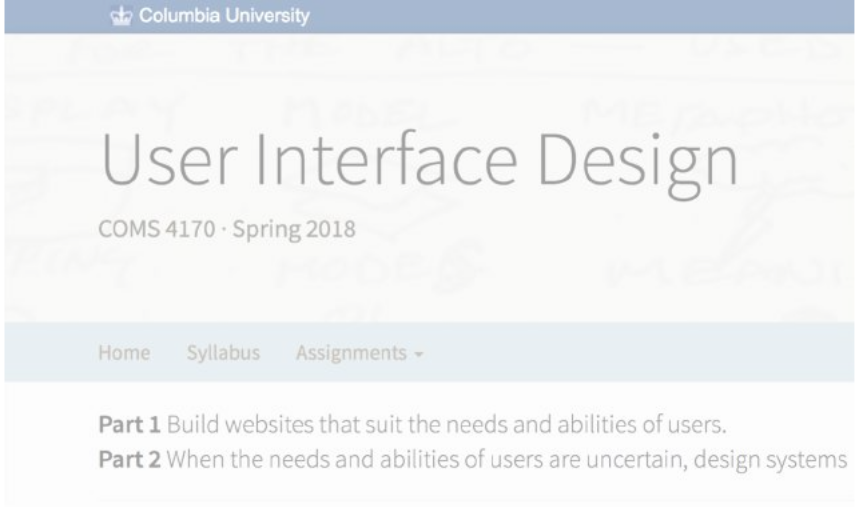
Design: Observation

No screens

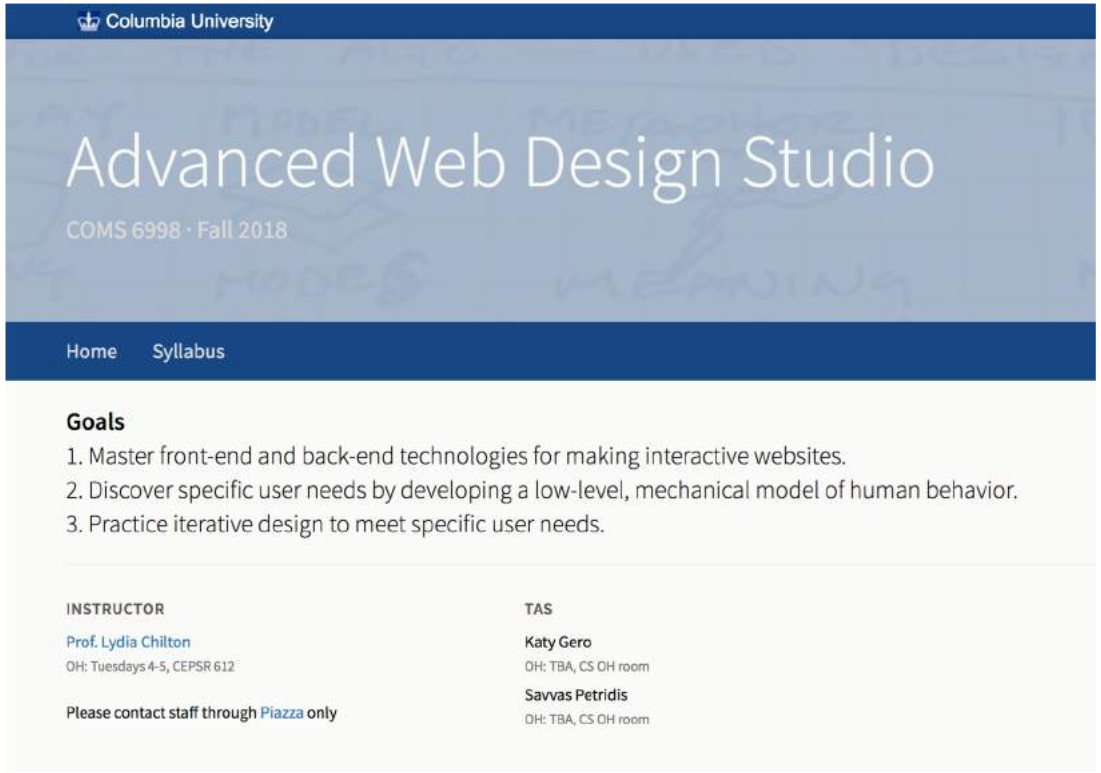
Prof. Lydia Chilton
COMS 6998
19 October 2018

Say your name



You already know front-end web dev:
HTML, JavaScript, Bootstrap, jQuery

And design:
Iterative design, critique



You will learn back-end web dev:

- Server-side programming (Flask),
- Databases (Sqlite, SQLAlchemy)
- Real-time Communication (Socket.IO)

