Cognitive Design Studio

Encourage wild ideas

Be visual

Prototype everything
Seeing as a Designer

Jane Suri + IDEO
thoughtless acts? book

Subtle and amusing ways that people react to the world around them

Reveal how people behave in a world not always perfectly tailored to their needs.

A real-world observational approach that can inspire designers

thoughtlessacts.com
Reacting

We react automatically to the objects and spaces that we encounter.
thoughtless acts

Responding

Some qualities and features prompt us to behave in particular ways
thoughtless acts

Co-opting

We make use of opportunities
thoughtless acts

Exploiting

We take advantage of physical and mechanical qualities we understand
thoughtless acts

Adapting

We alter the purpose or context of things to meet our objectives
thoughtless acts

We learn patterns of behavior from others in our social and cultural group.
thoughtless acts

Signaling

We convey messages and prompts to ourselves and other people.
thoughtless act assignment

• **Before** next Thursday’s class add a page under the thoughtless acts page on the wiki with an example of a thoughtless act. Include an image, brief description, and any design idea it generates for you. Be sure to also include your name.

• IAs will be the judges

• Prize for top three entries
I just got off the phone with Brian D'Aturemont the director of parking and transportation. He is very willing to be interviewed and happy to help your project. He said that most of the information you want is on their web site. I went to blink.ucsd.edu and did a search for parking. Immediately found all kinds of useful information. For example, here are excel spreadsheets with numbers of parking spaces for different types of spaces as well as average number of empty spaces at each hour during the day.

You ask about blueprints. Not sure those are available but in a few minutes your group could sketch a rough map and number of spaces in Hopkins. My bet is that you don't need the detail of exact sizes etc. Also viewing the physical local may lead to other interesting data about the physical context.

My advice is to be sure to be appreciative of the people in the office being busy. Schedule an appointment if you want to interview him or others. Do your homework about the data that is available before taking their time. Have one person to be the contact rather than multiple people independently arranging things with them.

I got the impression that he gets a lot of angry visitors often holding him responsible for things outside the scope of his control. I would suggest taking a much more interested-in-understanding-the-complexity-of-the-operation attitude when meeting with him or others involved.

Please forward this note to other members in your group.

Professor Hollan
Advice

• When asking for people’s time or assistance
  – Make it easy for them
  – Be considerate of their schedule
  – Assign someone to be the sole contact with them
  – Do your homework so you get most value
  – Provide feedback/appreciation
    • Contacted Catherine Friedman for Neptune Design group
    • Slides for SMARTlife group. Had names of contacts on it. Asking me for this indicated had not looked at slides closely. Asked IA and she did a quick google returned contact.
General Advice

• Focus on how to keep your project moving forward
  – Don’t let lack of progress on any one issue stop progress
  – Don’t use something as an excuse to not do other things
  – Don’t get caught up in what you might have done
  – Focus on making the project successful
  – Be realistic
  – Be pragmatic

• As you decide on specific focus often more data collection can be extremely valuable

• Remember that a sizeable portion of your grade in the course will be determined by your participation. Attending and contributing to group meetings and activities is crucial.
  – 25% - Participation: as documented in your personal wiki pages, the judgment of TA's/IA's, and summary judgments of your and other group member participation.
Concerns

• Number of interviews

• Ensuring there are design opportunities
  – Half and Half: lots of problems with parking but what are the design opportunities?
    • Policy issues: Number of spaces for each permit type and how determined, change in access (maybe x stickers/quarter that allow parking in any open space, grades, …)
    • How to reduce people driving (biking, car pooling, giving rides, other forms of commuting, …)
    • Information on availability of spaces
Concern: Focus

- SMARTlife: slow start but great to have real users of project results
  - application to exploit social networks to assist with health/weight management
  - access to users: study existing use of Facebook and related social networking apps, perhaps understanding existing use of badges, sites that help with calorie counting, possibly interface for new users to already existing apps that are similar to what might be designed, …
  - coordinate with Stanford project and what they are doing, might help focus

- Planteers: important issues but what focus
  - Awareness, website, how to encourage, educational information at site, sensor readings, …
  - focus will help decide who to interview
  - institutional policy and issues
Example Design

Designing novel interaction workspaces to support face to face consultations, Rodden, Rogers, Halloran, and Taylor
• The arrangement is socially awkward with the technology setting up a barrier to collaboration.
• Time is spent when the customer is waiting doing nothing, and is not being communicated with by the agent.
• The agent has to translate everything into a verbal form for the customer to understand what is going on.

