

**Squawk:** “Left inside main tire almost needs replacement.”

**Reply:** “Almost replaced main tire.”

**Squawk:** “Test flight OK, except autoland very rough.”

**Reply:** “Autoland not installed on this aircraft.”

**Squawk:** “#2 propeller seeping prop fluid.”

**Reply:** “#2 Propeller seepage normal.”

**Squawk:** “#1, #3 and #4 propellers lack normal seepage.”

We're mostly good communicators. Except when we're not.

## Collaboration

- Some of your goals
- Three key challenges
- Homework

Some of your goals:

### Collaboration

- 1- behave respectfully towards others, regardless of whether they are present
- 2- know when to listen and when to speak
- 3- get to know my teammates
- 4- behave professionally
- 5- make sure people are appreciated for good work
- 6- be open to others' ideas
- 7- accept feedback well

These are the goals that garnered the most interest on the self-assessment.

Note that:

(a) Each of them is an area for improvement that will make a substantial difference in your ability to collaborate effectively.

(b) You and your teammates have many interests and concerns in common.

Some of your goals:

### Collaboration

- 9- listen to criticism constructively
- 10- speak in a way that helps resolve conflict
- 11- be more patient
- 12- do my best work regardless of my team
- 13- help my team stay focused and avoid distractions
- 14- speak up more easily in a group
- 15- make and manage effective team agreements

Imagine yourself at the end of this term, having improved in some of these areas. Working on your ability to collaborate can help you, for example, to be less stressed, to contribute more, to feel more confident, to be more able to bring out the best from your teammates....

## Collaboration


We are mostly effective collaborators.  
Except when we're not.

