

COMMUNICATION

or,

How does anyone ever understand anything
anyone else says?

open your laptop or get out paper: we want you to take some notes. (dangerous!)

OVERVIEW:

- What is communication?
- How is communication important to robotics?
- How might you improve?

The story of PAUL

Why did I tell you that story?

open up empathy; give an example you can relate to; paint a picture of importance; create my own credibility; set out the risks of this conversation; stir up some thinking....



CAUTION:
DO NOT LISTEN WHILE OPERATING HEAVY MACHINERY

In my view, the dichotomy between [professional specialization] and [liberal arts] is anachronistic, lazy, and intellectually bankrupt. It might have had some basis in an industrial economy, but certainly not now.

Innovation fuses these two modes of knowing and learning. True innovators are adept at taking very specific areas of knowledge (technologies, scientific discoveries, social phenomena, etc.) and constantly reframing them in broader social, cultural, or political contexts. Innovative thinkers also know that in order to find opportunities to act, to make a difference in the world, they must collaborate--and be damn good at it. Higher education has failed miserably at teaching students to deeply and effectively collaborate in order to innovate. ...so the world I work in must radically change--fast.

--Randy Swearer, Provost of Philadelphia University, former Dean of the Parsons School of Design at The New School in New York

In your notebook, jot down some reactions to this. We'll come back to it later.

BY THE END OF THIS TALK,
WE'D LIKE TO LEAVE EACH OF YOU WITH:

- a sense that communication matters, and that seeking improvement is worthwhile;
- an understanding of why it's profoundly important to consider your audience;
- a commitment to consider your purpose, and your intended outcomes.

TO KEEP IN MIND AS YOU LISTEN:

- How does this conversation relate to writing?
- To presenting?
- To collaborating?

We are always, *always* communicating.

And we generally understand each other *in part.*

Interpret Krugman.



Photos: Getty Images

Jot down briefly what you see:
What's he feeling?
What's he thinking?

Interpret Krugman.



Photos: Getty Images

Invent two different scenarios for each picture:
what might he really be thinking about?

Interpret Krugman.



Photos: Getty Images

We're good at identifying each other's feeling-states...
...but we can't know what's really **causing** them.

Interpret Krugman.



Photos: Getty Images

Implications?

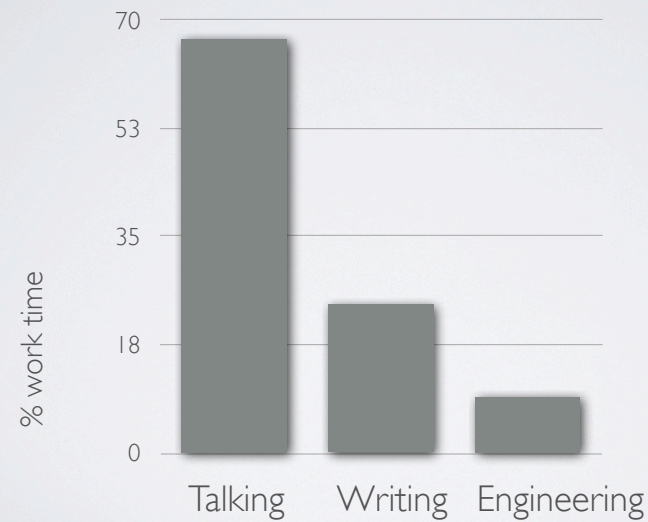
Krugman's favorite
caption for this photo:

“One had longed for the
Nobel Prize, the other loved
being president ... yet at
that moment, both men felt
a little empty.”



Photo: The Economist

Engineers were asked how they really spend their time.



MIT Alumni office

Professional scientists and engineers spend most of their time talking and writing. (The talk/write balance is probably more equal now, with email.) Then from time to time, they get to do science or engineering. You will leave here with the ability to do excellent science and engineering. We want you to leave with an ability to communicate that is a match for the quality of your work.

Communication?



fight?

flight?

COMMUNICATION: PART CONTENT, PART RELATIONSHIP



I love you...!

WHY COMMUNICATE?

INFLUENCE:

Your work is credible.

You are credible.

AN INFLUENTIAL PERSON

- **listens** more than they advocate their own views;
- **knows** about the **people** they work with, their likes and dislikes;
- is seen as understanding, or **empathetic**, rather than as persuasive or articulate;
- is seen as **flexible**, open to new ideas, able to be influenced;
- **talks openly** and directly, rather than keeping their views “close to the vest”;
- builds a **network** and uses it.

Source: David Burnham, BurnhamRosen Group, personal communication

Trust and genuine influence are closely related, as this research shows.

QUESTIONS

are your friends.

Seek them out.

Pull them out.

Ask lots of them.

They're your opportunity to learn.

A note: confidence vs. arrogance.

the feeling or belief that one can rely
on someone or something


- from *confidere* 'have full trust'

VS.

having or revealing an exaggerated
sense of one's own importance or
abilities

“BE YOURSELF, AND HAVE FUN.”

Mildred Dresselhaus
Institute Professor, emerita
Professor of Electrical Engineering and Physics, emerita
MIT

 (And cultivate a network, and mentors.)

M. D.

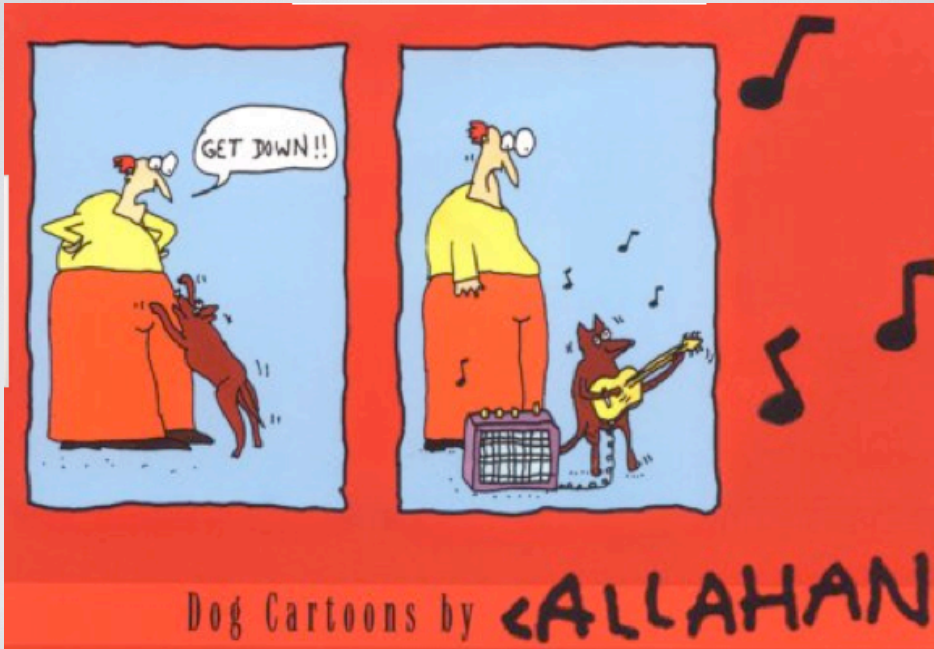
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HOMEWORK:

BE READY TO REPORT WHAT YOU LEARN.

- Note your first impressions of three people you meet (or, closely observe someone you know).
 - What does your mind say? What judgments does it make?
 - Ask them some thoughtful questions about themselves. Observe how your impression changes.
- At least twice this week, look for someone whom you find intimidating or annoying. Introduce yourself to them; get to know them.



Dog Cartoons by **CALLAHAN**