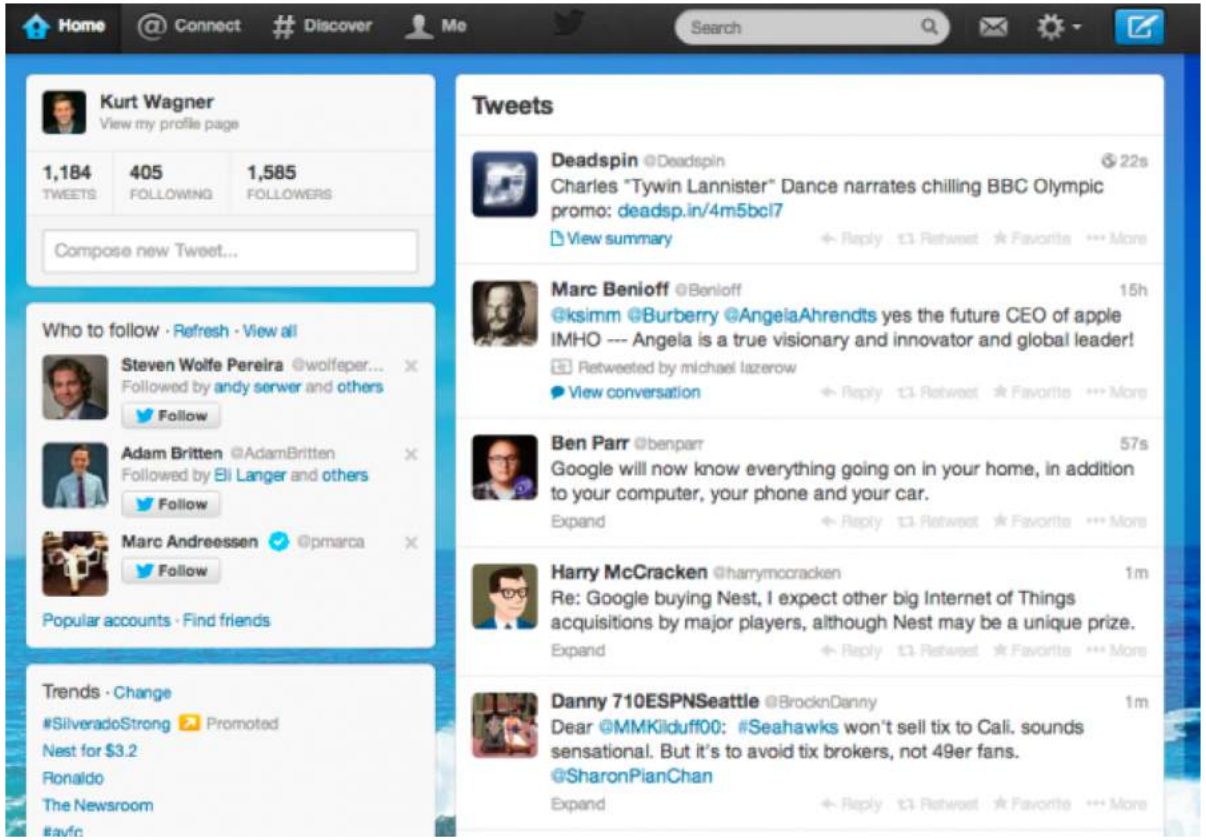
And practice web design by:

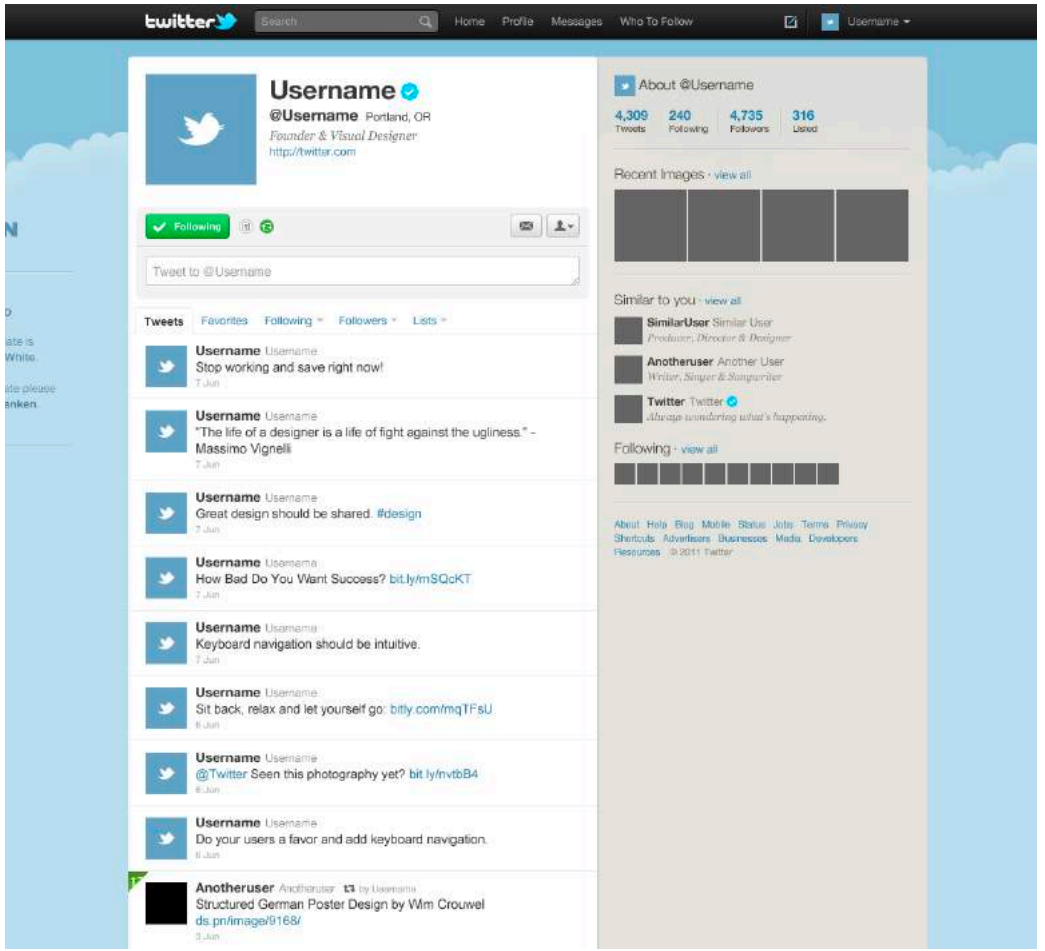
- Rebuilding IMDB.com
- Rebuilding twitter
- Pursuing your own project

Last week

- Implement the **real-time synchronous group chat aspect of Twitter**
  - Must have user accounts
  - Must have a database of history
  - Chats must appear in real-time using Socket.IO
    - must include message and the send's name
  - Needs to have a homepage of all messages
  - Needs to have pages for individual users messages
  - Users must be able to reply to a message (stretch goal)
- Don't need to implement:
  - Hashtags / trending topics
  - Profile pictures
  - search

Main page (all tweet) + User page (user tweets)





Studio: 24 minutes
Discuss how you implemented Twitter

Get in groups of **three**.

Let someone else **use your site** to test the following:

- When I tweet in the home page, does it automatically show up in my user page (give my user page is open)?
- When someone else tweets, does it NOT show up in my user page (give the user page is open)?
- If there are thousands of tweets, can the user still tweet and see new tweets without scrolling?