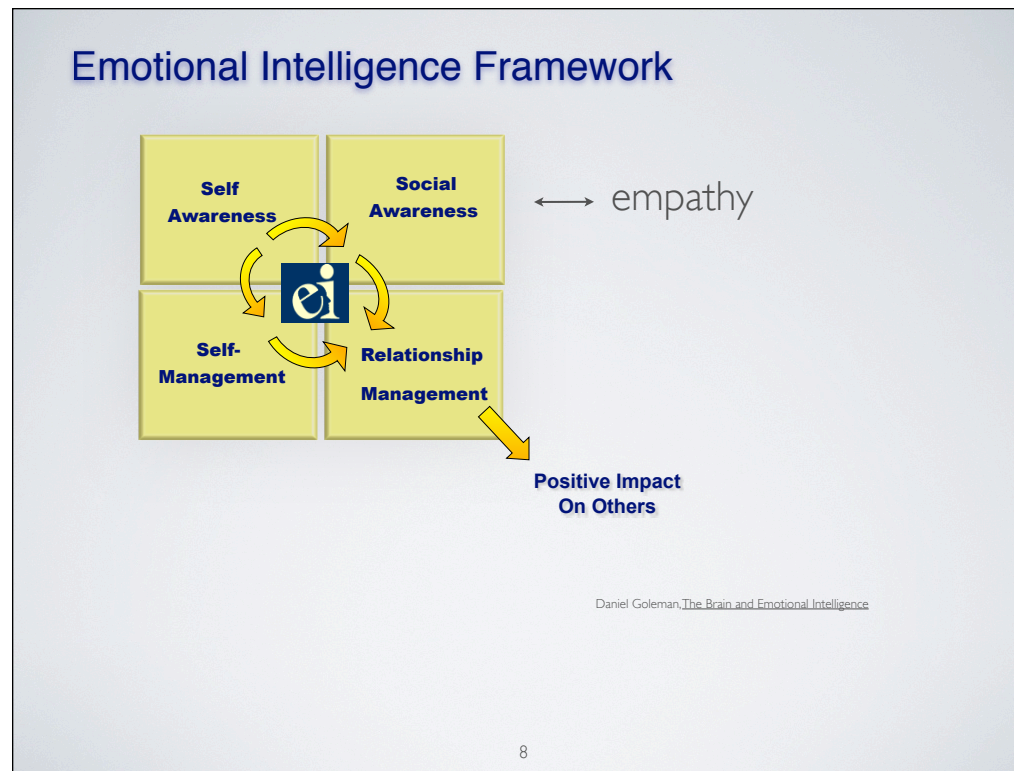
Collaboration  
Components

Me

You

Collaboration  
Challenge #1

What can we  
know about  Me      ?  
You



This component of RSS is largely based on the work of Daniel Goleman, specifically on what he termed “emotional intelligence.” Some of its primary elements are shown in the diagram above. We’ll work with this structure throughout the term as you learn and build with your teammates.

Notice that it’s likely that you and your teammates will learn differently about collaboration. And you’ll learn a lot from each other. Collaboration has a lot of components, and we bring a variety of strengths to the task. What’s obvious to you may be a valuable insight to someone else, and vice versa.



Collaboration

Challenge #1:

close your eyes (just for a minute)

Note that some of you are confident and at home being MIT students, and some of you are not.

That sense of yourself is just one dimension of the differences you bring to your teams. There is no “right” way to be, but it is very helpful to note that not everyone operates under the same basic assumptions that you do.

Note too that most of us do “dumb” things on a pretty regular basis. Most of us also do amazing things on a regular basis, but we notice and remember the “dumb” things more vividly.

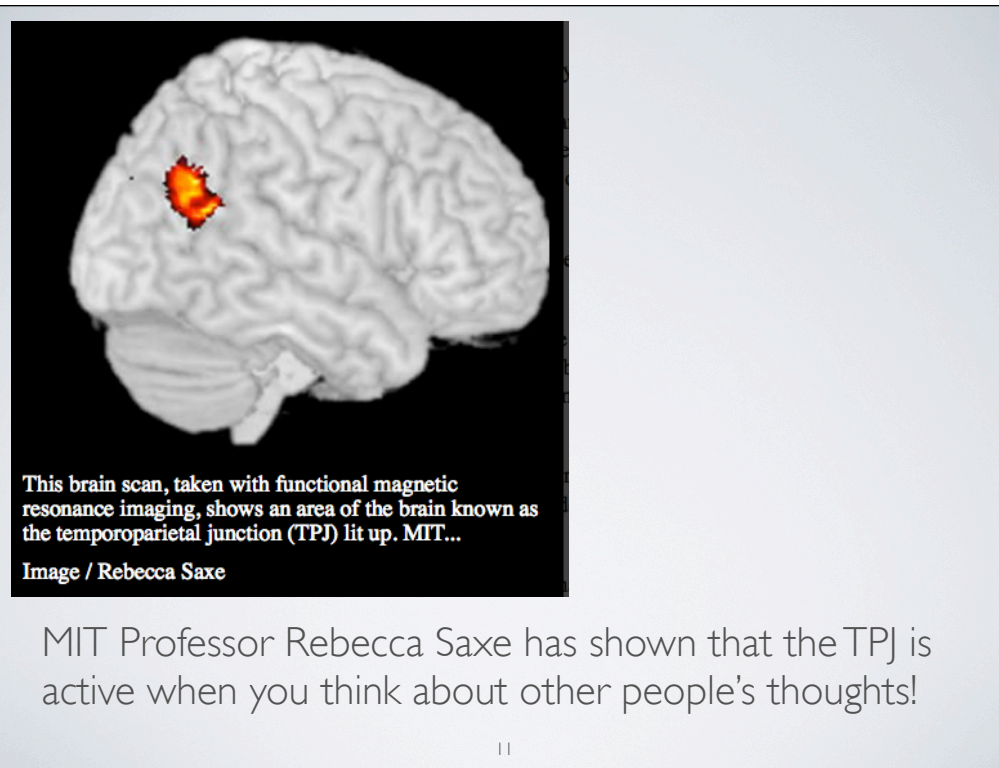
What difference does that make for our ability to work effectively with each other?

