

Design: Observation

No screens



Prof. Lydia Chilton
COMS 6998
19 October 2018

Say your name



User Interface Design

COMS 4170 · Spring 2018

[Home](#) [Syllabus](#) [Assignments](#) ▾

Part 1 Build websites that suit the needs and abilities of users.

Part 2 When the needs and abilities of users are uncertain, design systems

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

And design:
Iterative design, critique

Advanced Web Design Studio

COMS 6998 · Fall 2018

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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, CEPSSR 612

Please contact staff through [Piazza](#) only

TAS

Katy Gero
OH: TBA, CS OH room
Savvas Petridis
OH: TBA, CS OH room

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)

The screenshot shows the Twitter homepage. At the top, there are navigation links: Home, Connect, Discover, Me, and a search bar. Below the header, a profile card for "Kurt Wagner" is displayed, showing 1,184 tweets, 405 following, and 1,585 followers. A "Compose new Tweet..." button is present. On the left, a sidebar lists "Who to follow" with profiles for Steven Wolfe Pereira, Adam Britten, and Marc Andreessen. Below this is a "Popular accounts" section with profiles for Ben Parr and Harry McCracken. A "Trends" section at the bottom includes hashtags like #SilveradoStrong and #Nest for \$3.2.

Tweets

- Deadspin @Deadspin** Charles "Tywin Lannister" Dance narrates chilling BBC Olympic promo: deadsp.in/4m5bcI7 22s
- Marc Benioff @Benioff** @ksimm @Burberry @AngelaAhrendts yes the future CEO of apple IMHO --- Angela is a true visionary and innovator and global leader! 15h
- Ben Parr @benparr** Google will now know everything going on in your home, in addition to your computer, your phone and your car. 57s
- Harry McCracken @harrymccracken** Re: Google buying Nest, I expect other big Internet of Things acquisitions by major players, although Nest may be a unique prize. 1m
- Danny 710ESPNSeattle @BrooknDanny** Dear @MMKilduff00: #Seahawks won't sell tix to Cali, sounds sensational. But it's to avoid tix brokers, not 49er fans. @SharonPlanChan 1m

The screenshot shows a Twitter user profile page for "Username". The profile card displays the name "Username", location "Portland, OR", title "Founder & Visual Designer", and website "http://twitter.com". It shows 4,309 tweets, 240 following, 4,735 followers, and 316 listed. The timeline on the right shows several tweets from "Username" with timestamps ranging from 7 Jun to 6 Jun. The interface includes sections for "About", "Recent Images", "Similar to you", and "Following".

Username [@Username](#) Portland, OR Founder & Visual Designer http://twitter.com

4,309 Tweets 240 Following 4,735 Followers 316 Listed

About @Username

Recent Images • view all

Similar to you • view all

Following • view all

Tweets **Favorites** **Following** **Followers** **Lists**

- Username Username Stop working and save right now! 7 Jun
- Username Username "The life of a designer is a life of fight against the ugliness." - Massimo Vignelli 7 Jun
- Username Username Great design should be shared. #design 7 Jun
- Username Username How Do You Want Success? bit.ly/mSQcKT 7 Jun
- Username Username Keyboard navigation should be intuitive. 7 Jun
- Username Username Sit back, relax and let yourself go: bit.ly/mqTFsU 6 Jun
- Username Username @Twitter Seen this photography yet? bit.ly/nvtbB4 6 Jun
- Username Username Do your users a favor and add keyboard navigation. 6 Jun

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.

