MIS 5403
Summer 2016
Design Inquiry and Research
Week 1
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Office hours by appt.
How many of you have an iPhone?
Market share decline:

43% peak in 2010

< 1% in 2014

http://bgr.com/2013/10/30/blackberry-market-share-q3-2013/
http://en.wikipedia.org/wiki/BlackBerry_Ltd
What went WRONG?
More to think about...
“A PwC Pulse Survey of 246 CEOs in North and South America, Europe, Asia Pacific, and the Middle East reveals that 97% of CEOs see innovation as a top priority for their business.”

From PwC 02-Jul-2013
http://press.pwc.com/global/innovation-a-top-priority-for-business/s/918ccaab-2d82-4889-bc41-9905b3a4b9ec
“...Accenture surveyed 519 companies across more than 12 industry sectors in France, Britain, and the U.S. ... Almost all (93 percent) said the long-term success of their organization’s business strategy depends on their ability to innovate. Despite the importance they assign to this innovate-or-die business rationale, just 18 percent of CEOs say they’re seeing their investments in innovation pay off. At the same time, 46 percent of the executives surveyed said their company had become more risk averse when considering new breakthrough ideas, the study found.”

From Bloomberg Businessweek: By Bernhard Warner May 16, 2013
Our goal: SOLVE THIS PROBLEM
What is Business DESIGN?
5 years ago the term didn’t exist.
Now it is everywhere.
"BUSINESS DESIGN is a human-centred approach to creative problem solving. It applies design methods and mindsets to business challenges. It can be effectively used to help better understand customers, create new experiences and design innovative business strategies and models."

- Rotman School of Management

From https://www.rotman.utoronto.ca/FacultyAndResearch/EducationCentres/DesignWorks/AboutBD.aspx
The best of BOTH
BUSINESS + DESIGN
What COLOR is this?
Describe it.

45 / 38 / 36
30% Transparent
Quantitative  |  Qualitative
YOU NEED BOTH
2 CRITERIA
THINK differently
Think with your mind and hands.
Get beyond the surface.
GO DEEPER.
Go out.
Experience the situation.
Be the person.
Look at things from multiple sides, multiple scales.
Talk to people. Listen.

Hear what they have to say.
DRAW + MAKE
draw *transitive verb*

Middle English *drawen, dragen*, from Old English *dragon*; akin to Old Norse *draga* to draw, drag

First Known Use: before 12th century

2: to cause to go in a certain direction

3 a: to bring by inducement or allure: *ATTRACT*
b: to bring in or gather from a specified group or area
c: *BRING ON, PROVOKE*
d: to bring out by way of response: *ELICIT*

5 a: to extract the essence from
b: *EVISCERATE*

From: http://www.merriam-webster.com/dictionary/draw
make *transitive verb*

Middle English, from Old English *macian*; akin to Old High German *mahhōn* to prepare, make, Greek *magēnai* to be kneaded, Old Church Slavic *mazati* to anoint, smear

First Known Use: before 12th century

1b : to begin or seem to begin (an action) *(made to go)*

2a : **to cause to happen to or be experienced by someone*** *(made trouble for us)*

b : to cause to exist, occur, or appear : CREATE *(make a disturbance)*

3a : **to bring into being by forming, shaping, or altering material** : FASHION *(make a dress)*

b : COMPOSE, WRITE *(make verses)*

c : to lay out and construct *(make a road)*

4 : **to frame or formulate in the mind** *(make plans)*

5 : **to put together from components** : CONSTITUTE *(houses made of stone)*

6b : to form and hold in the mind *(make no doubt of it)*

7b : to set in order *(make beds)*

9a : **to cause to be or become** *(made them happy)* *(makes it possible)*

From: http://www.merriam-webster.com/dictionary/make
Draw ideas.
Make change.
For your Fox MBA:

EXPERIENTIAL LEARNING
TEAMWORK
CASE STUDIES
EMC
For your professional life:

Managing uncertainty
Complex problem solving
Organizational/Institutional change
Process Improvement
Product + Service Development
Strategy
Preparation for a changing world
Are any of you skeptics?
These are companies who **could not see** their world changing.