Collaboration  
Challenge #2:

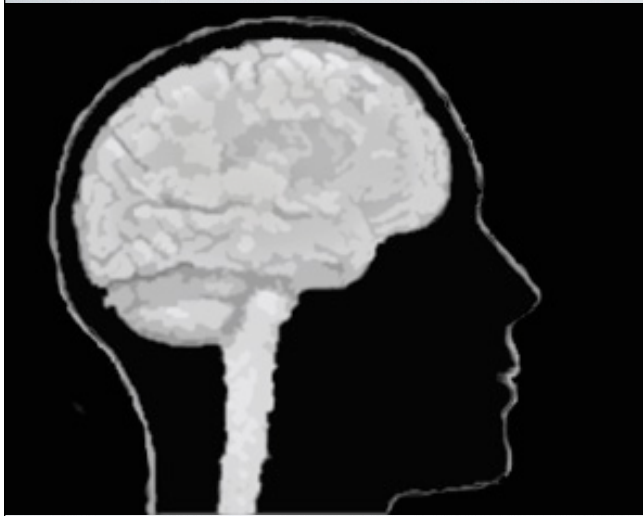
We are hard-wired for  
fight  
or  
flight.

One of the things that can complicate collaborative endeavors is our judgments and biases.

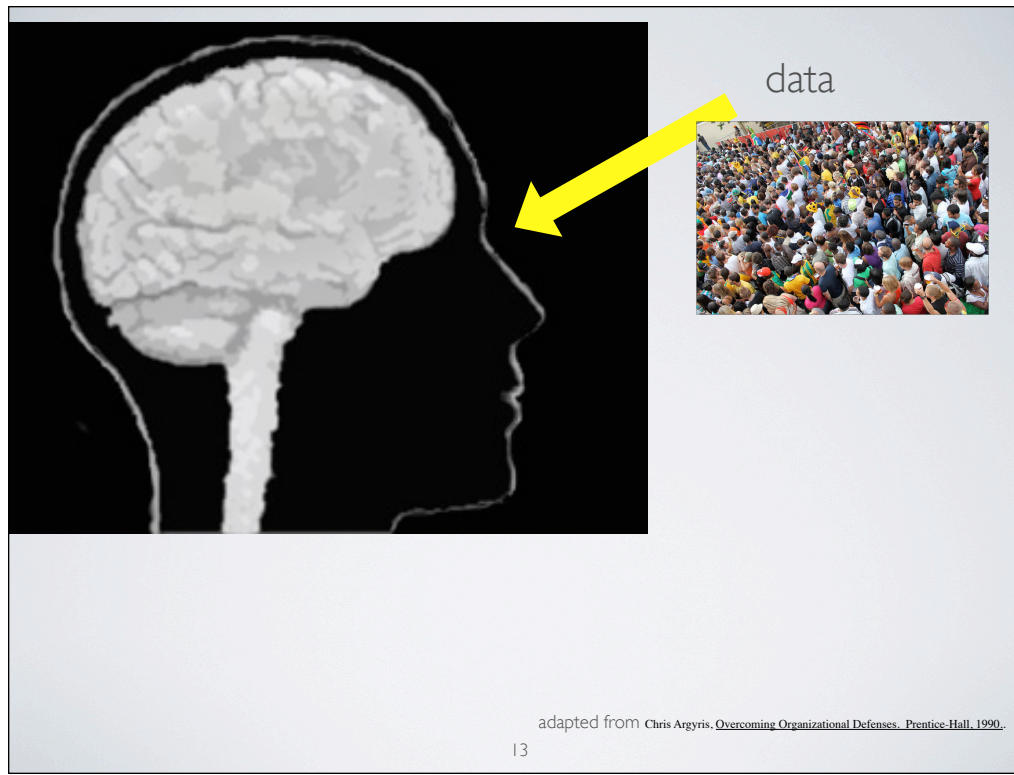
Consider how our physiology contributes to those judgments, and how self-awareness and self-management can ease their grip.