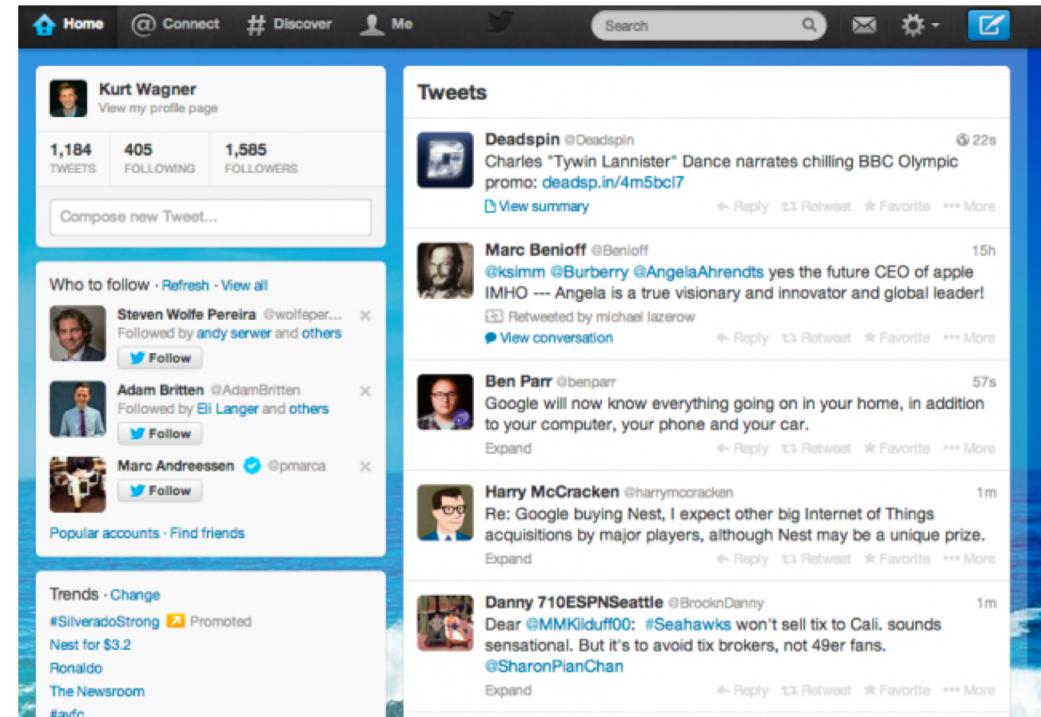
Next: Pick a new domain for chat



The screenshot shows the IMDb movie page for "Crazy Rich Asians" (2018). At the top, there's a search bar and navigation links for "Movies, TV & Showtimes", "Celebs, Events & Photos", "News & Community", and "Watchlist (2)". Below the header, the movie title "Crazy Rich Asians (2018)" is displayed with a rating of 7.5/10 based on 30,279 reviews. A "Rate This" button is also present. The main content area features a large image of the movie's poster, showing a couple in a tropical setting, followed by a video player and several smaller images. Below the poster, there are links for "Get Showtimes & Tickets" and "In 8 theaters near New York NY US [change]". The plot summary describes it as a contemporary romantic comedy based on a global bestseller. Credits list the Director (Jon M. Chu), Writers (Peter Chiarelli and Adele Lim), and Stars (Constance Wu, Henry Golding, Michelle Yeoh). There are also links to "See full cast & crew".

1. Reimplement IMDB

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



The screenshot shows a Twitter profile for "Kurt Wagner". The profile picture is a small thumbnail. The bio says "View my profile page". Below the bio, it shows 1,184 tweets, 405 following, and 1,585 followers. There is a "Compose new Tweet..." input field. To the right, there are sections for "Who to follow" (listing Steven Wolfe Pereira, Adam Britten, and Marc Andreessen) and "Popular accounts - Find friends" (listing Trends like "#SilveradoStrong", "Nest for \$3.2", "Ronaldo", "The Newsroom", and "#aufrn"). The main feed on the right shows several tweets from other users, such as Deadspin (@Deadspin), Marc Benioff (@Benioff), Ben Parr (@benparr), Harry McCracken (@harrymccracken), and Danny 710ESPNSeattle (@BrockDanny). Each tweet includes the author's profile picture, the tweet text, and interaction buttons for reply, retweet, favorite, and more.

1. Reimplement Twitter

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

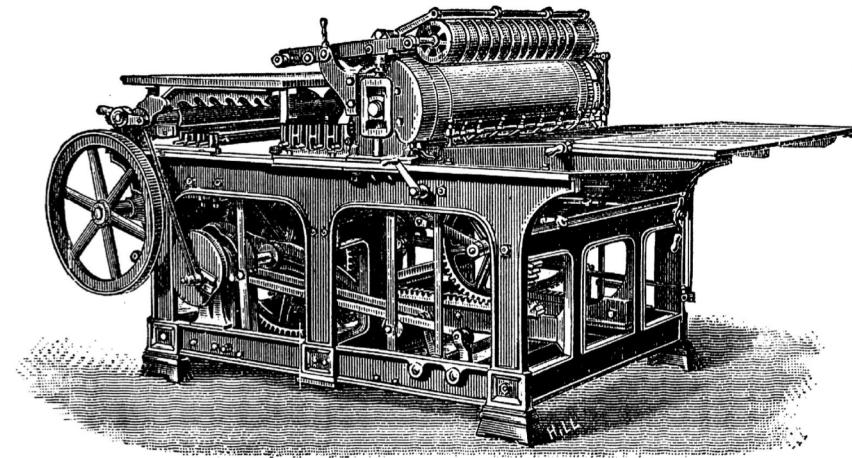
Communication technology has been transforming society for thousands of years.



