## Communications and 20.109



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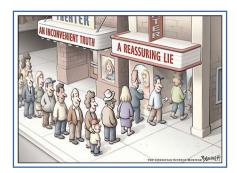
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## Getting to know you -- Part 1 Two truths and a lie

☐ Write three statements about yourself, two of them true and one a lie.



### Getting to know you -- Part 2 Letter to Atissa, Neal, and Linda

- □ What have been your experiences with scientific writing (e.g., lab reports, research articles, reviews)? With other forms of writing?
- ☐ What have been your experiences with oral presentations (whether scientific or not)?
- ☐ How would you describe yourself as a writer? As a public speaker?
- ☐ What are your writing/speaking goals for 20.109?

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# What were the steps in the writing process for a recent academic project?

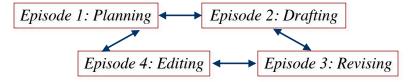
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## Modeling the process for trouble spots



#### A Writer's Questions

What do I know about my topic?
Why am I writing?
Who are my readers?
What do they know already about my topic?
How is this task like others I have done?
What structure works best for my topic?



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### Good writers and composing strategies



#### Independence Key

- Declarative Knowledge: Knowing what strategies are available
- **2. Procedural Knowledge:** Knowing how to use a strategy.
- 3. **Conditional Knowledge:** Knowing how and when to use a strategy.

The goal is to develop all three types of knowledge for each part of the writing process.

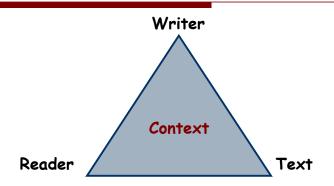
## Controlling the rhetoric of scientific writing



... "the art of finding in any given case the available means of persuasion" (Aristotle).

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## Writing and the rhetorical triangle

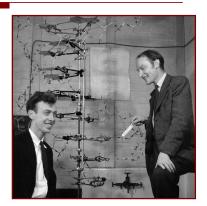


Writers balance the relationship among themselves, the texts, their readers, and the context in which this balancing act occurs.

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## Courting the audience

"The April 1953 paper, then, is really just the initial move in a rhetorical strategy aimed at gaining and holding the attention of an audience. As such, it presumes an understanding of science as a human community in which neither facts nor ideas speak for themselves, and the attention of the audience must be courted."\*



\*Michael Halloran on Watson & Crick's 1953 "The Structure of DNA"

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## Reality may complicate the triangle

#### **Multiple purposes**

- Explain
- Entertain
- Persuade
- Get an A



#### **Multiple audiences**

- Yourself
- Imagined reader
- Peers
- Instructors

## Language enables writing and research





"Language, oral or written, is an expressive instrument through which we communicate what we have previously thought [or discovered]. It is also the reflective instrument through which we think, alone or with others, about what we are doing" (Paul Connolly).

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#### Good MIT resources



#### The Mayfield Guide On-Line

http://www.mhhe.com/mayfieldpub/tsw/home.htm

#### MIT Writing and Communication Center

Room 12-132; 617/253-3090 Appointments can be made from http://web.mit.edu/writing/

## Writing resources on the 20.109 Wiki

http://openwetware.org/wiki/20.109%28S10%29

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