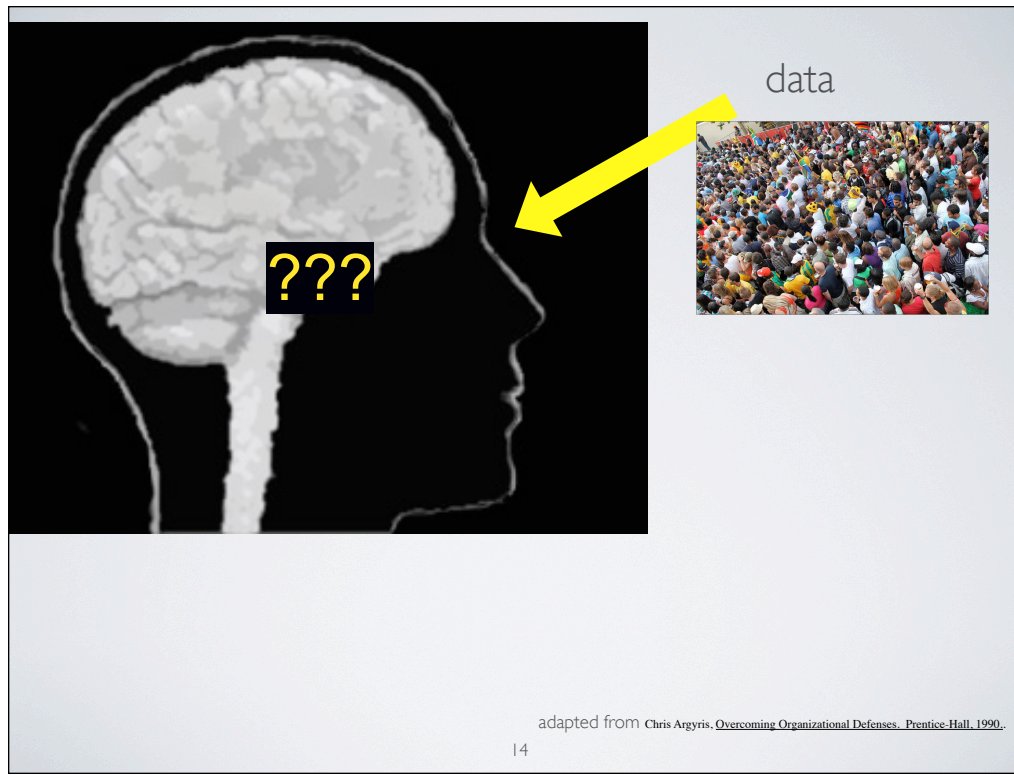
Professor Rebecca Saxe, in MIT's Brain/Cog department, is doing groundbreaking work on the neural substrate of components of our relationships with each other: "She ended a decades-long argument among neuroscientists when she showed that there is a specific part of our brains dedicated to thinking about others' desires."



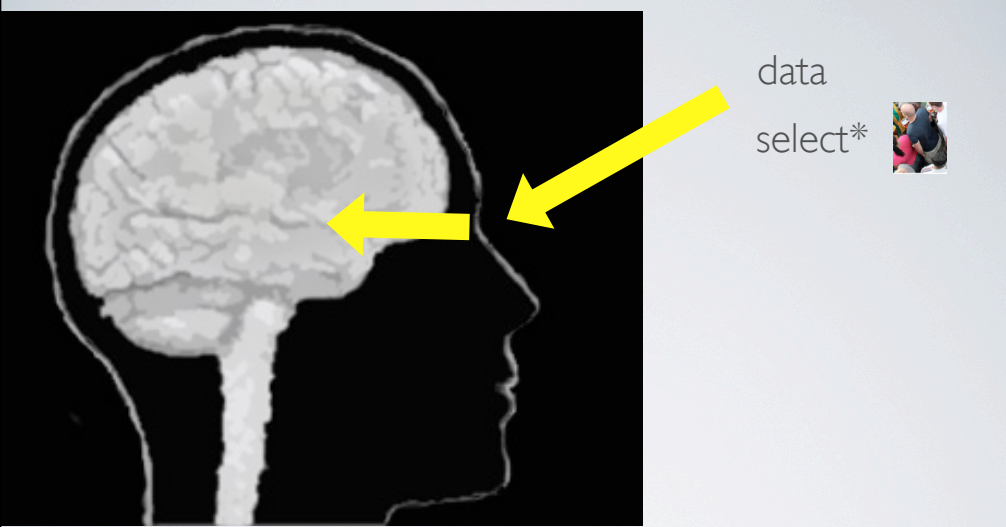
So what happens when you perceive others?