3500 BC – Writing

Agriculture. You could write down and remember weather patterns

Banking. You could record who owed you money.

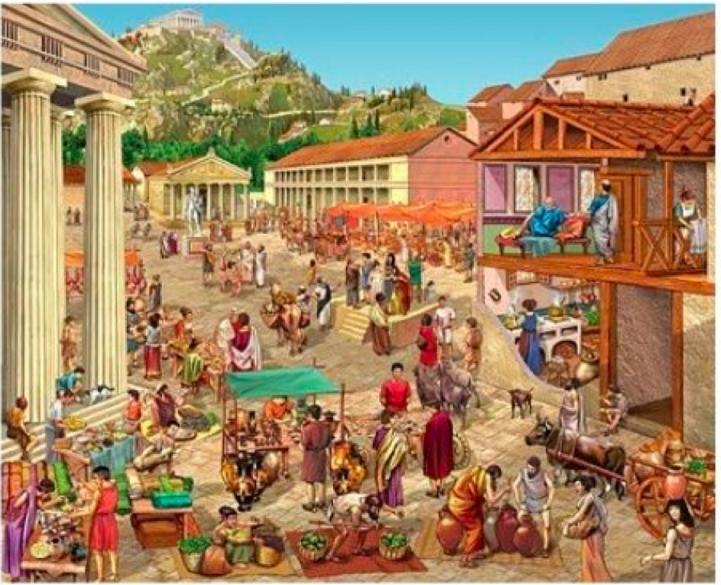


1440 – Printing press

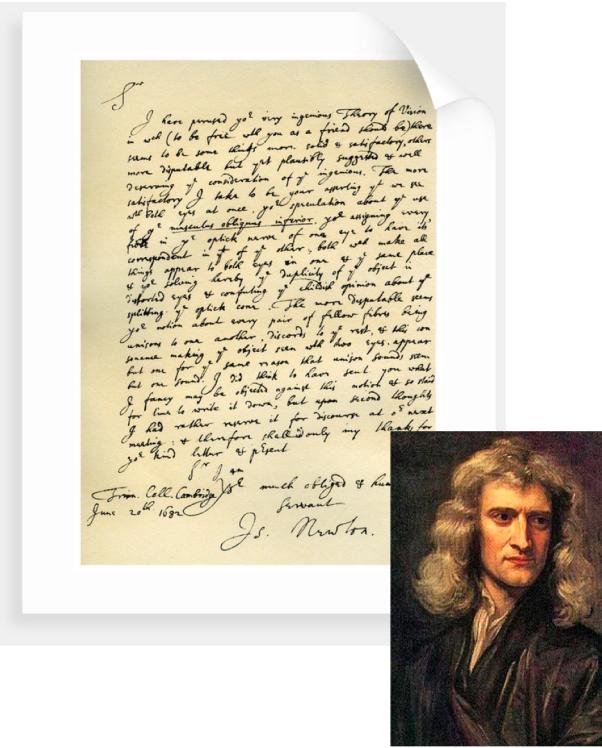
Religion.
After Martin Luther's 95 theses, German towns with printing presses were more likely to become Protestant.

Historically, communication has been the solution to many problems

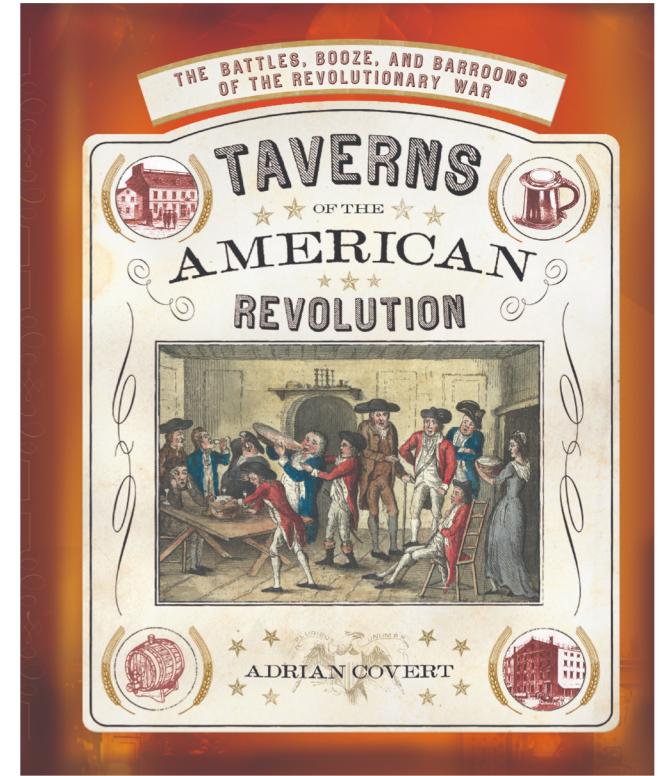
agora



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

craigslist

post to classifieds
my account

search craigslist

event calendar

M	T	W	T	F	S	S
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

help, faq, abuse, legal
avoid scams & fraud
personal safety tips
terms of use new
privacy policy
system status
about craigslist