In the last 10 years they **failed**, went through **bankruptcy** or became **insignificant**.
Lehman Brothers
Who do **YOU** want to be?
Let’s BEGIN
team building + collaboration
Tell me about ROLES and the 10 Faces of Innovation

1. What are the key points from the reading?
2. How do these ideas apply to you personally or professionally?
“Innovation is all about people. It is about the roles people can play, the hats they can put on, the personas they can adopt.”

http://www.fastcompany.com/54102/10-faces-innovation

Learning personas:
**Anthropologist / Experimenter / Cross-pollinator**

Organizing personas:
**Hurdler / Collaborator / Director**

Building personas:
**Experience Architect / Set Designer / Caregiver / Storyteller**
Introduction
Identification
Communication Coordinates
I want to know more
I want to know what makes people TICK
Tell me a STORY
Create a new Business Card. Tell me a STORY

Make a card that stands.
Use any materials available
Include your NAME and TELL A VISUAL STORY ABOUT YOU and....
What persona describes you?

Learning personas:
Anthropologist / Experimenter / Cross-pollinator

Organizing personas:
Hurdler / Collaborator / Director

Building personas:
Experience Architect / Set Designer / Caregiver / Storyteller

Or: explorer / analyst / people person / artist / puzzle solver / other...
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Entrepreneur

Architect
I am a BUILDER
Introduction:

Table
Introduction:

general
Lesson learned:

name card +
Know your team. Build on strengths.
Details are important.
Use all available resources
Make tools.
course overview
+
syllabus review
Method: LEARN BY DOING

1. Do something
2. Analysis + Lessons Learned
3. Reflections on value
Structure: TOPICS

Day 1. Intro + How to approach problem solving and conduct research.
[Research]

Day 2. Research analysis + Understanding contexts and stakeholders
[More research]

Day 3. Understanding a problem as a system, Synthesis and Visualizing Solutions
INDIVIDUAL Preparation:

- Essential research for your team projects

- Reading Summaries
- Fieldwork
- Photos
- Video
INDIVIDUAL Assignments:

- Essential skills [graded A-F]

- Interviews
- System mapping
TEAM Assignment:

- Project Report [graded P/PH]
Grading Breakdown:

- Class preparation and participation 25%
  - Weekly Reading Summaries (3)
  - Fieldwork Process documentation
  - 20 Fieldwork photos
  - 3 Fieldwork Videos

- Individual interviews 25%
- Individual System Mapping 25%
- Team project report 25%
AMBIGUITY requires SUPPORT

Talk/Meet with me. I can help you.
Things can change …
important information on
the course blog
Let’s BEGIN
What do we mean by **DESIGN**?
a CULT of THINGS
Since the 16th century design has been relegated to the world of things.

design

*noun*

date: 1569

1a: a particular purpose held in view by an individual or group <he has ambitious *designs* for his son>  
b: deliberate purposive planning <more by accident than design>

2: a mental project or scheme in which means to an end are laid down

4: a preliminary sketch or outline showing the main features of something to be executed <the design for the new stadium>

5a: an underlying scheme that governs functioning, developing, or unfolding: PATTERN, MOTIF <the general design of the epic>  
b: a plan or protocol for carrying out or accomplishing something (as a scientific experiment); also: the process of preparing this

6: the arrangement of elements or details in a product or work of art

7: a decorative pattern <a floral design>

8: the creative art of executing aesthetic or functional designs
Design as ART
Can DESIGN be greater than that
What does DESIGN really mean?
Let’s learn from PEOPLE
Design is not just what it looks like and feels like. Design is how it **works**.

Steve Jobs [Apple]
People think that design is styling. Design is not style. It’s not about giving shape to the shell and not giving a damn about the guts. **Good design is a renaissance attitude that combines technology, cognitive science, human need, and beauty to produce something that the world didn’t know it was missing.**

Paola Antonelli [Curator of Design, MOMA]
Good design is obvious.
Great design is transparent.

Joe Sparano [Oxide Design]

Design should never say, “Look at me.”
It should always say, “Look at this.”