Implementation **discussion**:

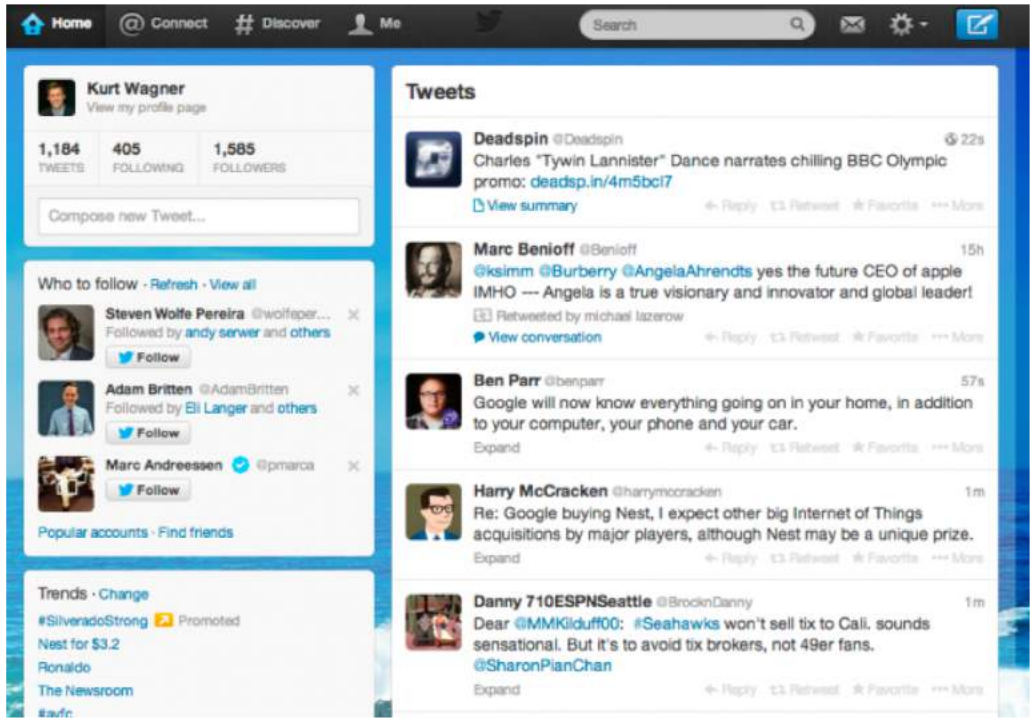
- How did you link user names to tweets?
- Can you see new tweets and their authors in real time (from two users in two browsers)?
- Can you load a page from history?
- How did you implement the user page?

Due by 9pm today on Piazza – write one thing you learned from implementation discussions today.

Next: Pick a new domain for chat

1. Reimplement IMDB

2. With in the same domain (movie data)
Find a new user goal (by brainstorming)



1. Reimplement Twitter

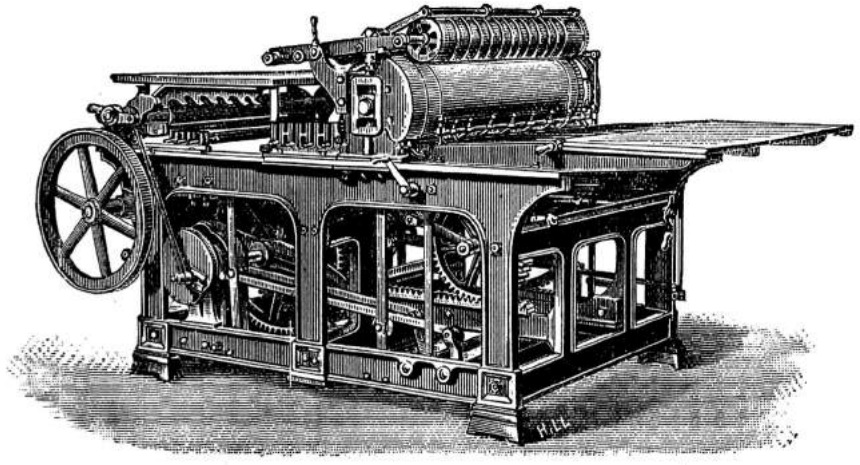
2. With in the same user goal (communication)
Find a new domain (HOW????)

Communication technology has been transforming society for thousands of years.

3500 BC – Writing

Agriculture. You could write down and remember weather patterns

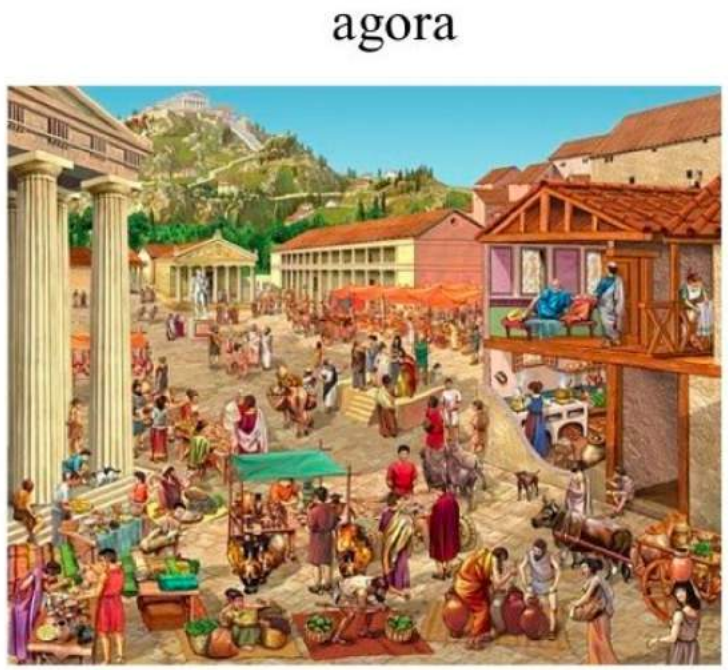
Banking. You could record who owed you money.



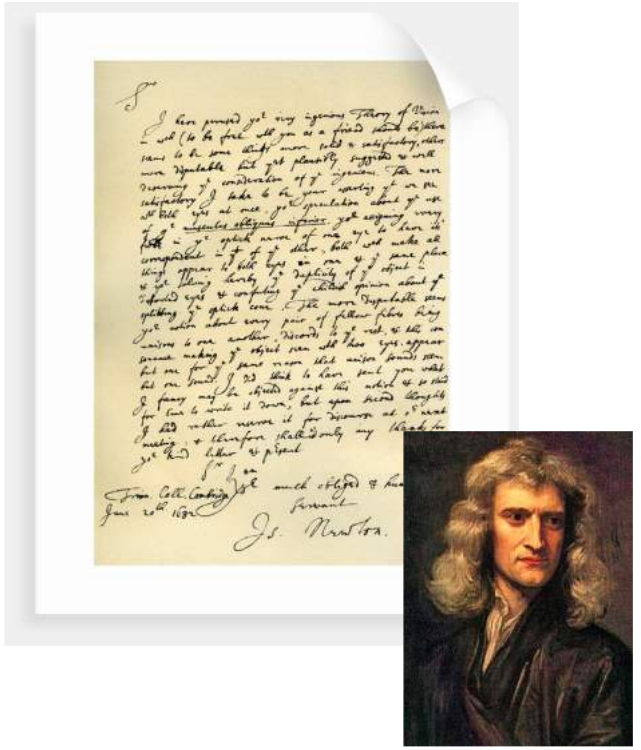
1440 – Printing press

Religion.
After Martin Luther's 95 theses,
German towns with printing presses were more likely to become Protestant.