manhattan mnh brk que bx stn jsy lgi

community

- activities
- artists
- childcare
- classes
- events
- general groups
- local news

housing

- apts / housing
- missed connections
- housing swap
- housing wanted
- office / commercial parking / storage
- real estate for sale
- rooms / shared rooms wanted
- sublets / temporary vacation rentals

services

- automotive
- beauty
- cell/mobile
- computer
- creative
- cycle
- event
- farm+garden
- financial
- household

for sale

- antiques
- appliances
- arts+crafts
- atv/utv/sno
- auto parts
- aviation
- baby+kid
- barter
- beauty+hlth
- farm+garden
- free
- furniture
- garage sale
- general
- heavy equip
- household
- jewelry
- materials

stackoverflow

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PUBLIC

Stack Overflow

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Users

Jobs

Teams Q&A for work

Learn More

how does socket.io work? [closed]

58 answers

what are the exact mechanics of socket.io?

is it on port 80 or a separate one?

does it really stay open or is that part simulated?

is there a way to profile each socket event ? (sort of calls)

javascript node.js socket.io

share improve this question edited Mar 6



Modern commerce is aided by 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.

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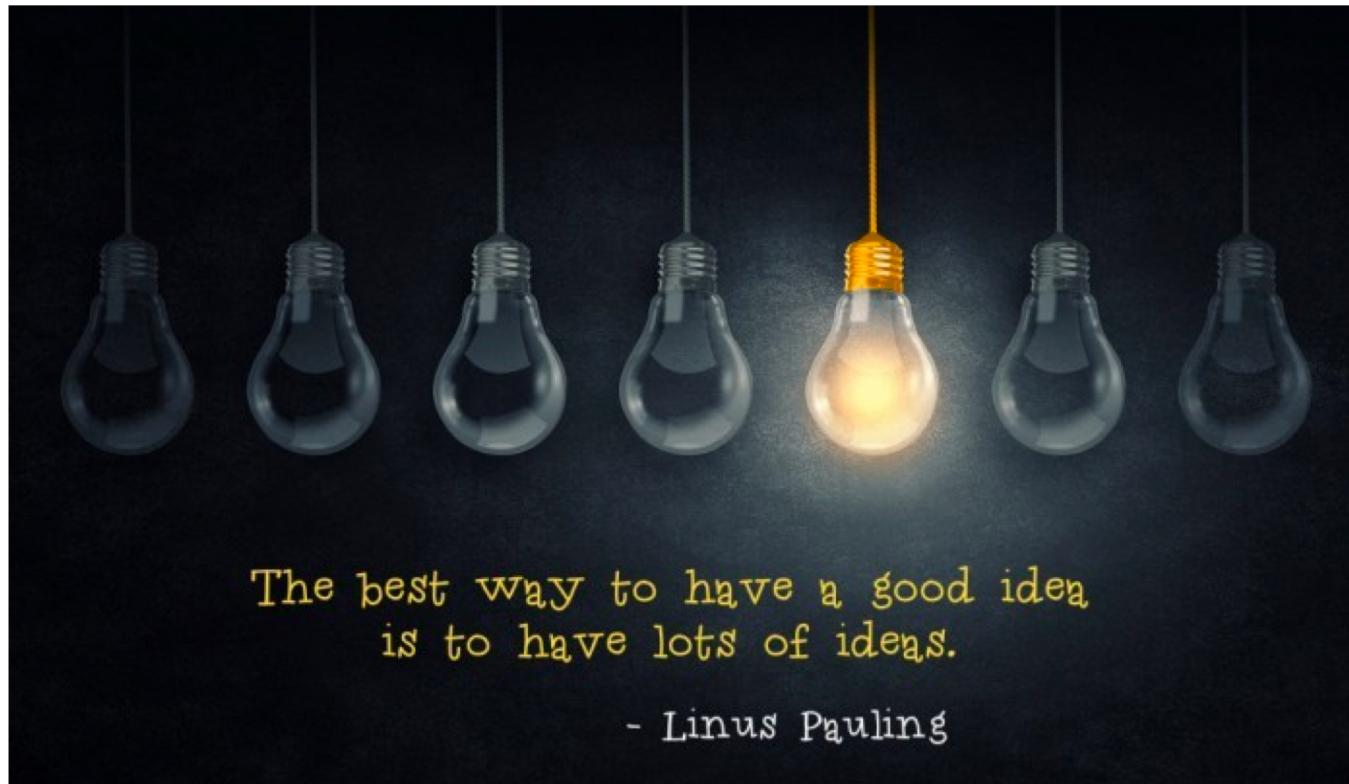
[Savvas Petridis](#)