David Craib [graphic design]
Design is directed toward human beings. To design is to solve human problems by identifying them and executing the best solution.

Ivan Chermayeff [graphic design]
Design must seduce, shape, and perhaps more importantly, evoke an **emotional** response.

April Greiman [graphic design]
Design means being good, not just looking good.

Clement Mok [designer]
DESIGN is:
Functional
Interdisciplinary / Integrated
Useful [fills a need]
Transparent
Human-centered
Emotional / Experiential
Ethical
bigger than me
“Thinking like a designer can transform the way you develop products, services, processes – and even strategy”

- Tim Brown, IDEO

From Design Thinking
BASIC PRINCIPLES OF DESIGN THINKING

Tim Brown’s Traits of a Design Thinker
• Empathy with users
• Integrative Thinking
• Optimism
• Experimental
• Collaborative

The Process is
• Ambiguous
• Requires a tolerance for risk and failure
• Iterative
• Makes ideas Visible and Physical - Prototyping
AT FIRST DESIGN THINKING WAS RADICAL
THE EVOLUTION OF DESIGN THINKING

Origins 1960’s: Herbert Simon’s book *The Sciences of the Artificial*

3 stages of decision-making

1. intelligence gathering:
   search environment for decision calling for action
2. design:
   possible course of design invent/develop/analyse
3. choice:
   select particular choice

1973: Robert McKim’s book *Experiences in Visual Thinking*

• focused on ways in which perceptual thinking skills can be observed, utilized and improved
• how powerful these skills are in their “capacity to change your world of ideas and things.”

THE EVOLUTION OF DESIGN THINKING

1978: roots of IDEO

1980’s: Stanford’s Rolf Faste expanded on McKim’s work
• defined and popularized the concept of “Design Thinking”¹
• pioneered as a 'whole person' approach to problem solving centered on the perception of needs²

1991: IDEO founded

2004: Stanford’s Hasso Plattner Institute for Design / the "d.school” founded

DESIGN IN BUSINESS IS NOW MAINSTREAM

>2015

>2016
THE LEADING BUSINESSES KNOW THIS …

Industry’s Indication of Design’s Value sits at the Very Top in the Old (and New)

2014 Fortune 500 list (excerpt)


Thirteen (10%) of the 2014 Fortune 125 companies have executive-level positions of CEO support for design. Note that Nike’s CEO is a designer.

Source: @kpcb @phnmaeda @fortunemagazine #DesignInTech

...SO DO THE NEXT BUSINESS LEADERS

## Students in Business Schools are embracing Design wholeheartedly

<table>
<thead>
<tr>
<th>BusinessWeek (US) 2014</th>
<th>Rank</th>
<th>FT (Global) 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duke (Fuqua)</td>
<td>1</td>
<td>Harvard</td>
</tr>
<tr>
<td>Pennsylvania (Wharton)</td>
<td>2</td>
<td>London Business School</td>
</tr>
<tr>
<td>Chicago (Booth)</td>
<td>3</td>
<td>Pennsylvania (Wharton)</td>
</tr>
<tr>
<td>Stanford</td>
<td>4</td>
<td>Stanford</td>
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<tr>
<td>Columbia</td>
<td>5</td>
<td>INSEAD</td>
</tr>
<tr>
<td>Yale</td>
<td>6</td>
<td>Columbia</td>
</tr>
<tr>
<td>Northwestern (Kellogg)</td>
<td>7</td>
<td>IESE Business School</td>
</tr>
<tr>
<td>Harvard</td>
<td>8</td>
<td>MIT (Sloan)</td>
</tr>
<tr>
<td>Michigan (Ross)</td>
<td>9</td>
<td>Chicago (Booth)</td>
</tr>
<tr>
<td>Carnegie Mellon (Tepper)</td>
<td>10</td>
<td>Berkeley (Haas)</td>
</tr>
</tbody>
</table>

### Almost unanimously

- 7 out of 10 in the BW Top Ten US Business Schools have student-led design clubs.
- 7 out of 10 in the FT Top Ten Global Business Schools have student-led design clubs and/or design partnerships.