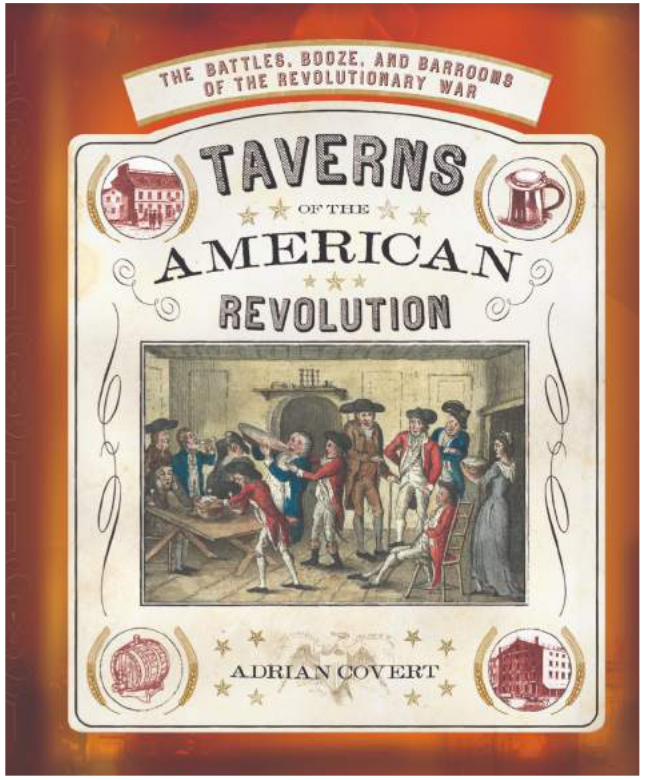
Historically, communication has been the solution to many problems



Commerce depends not just on prices but on verbal negotiation



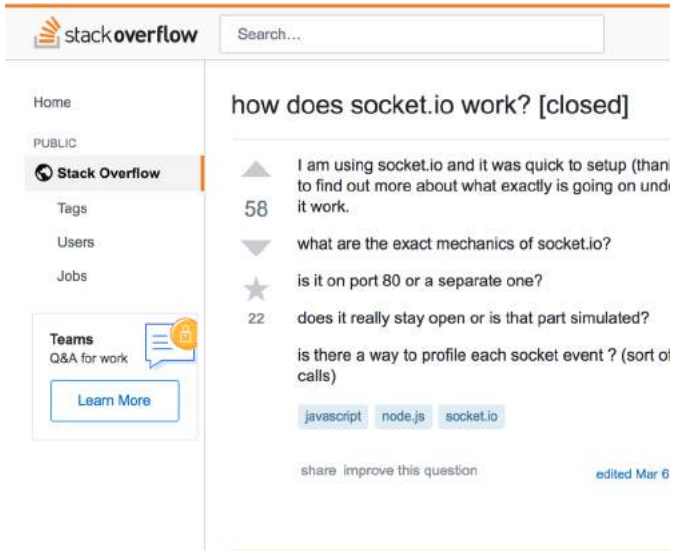
Scientists like Isaac Newton learned about other's work through letters.



Revolutions often start by angry people meeting in bars

Communication technology is still solving many of these problems

Modern commerce is aided my online marketplaces.



Modern scientists and inventors help each other online through q&a sites.

Modern revolutions have been escalated on social media in order to reach critical mass.

Next week

- Identify a **domain** where chat can solve a specific user need.
- Build on your code from this week
- The graphic design should be minimal, but usable.
  - We will do user tests in studio next week.

Advanced Web Design Studio

COMS 6998 · Fall 2018

Home Syllabus

Goals

1. Master front-end and back-end technologies for making interactive websites.
2. Discover specific user needs by developing a low-level, mechanical model of human behavior.
3. Practice iterative design to meet specific user needs.