We are surrounded by bits of sensory data.  
That data enters our brain through our sensory apparatus--largely but not entirely our vision and hearing.



First, the data is screened by the amygdala for any hint of threat: do we need to fight or flee? Or are we safe?



data  
select\*

**\*based on past, interests, training, culture, mood, need, etc....**

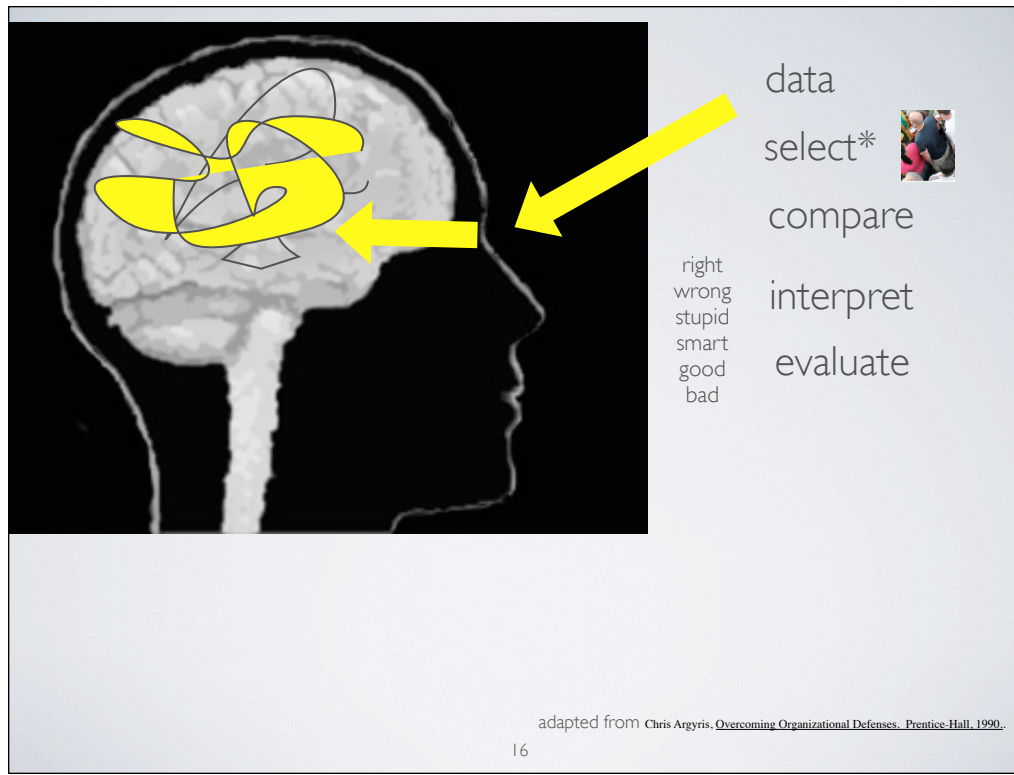
adapted from Chris Argyris, Overcoming Organizational Defenses, Prentice-Hall, 1990.

15

If we're safe, we then select data, largely in accordance with our past: our personal history, culture, experience, our immediate mood, needs, wants....