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How to discover specific needs

Previously on COMS 6998:

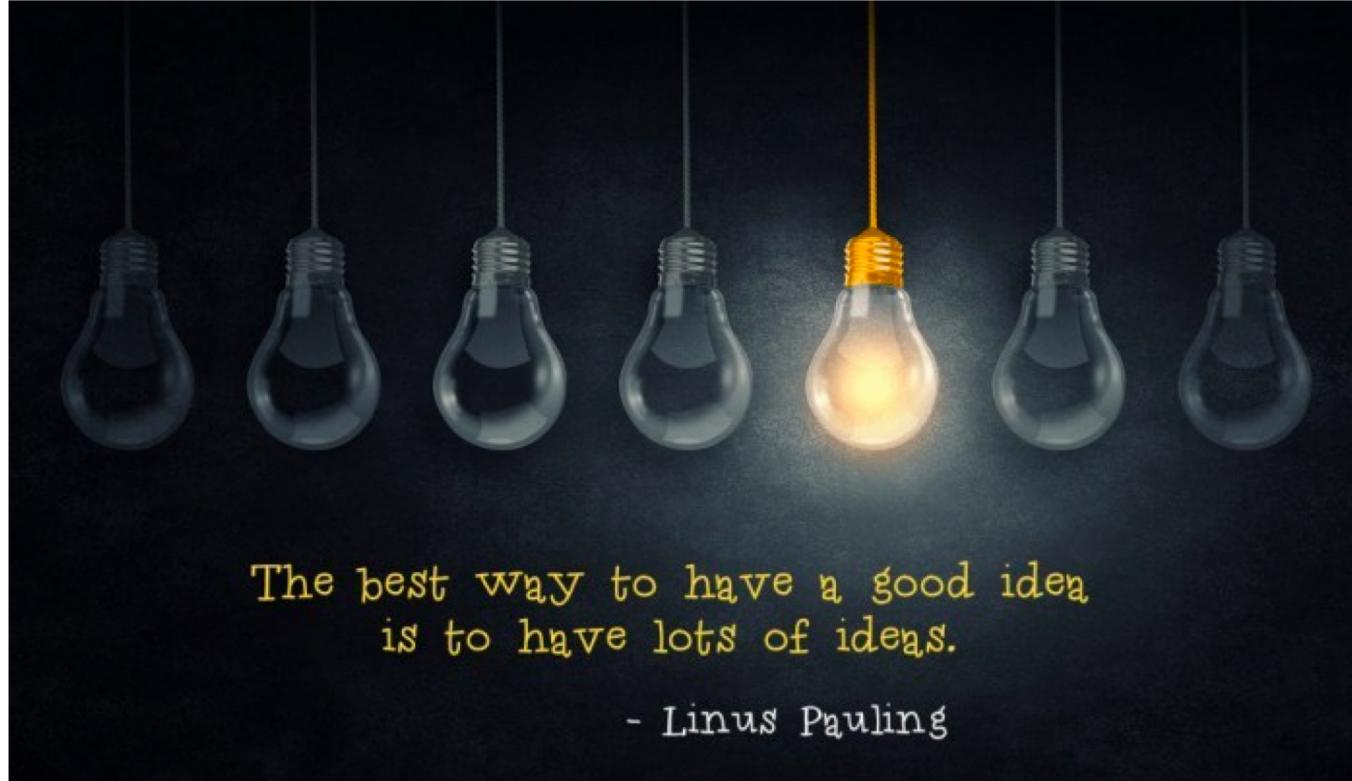
Coming up with the perfect idea can be intimidating



The best way to have a good idea
is to have lots of ideas.

- Linus Pauling

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



The best way to have a good idea
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Your first idea is not necessarily the best.