INSTRUCTOR

Prof. Lydia Chilton

OH: Tuesdays 4-5, CEPSR 612

TAS

Katy Gero

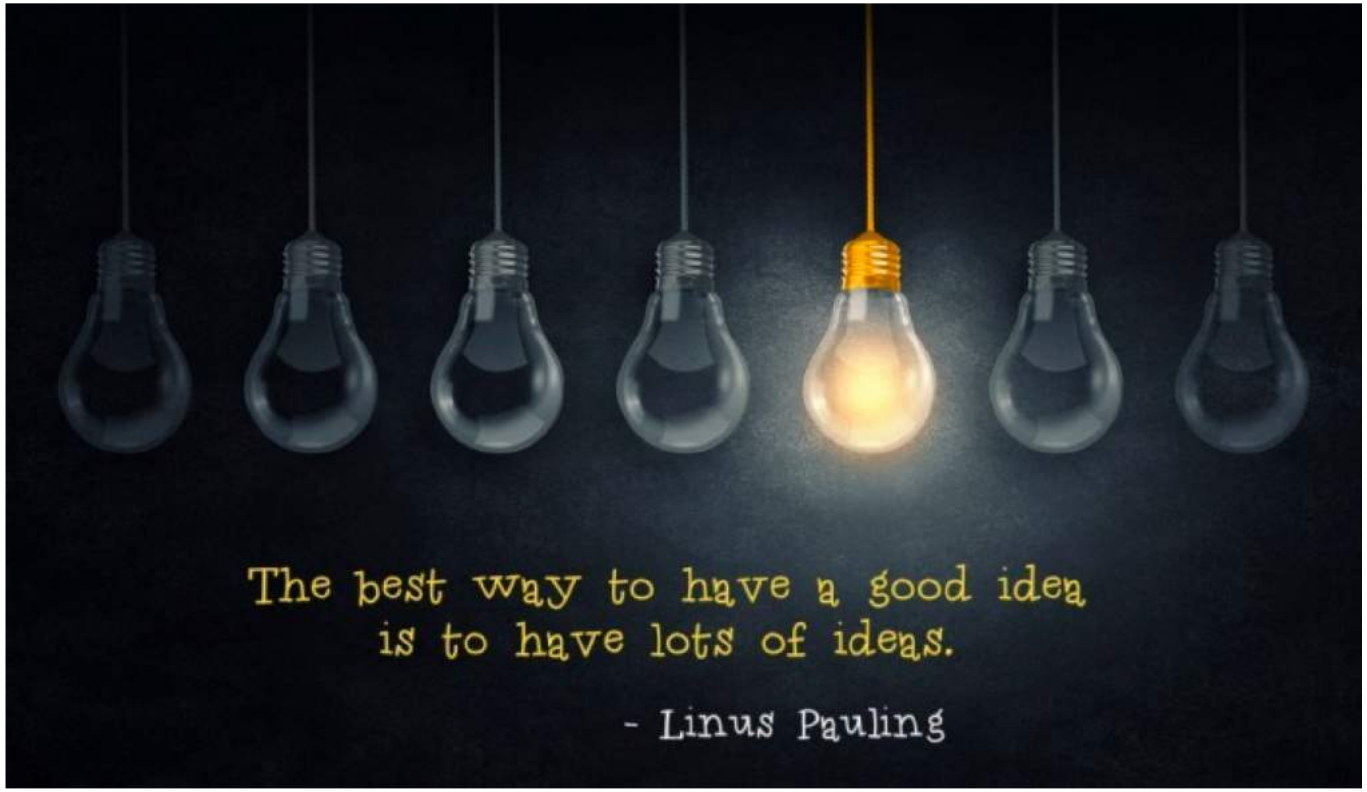
OH: TBA, CS OH room

Savvas Petridis

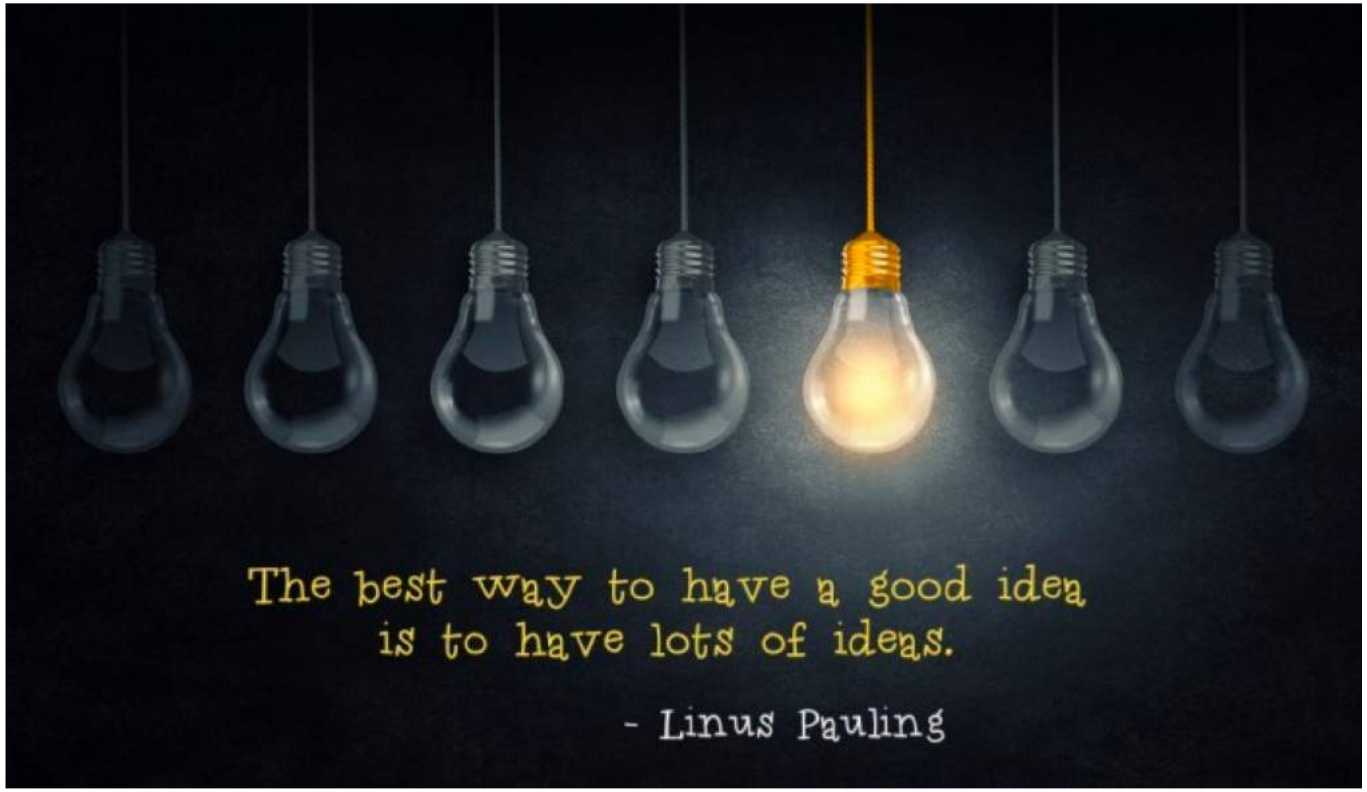
How to discover specific needs

Previously on COMS 6998:

Coming up with the perfect idea can be intimidating



Brainstorming helps people overcome a cognitive error: Picking the first idea they have.



Your first idea is not necessarily the best.