This means that the content of the consultation – a round the world trip – is hard to ‘see’: it tends to be something imagined on the basis of talk – and of course, the customer has to remember the information from moment to moment, and with a complex product can easily get lost. This issue is compounded by the numerous representations used.
Design Implications

• Reducing physical asymmetry by configuring the orientation of displays to promote cooperation at the core of the consultation.

• Reducing representational asymmetry by providing shared informational resources that both customer and agent can refer to and make sense of.
Design Implications

- Empowering the customer, by enabling them to take a more active part in the initial stages of planning.

- Reducing social awkwardness, through designing better physical and technological arrangements and enhancing camaraderie between customer and agent.

- Reducing translation costs and, in so doing, the cognitive effort required to understand and develop a product.

- Enabling the customer and agent to plan synchronously and in a complementary way.
Designing a New Interactional Space

• Altering the physical arrangement of the technology to allow more equitable access to information by both parties.

• Providing different seating/standing arrangements to allow the customer and agent to sit or stand side by side rather than opposite each other.
Figure 3 Screen shots of the three displays from the eTable prototype showing the itinerary unfolding.
The Pill Bottle

- Standard-issue amber-cast pharmacy pill bottle has remained virtually unchanged since it was pressed into service after the second World War.

- Deborah Adler
  - Young graphic designer
  - Grew up in a family of doctors but took a different path: MFA
  - Her grandmother accidentally took her grandfather’s meds
  - Her ClearRx prescription-packaging system used by Target pharmacies.
  - Also in a MoMA exhibit
• **Inconsistent labeling.**
  Every pharmacy’s bottle has a different style and placement of information.

• **Branding trumps all.**
  The first and largest piece of type on a label is often the drugstore’s logo and address—not the name of the drug and instructions on how to take it, which should be given priority.

• **Confusing numbers.**
  Numerals are often printed without explanation. The number 10 floating in empty space, for example, could be read as ten pills or “take ten times a day.”

• **Poor color combinations.**
  Color-coded warning stickers don’t contrast strongly enough with either bottles or text. Black type set against a navy background is hard to decipher. An orange sticker can hardly be read against an orange bottle.

• **Curved shape is hard to read.**
  Existing pill bottles have no flat surfaces and are too narrow for an entire label to be visible at once. In order for all pertinent information to be observed, the bottle must be rotated.

• **Tiny type.**
  The FDA requires a separate information sheet to be included with all medication. The long lines of tightly spaced type mean it’s usually discarded unread.
Adler’s Prototype

- **1) Easy I.D.**
  The name of the drug is printed on the top of the bottle, so it’s visible if kept in a drawer.

- **(2) Code red.**
  The red color of the bottle is Target’s signature—and a universal symbol for caution.

- **(3) Information hierarchy.**
  Adler divided the label into primary and secondary positions, separated by a horizontal line. The most important information (drug name, dosage, intake instructions) is placed above the line, and less important data (quantity, expiration date, doctor’s name) is positioned below.
Adler’s Prototype

- (4) **Upside down to save paper.** Klaus Rosburg, a Brooklyn-based industrial designer hired by Target, came up with an upside-down version that stands on its cap, so that the label can be wrapped around the top. Every piece of paper in the package adds up to one eight-and-a-half-by-fourteen-inch perforated sheet, which eliminates waste and makes life easier for pharmacists.

- (5) **Green is for Grandma.** Adler and Rosburg developed a system of six colored rubber rings that attach to the neck of the bottle. Family members choose their own identifying shade, so medications in a shared bathroom will never get mixed up.
• 6) An info card that’s hard to lose.
A card with more detailed information on a drug (common uses, side effects) is now tucked behind the label. A separate, expanded patient-education sheet, designed by Adler, comes with three holes so it can be saved in a binder for reference.