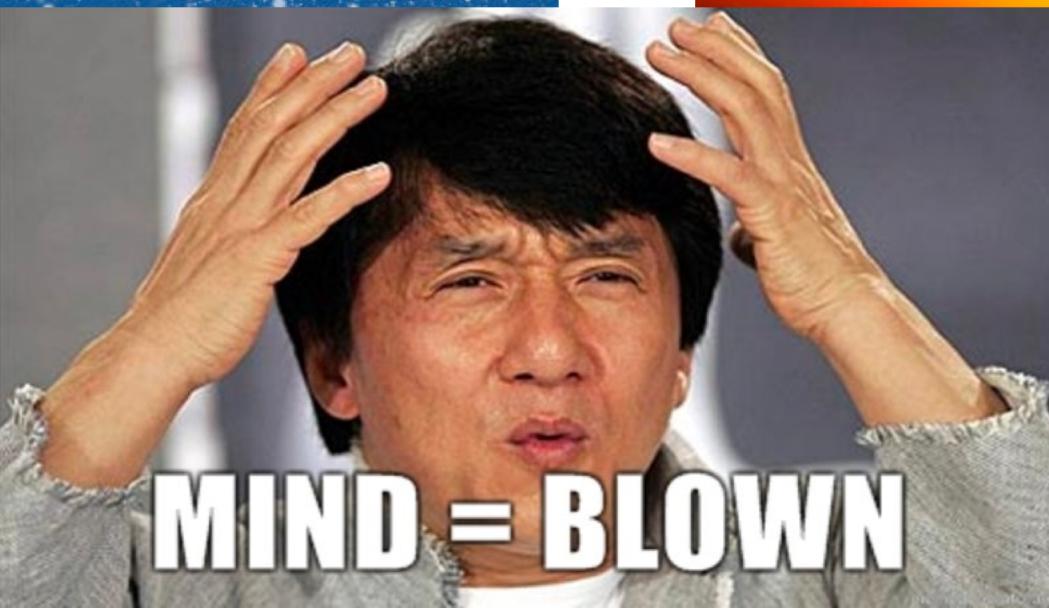
Brainstorming helps people be less greedy in their search for ideas.

New ideation technique:
Observation

“What are stars for?”



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

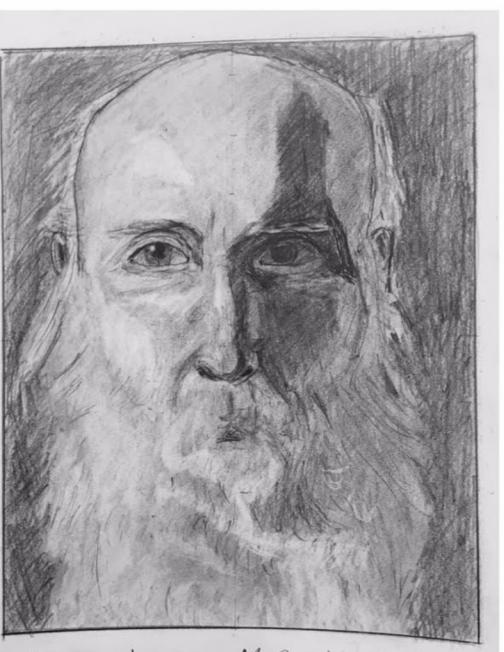
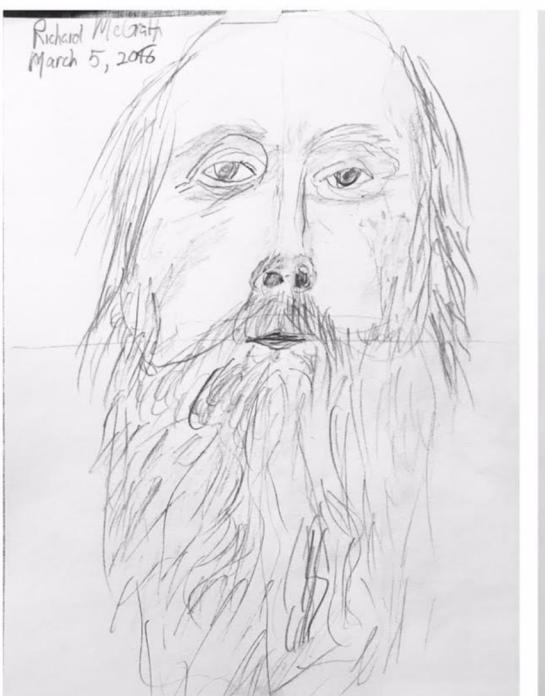
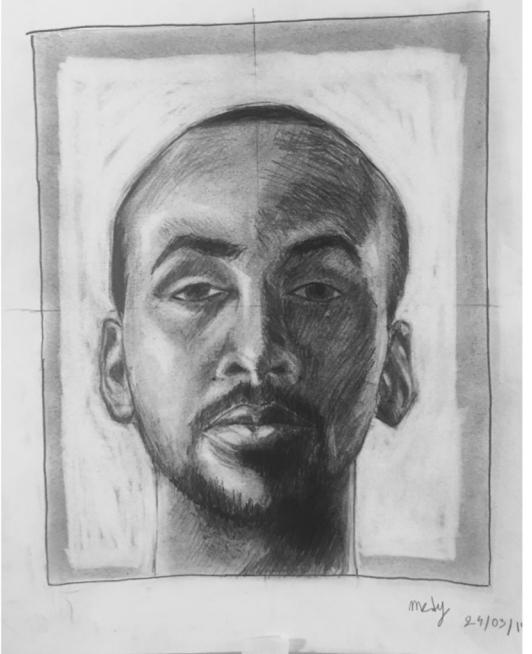