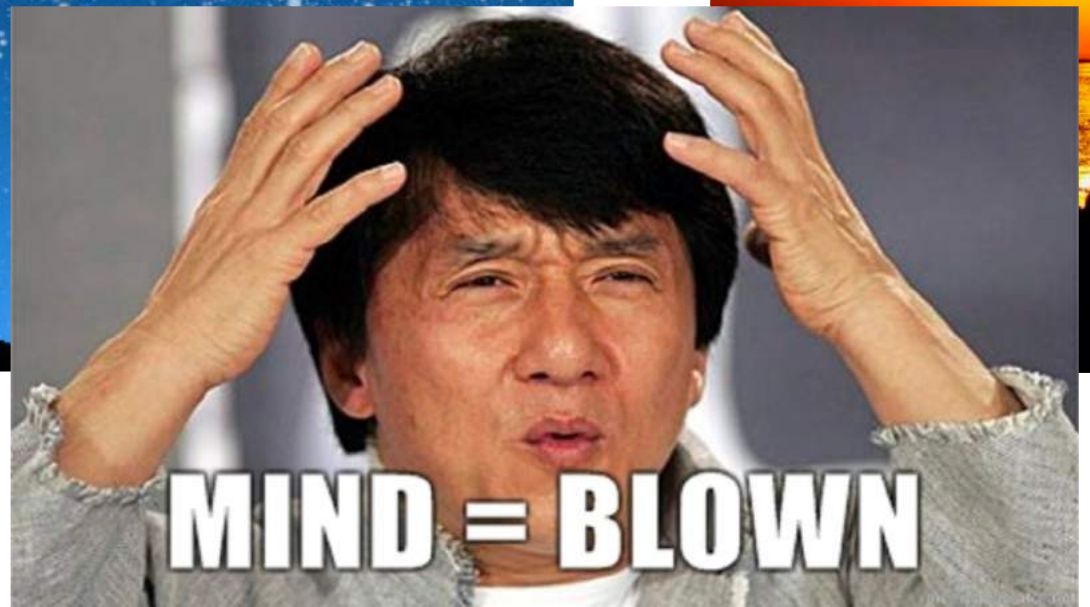
Brainstorming helps people be less greedy in their search for ideas.

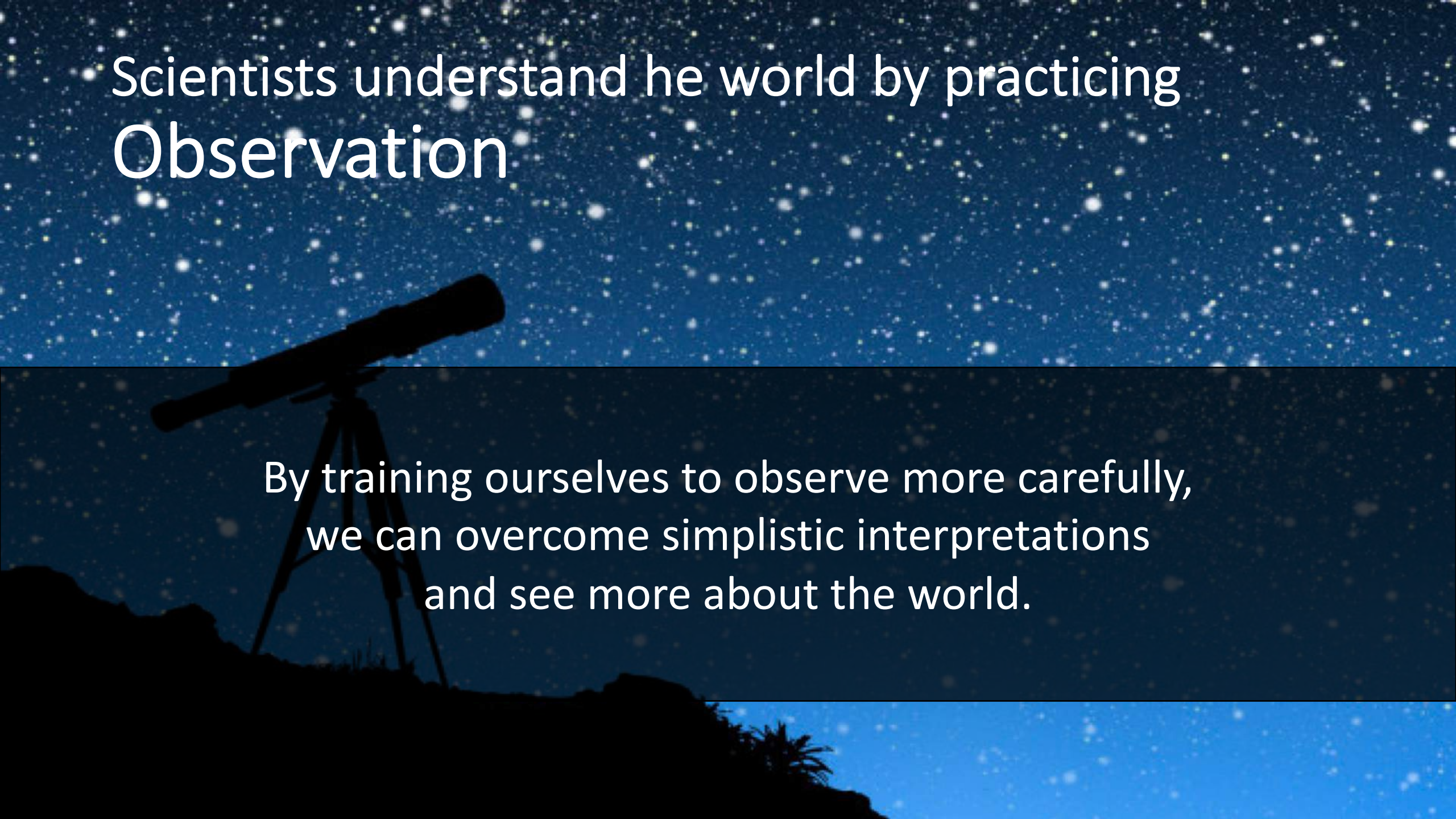
New ideation technique:

Observation

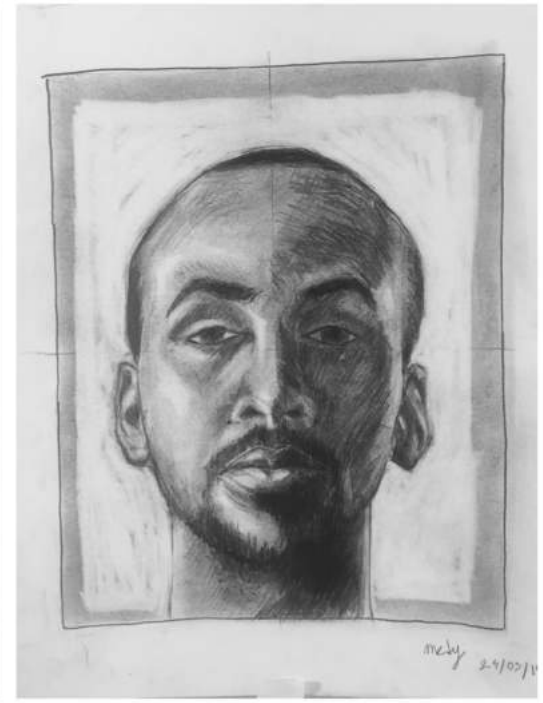

“What are stars for?”