• (7) Take “daily.”
Adler avoided using the word once on the label, since it means eleven in Spanish.

• (8) Clear warnings.
Adler decided that many of the existing warning symbols stuck on pill bottles don’t make much sense—the sign for “take on an empty stomach,” for instance, looked like a gas tank to her—so together with graphic designer Milton Glaser, for whom she now works, she revamped the 25 most important
Affinity Diagram

Advantages of post-it notes

- High resolution
- Take pictures
- Put on large paper so can roll up
Why don’t more Americans commute to work by bicycle?

The best bike routes are not usually the best car routes.

Biking time is more than driving time for trips > 10 miles.

Many people live > 10 miles from work.

A decent commuter bike costs at least $500.

Recreational bikes are not always good commuter bikes.

Helmets give cyclists “helmet hair.”

Fixing flats requires some technical skill.

Most workplaces do not provide secure bike storage.

Cyclists are often perceived as eccentric.

Few workplaces provide locker room facilities.

On warm days, cyclists sweat.

Cars are an expression of self for many Americans.

Cycling requires at least modest fitness.

Carrying cargo requires extra equipment.

It’s hard to stay comfortable on a bike in the rain.

Bikes locked outside are prone to theft.

Many people don’t know what kind of gear they need for commuting.

Most locations have variable climate over the year.

In the winter, it’s dark on the commute home.

Cyclists are exposed to danger from cars when they share the road.

Safe urban cycling requires skill.

Riding on busy roads is scary.

Staying comfortable in winter is tricky.

People are idiots when it comes to picking bike routes.

The best bike routes are not usually the best car routes.

Many people have a hard time committing to exercise.

Americans are couch potatoes.

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Why don’t more Americans commute to work by bicycle?
Organize

Commuting by bike requires an investment in skills and knowledge, and in some cases a willingness to spend extra time and effort.
Transition: Data to Creative Design

- Challenge of being creative
  Draw four lines through all the points without lofting your pencil from the paper
Creativity and Dissent

Authentic dissenters — people who really disagree with group — can enhance group creativity.

Their opinion needn’t be right — but they can free the group from stagnant thinking.

The originality of the minority stimulates the majority.

Dissent IS Patriotic.
Dissent and Authenticity

The benefits of dissent are weakened if

Dissent is not real: A deliberate “devil’s advocate” in the group can actually stifle dissent, because the majority know the opinion is manufactured.

Dissent is not encouraged: Polite or pro-forma acceptance is not enough.
IDEO's Brainstorming Rules

1. Sharpen the Focus
2. Playful Rules
3. Number your Ideas
4. Build and Jump
5. The Space Remembers
6. Stretch Your Mental Muscles
7. Get Physical

Aim for quantity
Hope for quality
Brainstorming Fundamentals
Brainstorming

• Great brainstorming is one of the most powerful and one of the most misunderstood methods in the innovators toolbox. It’s a special kind of collaboration with specific rules of behavior designed to maximize idea generation.

• Many say they know how to brainstorm. Few do it really well. In some ways, brainstorming is like volleyball. If you know the rules, you might be able to survive a social game at the neighborhood picnic. But this is a far cry from the kind of volleyball you watch on TV. No matter what level you’re at, you can always up your game.
IDEO Brainstorming Rules

• **Defer judgment** – separating idea generation from idea selection strengthens both activities. For now, suspend critique. Know that you’ll have plenty of time to evaluate the ideas after the brainstorm.

• **Encourage wild ideas** – breakout ideas are right next to the absurd ones

• **Build on the ideas of others** – listen and add to the flow if ideas. This will springboard your group to places no individual can get to on their own

• **Go for volume** – best way to have a good idea is to have lots of ideas

• **One conversation at a time** – maintain momentum as a group. Save the side conversations for later.

• **Headline** – capture the essence quickly and move on. Don’t stall the group by going into a long-winded idea.