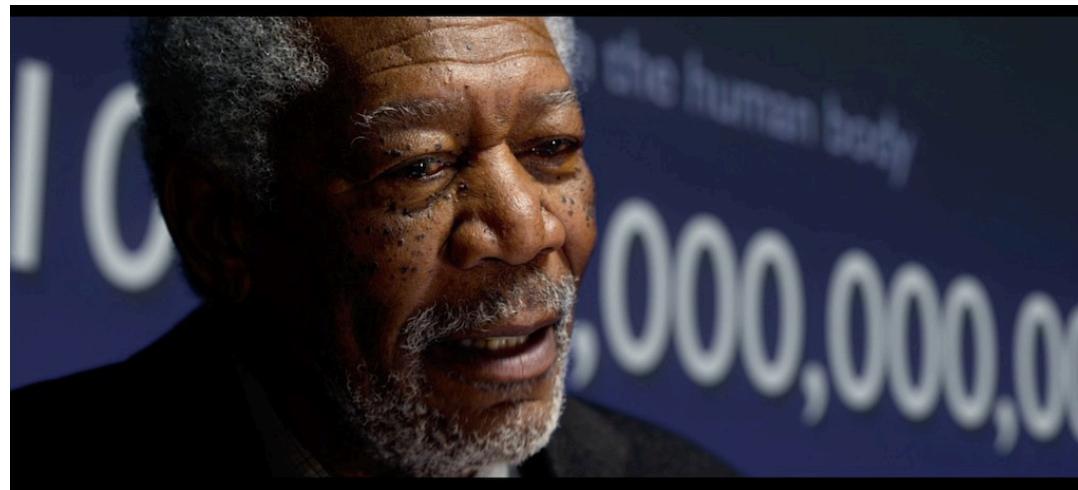


# What is science?

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A branch of study that deals with a connected body of demonstrated truths or with observed facts systematically classified and more or less comprehended by general laws, and incorporating trustworthy methods (now esp. those involving the scientific method and which incorporate falsifiable hypotheses) for the discovery of new truth in its own domain.

Is neuroscience science?  
Is it true?



# Is ‘computer science’ science? Is it true?



Is archaeology science?  
Is it true?



When is science “true”?

Can things be true that  
are not science?

# The Rhetoric of Science Paradox

Does science have a rhetoric?



# Problems in Science Writing

Piled Higher and Deeper by Jorge Cham [www.phdcomics.com](http://www.phdcomics.com)



# Problems in Science Writing

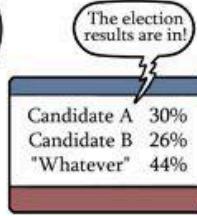
Dear News Media,

When reporting poll results, please keep in mind the following suggestions:

1. If two poll numbers differ by less than the margin of error, it's not a news story.  

2. Scientific facts are not determined by public opinion polls.  

3. A poll taken of your viewers/internet users is not a scientific poll.  

4. What if all polls included the option "Don't care"?  


Signed,

-Someone who took a basic statistics course.

[WWW.PHDCOMICS.COM](http://WWW.PHDCOMICS.COM)

JORGE CHAM © 2010

# Problems in Science Writing

“What headlines would look like if we lived in a mathematically literate world”

- Our World: Market Rebounds after Assurances from Fed Chair

Mathematically Literate World: Market Rebounds after Regression to the Mean

- Our World: Firm's Meteoric Rise Explained by Daring Strategy, Bold Leadership

Mathematically Literate World: Firm's Meteoric Rise Explained by Good Luck, Selection Bias

- Our World: Psychologists Tout Surprising New Findings

Mathematically Literate World: Psychologists Promise to Replicate Surprising New Findings Before Touting Them

- Our World: After Switch in Standardized Tests, Scores Drop

Mathematically Literate World: After Switch in Standardized Tests, Scores No Longer Directly Comparable

- Our World: Local Heat Wave Seen as Sign of Global Warming

Mathematically Literate World: Local Heat Wave Not Seen as Meaningful Indicator of Global Trends



# What is the rhetoric of science?

1. The analysis of the methods that scientists use to persuade their audience.
2. The analysis of the ways that science is used as a tool in persuasive writing.
3. The skill of writing honestly and persuasively about science.

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1. The analysis of the methods that scientists use to persuade their audience.
2. The analysis of the ways that science is used as a tool in persuasive writing.
3. The skill of writing honestly and persuasively about science.

(Why I care)

# Syllabus Review

- Unit 1: What is the relationship between science and truth?

*Assignment: rhetorical analysis*

- Unit 2: Science in the public imagination.

*Assignment: interviews*

- Unit 3: The Science Wars

*Science Writing Portfolio: feature article, op-ed, presentations.*

# Syllabus Review

- Office Hours: please come
- Textbooks: not required
- Late work:
  - One day: 5%
  - Two days: 30%
  - Each additional day: +10%
  - More than five days: 0
- Attendance:
  - Required: failure after 4 absences.
- Plagiarism: don't do it
- Disabilities: talk to me, please.

# Major Assignments

- Analytic Essay: 20%
  - Essay 1.1: 10%
  - Essay 1.2: 10%
- Scientific Interview: 20%
  - Report: 10%
  - Profile: 10%
- Portfolio Drafts: 20%
  - Blog Post
  - Op-Ed
  - Feature Article
- Final Portfolio: 20%
- Research Summaries: 10%
- Presentations: 10%

# Rhetoric 309k

# Contract

# The RHE309k Website

[www.halperta.com/rhe309k-fall2014](http://www.halperta.com/rhe309k-fall2014)

canvas.utexas.edu

# Assignments

Wakefield et al. article and worksheet  
Due Thursday, Sept 4. 2014

# References

- Cham J. (2009, May 18). The Science News Cycle. *PHD Comics*. Retrieved from <http://www.phdcomics.com/comics.php?n=1174>
- Corbett E.P.J. (1967). What Is Being Revived? *College Composition and Communication*, 18, 3, 166-172.
- Orlin, B. (2013, December 4). What headlines would look like if we lived in a mathematically literate world. *Huff Post Media*. Retrieved from [http://www.huffingtonpost.com/ben-orlin/what-headlines-would-look-like\\_b\\_4386621.html](http://www.huffingtonpost.com/ben-orlin/what-headlines-would-look-like_b_4386621.html)
- Science N. (2014, June). In the *OED Online*. Retrieved from <http://www.oed.com/view/Entry/172672?redirectedFrom=science#eid>.