Common Cognitive Error:
“What you see is all there is.”

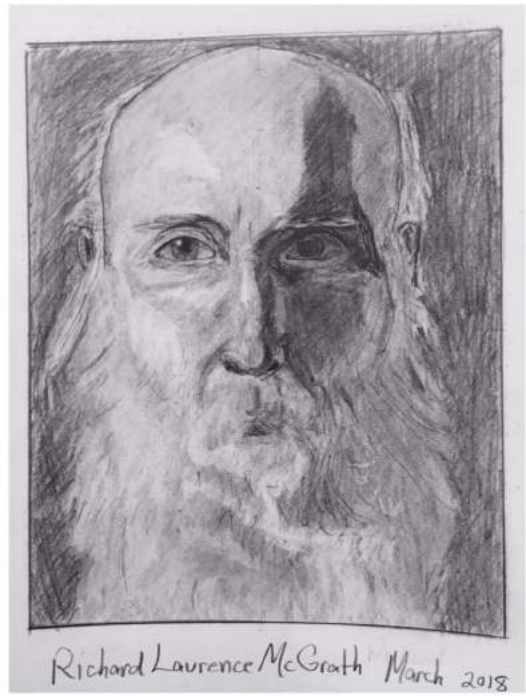



Scientists understand he world by practicing
Observation
By training ourselves to observe more carefully,
we can overcome simplistic interpretations
and see more about the world.

Example: Realistic art is hard




Richard McGrath
March 5, 2018


Richard Laurence McGrath March 2018

To draw more realistically, forget the “whole”.

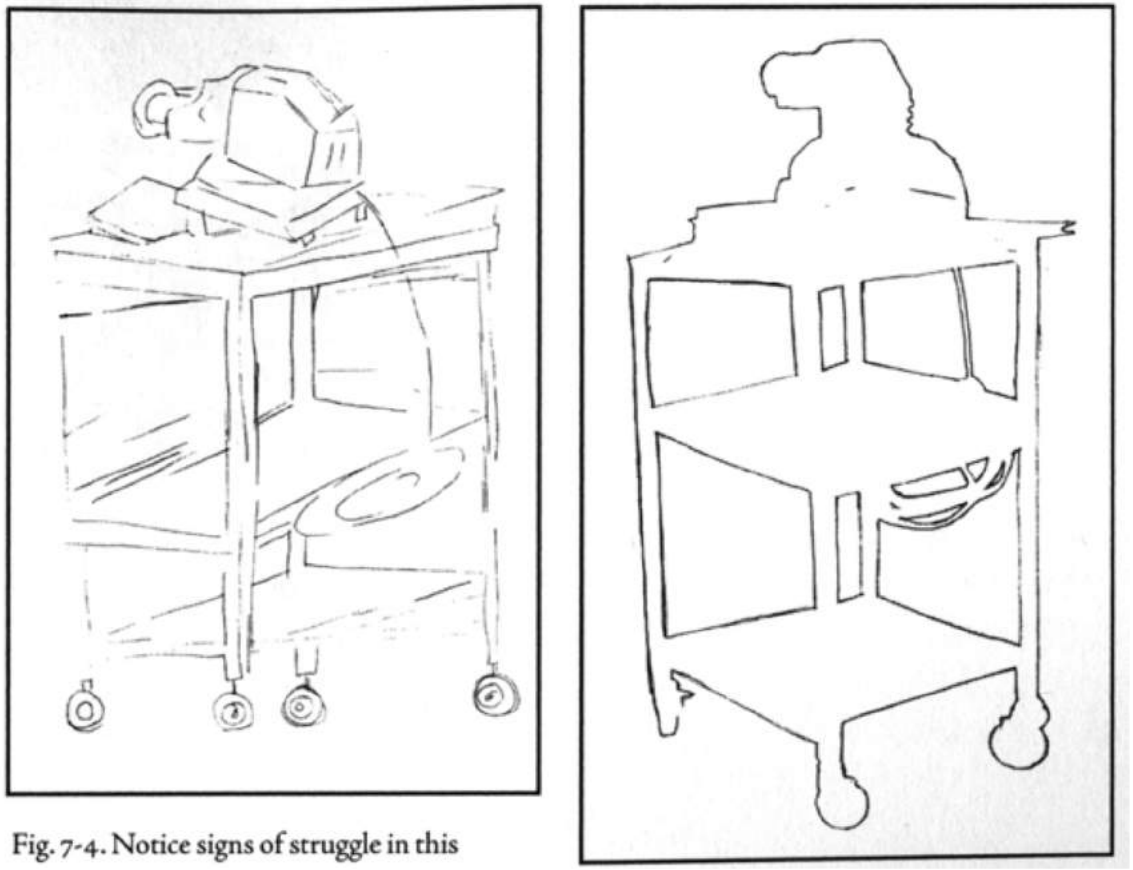
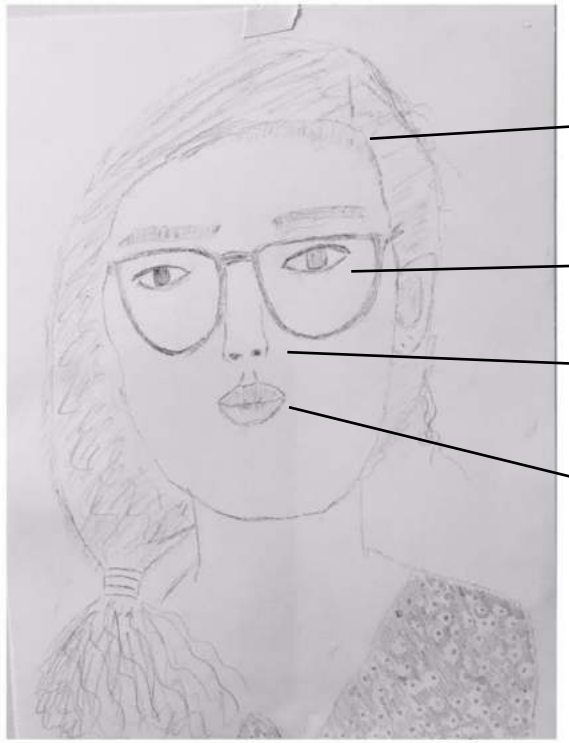


Fig. 7-4. Notice signs of struggle in this

Observe single aspects (like shape) more carefully.