Scientists understand the world by practicing Observation

By training ourselves to observe more carefully, we can overcome simplistic interpretations and see more about the world.

Example: Realistic art is hard





To draw more realistically, forget the “whole”.

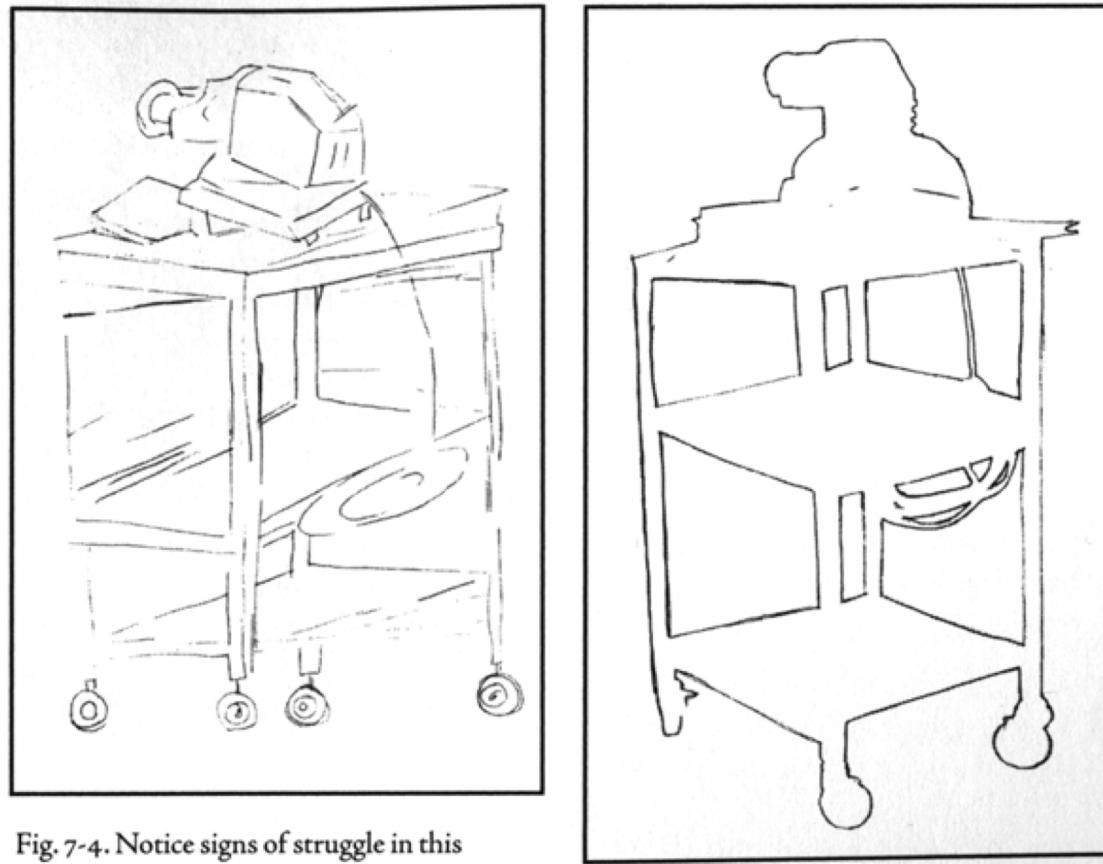
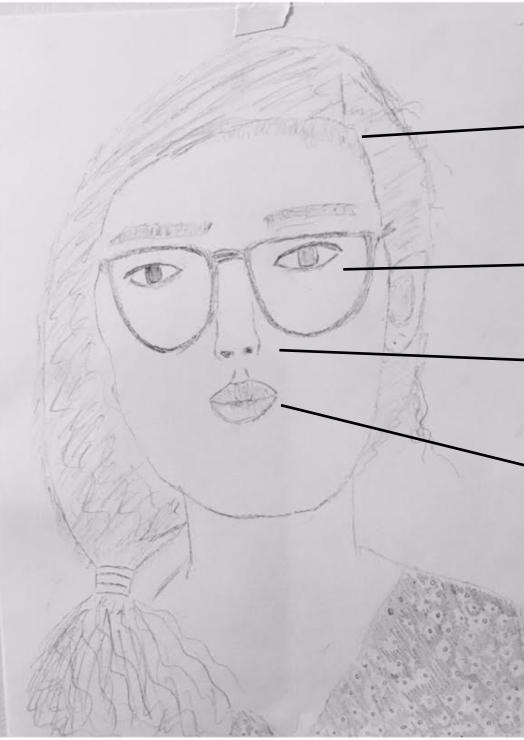