Source: @kpcb @shoee @johnmaeda @wsj @duke mbadesign @lbs DesignInTech

The habit of calling a finished product a Design is convenient but wrong. Design is what you do, not what you've done.

Bruce Archer, The Guardian
Design is about actions

design  verb

etymology: Middle English, to outline, mean, from Anglo-French + Medieval Latin; Anglo-French designer to designate, from Medieval Latin designare, from Latin, to mark out, from de + signare to mark

date: 14th century

transitive verb

1: to create, fashion, execute, or construct according to plan: DEVISE, CONTRIVE

2a: to conceive and plan out in the mind <he designed the perfect crime> b: to have a purpose: INTEND <she designed to excel in her studies> c: to devise for a specific function or end <a book designed primarily as a college textbook>

4a: to make a drawing, pattern, or sketch of b: to draw the plans for <design a building>

intransitive verb

1: to conceive or execute a plan

2: to draw, lay out, or prepare a design
design is what you do
Let’s DO something.
Action:

analysis + synthesis
**analysis**: the separating of any material or abstract entity into its constituent elements (opposed to synthesis)

**synthesis**: the combining of the constituent elements of separate material or abstract entities into a single or unified entity (opposed to analysis)

- From http://dictionary.reference.com/
analysis: PULLS IT APART

synthesis: PUTS IT TOGETHER
process overview
TOOLS
1. Tell your story
2. listen for meaning + take notes
2.5. isolate ideas
3. then put them on the wall
4. look for patterns
5. identify **key words**.
Let’s begin.
keychain stories
analysis
Tell stories about all of the things that are attached to your key chain.
[2 min per person. USE ALL THE TIME YOU ARE GIVEN]
synthesis

Post all of the notes on the wall.
Move them around to form meaningful categories.

:15 cluster
Identify key words.
Building on your key words,
construct the sentence:
“\textit{A key chain is ...}”
Lesson learned:
collaboration
100%
100% 100% 100% 100% 100%

500%
Do the math.
It’s better if you work together.
This is what collaboration looks like
Lesson learned:

From ordinary to extraordinary
Now find the extraordinary in your project.
Your PROJECT
A CABINET OF CURIOSITIES

COLLECTIONS & COLLECTORS

RESEARCH A SPECIFIC type of COLLECTOR and COLLECTION

Individually assemble a research portfolio of as much information as you can find (primary and secondary sources) on a this market.

CONDUCT FIELD WORK and INTERVIEWS
Context:
Our client’s area of interest is in collectors and collecting. She is a serial entrepreneur interested in finding the best opportunity to launch a new business venture to serve collectors’ needs. For her, it is all about the BEST BUSINESS OPPORTUNITY. She is willing to consider any goods, including the illicit and the bizarre and any role in the market (dealer, distributor, representative...)

Problem:
The essential problem is to understand what drives collectors.
• What do they want and need?
• Which collectors represent the best market to serve – ranging from the connoisseur to the hoarder?
• How can you document consumers, markets and activities that are secretive and wish to remain UNDOCUMENTED?

You will research and analyze markets and assess the business opportunity. You will write a report/business plan documenting your findings, your recommendation and your proposed strategy for implementation.
Fieldwork + Ethnographic research
For NEXT CLASS
Your research assignment
ASSIGNMENT PART 1: RESEARCH

You will conduct ethnographic research related to your project.

1. Go out and visit / observe / experience collectors and collector markets

2. You must take at least 20 different pictures of a situation relevant to your project domain of interest. Photos should present a range of perspectives from general overview images to very specific details and situational context.

3. Take at least 3 video clips of 2 minutes each.

Due next class.
A PORTRAIT is defined as:
1: a picture
2: a sculptured figure
3: a graphic portrayal in words

Synonyms for PORTRAIT are:
definition, delineation, depiction,
picture, description, portraiture,
portrayal, rendering, sketch, vignette

Related Words are:
account, anecdote, chronicle,
narrative, report, story, tale, yarn;
demonstration, exemplification,
illustration; clarification, elucidation,
explanation, explication, exposition

From: http://www.merriam-webster.com/dictionary/portrait
This is a photo of two students @ a track meet last year, they have since graduated, but were known as players in the second hand market.