If you are unaccustomed to a certain mode of dress, for example, you'll be likely to notice it more.

If you're in the market for a certain brand of bike, you'll be more likely to notice occurrences of that brand of bike; it may seem like, suddenly, they're everywhere.



We compare current data to the past, and interpret and evaluate it accordingly.

All of this happens nearly instantaneously, and generally outside of our awareness. It happens with our environment, and it happens with the people around us as well: we select, compare, interpret, and evaluate each other without much noticing that we are.



data  
select\*  
compare  
interpret  
evaluate  
conclude  
act


oh no!!

adapted from Chris Argyris, *Overcoming Organizational Defenses*, Prentice-Hall, 1990.

17

We arrive at conclusions, based on that process of comparing and evaluating. This process is so fast and so automatic that we hardly notice what we “see” or “hear” is largely a construct of our own history.

The diagram illustrates the 'ladder of inference' process. On the left, a grayscale profile of a human head is shown with a yellow 'S' shape drawn over the brain area. Three yellow arrows point from the 'S' to a list of cognitive steps on the right. A yellow speech bubble containing the text 'oh great!!' is positioned near the bottom of the list. The list of steps is as follows:

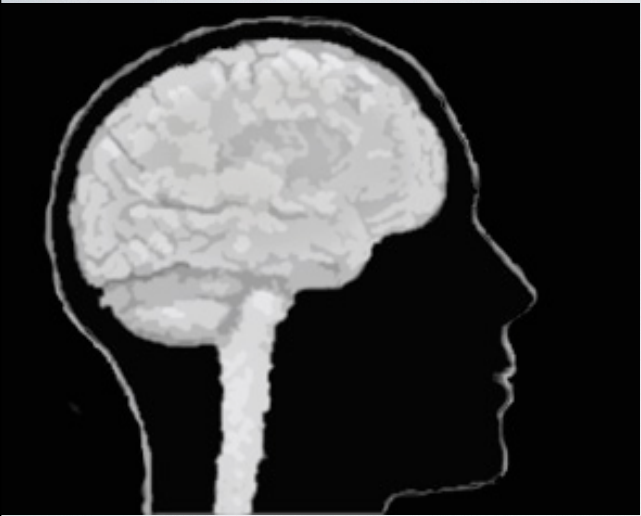
- data
- select\* 
- compare
- interpret
- evaluate
- conclude
- act

Chris Argyris and Peter Senge dubbed this the "ladder of inference."

adapted from Chris Argyris, Overcoming Organizational Defenses, Prentice-Hall, 1990.

18

It seems as if what we “see” or “hear” is real, when in fact we have significantly selected from and shaped those relatively few bits of sensory data that end up in our awareness.  
So people can look at the same data set and see radically different things.



So a large part of developing self-awareness is becoming aware of yourself leaping up your ladder of inference, then learning to slow yourself down, and eventually to evaluate more objectively.

19

This processing of sensory data, and arriving at unexamined conclusions, is one source of problems on a team. We can become more aware of the process, and interrupt our “jumping to conclusions.” We can step back from the instantaneous “reality” our cognitive processes deliver to us, and consciously re-evaluate them. Even a little flexibility in our ability to change or renew our interpretation of things can be a great help in the complex process of working with others.

## 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

Some of this ability to re-assess and re-evaluate can be seen in the results of this study. People in business were asked about the qualities of they noted in others whom they found to be genuinely influential. One component common to several of these qualities is a nimbleness of thought, an ability to change perspective.

## HOMEWORK FOR FRIDAY

- Summarize your self-assessment with your teammates:
  - what are three or four things that you want to work on with regard to your communication in this class?
  - what are one or two things about collaboration that you want to improve this term?

That's it for today.

We will revisit and enlarge upon these ideas over the course of the semester.

For now, note that most of your learning will happen with each other, working on your teams.

Over the next few days, share at least some of the goals on your self-assessments with your teammates. Make each other aware of some of the things you said you wanted to work on, so that you can support each other.