Observing stops you from processing elements simplistically (symbolically)



shape

shadows

Negative space
Between features

And helps you see things objectively.

Observation Exercises

Help you to separate **what you see (observation)**
from what you **interpret**.

Observation vs. Interpretation

- "The students are facing the instructor" — Observation
- "The students are paying attention" — Interpretation

- "The students laughed" — Observation
- "The student found something funny" — Interpretation

- "He made a mistake." — Interpretation
- "He stepped on her toe" — Observation

- "The room isn't big enough" — Interpretation
- "During exercises, four people ran into the wall" — Observation

What is this?

How is this better?

Observe this item. What do you see?

Interpret your observations

Height difference	Better stabilizes the head while sleeping
Black & red	The black is soft, The red is breathable, so it doesn't get too hot
zipper	Holds you iphone! So you don't get tangled in the cord
Black strings	Keeps it tight around your neck To better support the head, doesn't fall off
Two black tabs	Straps to the back of the seat, So that you can stay upright!

By separating observations from interpretations,
we can overcome simplistic interpretations
and discover more about the world.

Finding problems you can fix with communication

Observe your life over the next week.

- **Find problems**: what were communication failures or frustrations
- **Find positive example**: when did something randomly go well. How could we repeat that awesomeness everyday?

Observe what really happened

Interpret why it went well.

Is this a thing we could repeat and facilitate with technology?

Examples of problems fixed by real-time communication

- Sharing files and comments within an office is a **pain**
  - Email is lame. Hard to find. Threads and complex

Slack

- Finding cabs is **hard**!
  - Waiting in the cold sux, not knowing how long you'll wait sux.

Uber

- Texting is fun, but **hard** to express excitement, or sadness.
  - Typing ":-)" is **cool**. Can we do more of that?

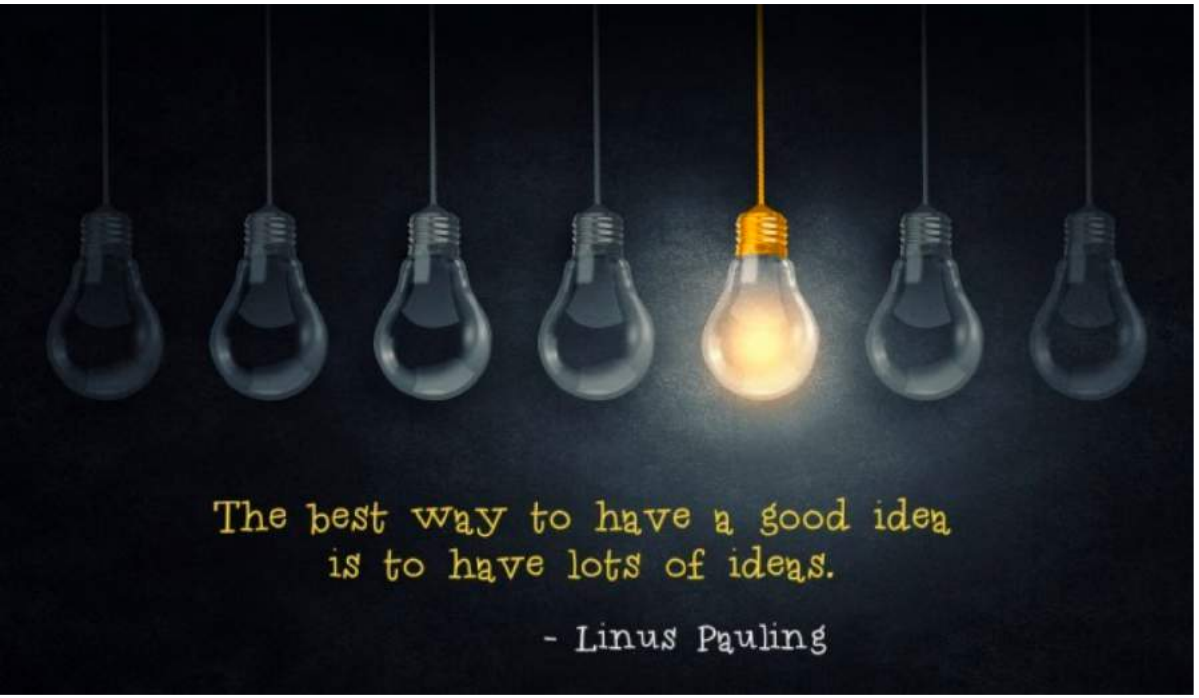
Emoji

- When I lecture **I don't know** if my students are getting it
  - Asking questions is interactive, could I run polls in class?

Clicker apps

Summary

Coming up with the perfect idea can be intimidating



Brainstorming overcomes greediness

Observation overcomes simplistic interpretations "what you see is all there is"

By separating observations from interpretations you can get past simplistic interpretations and see the more about the world.

Art - More realistic drawing

Science – Understanding how nature really works

Engineering – Making better products

There is always more to discover

Finding Problems you can Fix with communication

Observe your life over the next week.

- **Find problems**: what were communication failures or frustrations
- **Find positive example**: when did something randomly go well. How could we repeat that awesomeness everyday?

Observe what really happened

Interpret why it worked or failed.

Is this a thing we could repeat and facilitate with technology?

Next week

- Identify a **domain** of communication where we can
  - fix a problem or (allow students to ask/answer each others questions)
  - enhance an existing practice (add emoji to texting)
- Build on your code from this week
- The graphic design should be minimal, but usable.
  - We will do user tests in studio next week.

- Try observing your communication issues in your life
  - Separate observations from interpretation

Due by 9pm today on Piazza – write one thing you learned from implementation discussions today.