Phones like this often caused adults and college aged students to purchase phones in the second hand market.

These are two of the students who took photos of themselves at school on stolen phones, then sold them and got caught.

This is Sewanhaka High School, home of the secondary market I looked in to.

This is Manor Deli, home of the second hand cell phone market from Elmont, NY.

A prime source for goods at the high school. In my conversations I found out that last year a series of break ins with a crow bar happened at a different high school in the same district.
In an attempt to focus the research, I used yourdictionary.com's definition.

Internet searches for "technology" and "technology definition" reveal a market with a wide degree of variability.
ASSIGNMENT PART 2: INTERVIEWS

You must interview at least 3 people who represent stakeholders for your project.

You want to learn as much as you can about them and their personal relationship to the project domain of interest.

Write a 1-2 page (full page minimum) personal portrait telling their “story”. Provide details and insights into their personalities, choices, preferences, and personal intellectual and emotion drivers. **This is a story – not a Q+A summary.**

The interview assignments are opportunities to understand the relationship between PEOPLE and SITUATIONS. Your goal is to understand what people want and need. Successful interview assignments usually involve multiple interviews and several pages of transcribed conversation that are summarized and distilled into a meaningful narrative.

If your interview is very brief or cut short – I strongly suggest doing another until you have sufficient material.

LOOK AT SAMPLES OF “A-LEVEL” WORK ON THE COURSE BLOG
Let’s **dissect** an example
“Joseph

Joseph (name has been changed) is 22 years old, and has been homeless since leaving his foster home at 19. He occasionally stays at St. Columba’s, a shelter in West Philadelphia, and spends a lot of his time at the Youth Health Empowerment Project in Center City, a drop in center for young adults. He sings in Suburban Station to make some money to supplement his disability and food stamps. Joseph has schizophrenia, major depression, and epilepsy. He finds it very challenging to interact with his peers due to his diagnoses, homelessness, and lack of education....”
“Joseph has difficulty connecting with his friends and social workers because he changes his phone number frequently. He has several phones, and uses them until he runs out of text messages, and then begins using another one. One of them is a free government issued phone, and several others are inexpensive pay-as-you-go plans. He also loses phones frequently. His belongings are often stolen in the shelter, and he loses his things often when sleeping on the street. His seizures and resulting confusion and memory loss also contribute to his frequently lost phones....”
“Phones can be expensive, and it can be difficult to replace them so frequently. Joseph continues to replace them though, because it is important for him to maintain his social network. He can find inexpensive used phones from “guys I know”, especially in and around Suburban Station. Joseph says that sometimes “I have stuff people want. So we do a trade.”, and states that he stole a phone “only once. But it was a good one and the guy locked me out.” He states “last week my social worker tried to call me, but the voice mail was in Spanish. So she knew it wasn’t legit. I heard it for that....”
“Cell phones are a status symbol, even in the homeless community. More expensive phones can represent the level of skill required to obtain it, but Joseph says that the most important thing is having a way to keep in touch with his supports. “I don’t have a home, you know? I don’t have much. But I have people. If I can’t talk to them, then what do I have?”
ONE PAGE. A LOT OF INFORMATION.
The right tools make the job easier
5 QUESTIONS
Questions lead to ANSWERS
DESIGN INQUIRY / 5 questions to answer:

1. **what** inspired you (good or bad)
2. **who** are the affected stakeholders
3. **what** are their **unmet needs** + why are they important
4. **what** is your **solution**
5. **what** **resources** do you need to create and sustain your solution
OBSERVATIONS > PEOPLE > NEEDS > IDEAS > REALITY
THE AQUADUCT

Photo: from Hiroshi Sugimoto's Theater series
DESIGN INQUIRY / 5 questions to answer:

1. **what** inspired you (good or bad)
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4. **what** is your **solution**
5. **what** **resources** do you need to create and sustain your solution
Any questions – contact me

jamescm@temple.edu

Interested in the subject?— connect with me

www.linkedin.com/in/jmoustafafellos
Quickly clean up:

place all tools in your bins and return them to the stack.

return all other materials to supply tables