Fig. 7-4. Notice signs of struggle in this

Observe single aspects (like shape) more carefully.

Observing stops you from processing elements simplistically (symbolically)



Head

eyes

nose

mouth



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



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

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 your 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!

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
- Finding cabs is **hard!**
 - Waiting in the cold sux, not knowing how long you'll wait sux.
- Texting is fun, but **hard** to express excitement, or sadness.
 - Typing “:-)” is **cool**. Can we do more of that?
- When I lecture I **don't know** if my students are getting it
 - Asking questions is interactive, could I run polls in class?

Slack

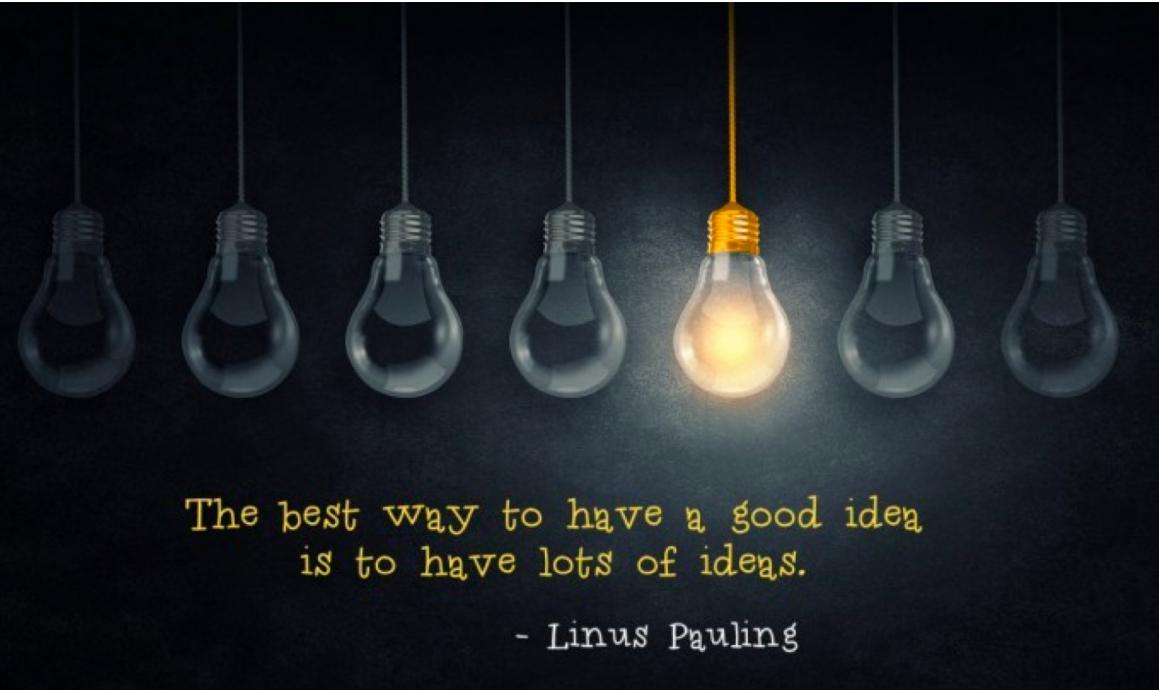
Uber

Emoji

Clicker apps

Summary

Coming up with the perfect idea can be intimidating



The best way to have a good idea
is to have lots of ideas.

- Linus Pauling

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.