Learning to Give and Receive Critique

You will learn to both give and receive critique

Each is important
Each is a skill developed through practice

Many activities will consist of group critiques

Each group will present an artifact
Other class members and staff will offer critique

Starting tomorrow with critique of Assignment 2c: Design Research Check-In
Why Critique?

Critique helps evaluate early, often, and cheaply

  Applicable to artifacts of many types
  Compare to other expert inspection methods

You are not your own worst critic

  We collectively know more than any one of us
  It is hard to see past your own decisions
  Design requires getting past our own infatuation

A design can feel like our love, our baby...
Why Critique?

Critique is not just for design

It applies to many artifacts and domains

Examples?
Why Critique?

Critique is not just for design

   It applies to many artifacts and domains

Examples?

   visual art, writing, design, code (i.e. code review)

Over time, you should gather people who can give you high-quality critique in everything you do

   You may meet some of those people in this class
Critique is About Improvement

http://alistapart.com/article/design-criticism-creative-process
What is Critique?

Critique is a method for feedback

It is not just a list of complaints

1. Presenters sit down with critics
2. Quickly explain their artifacts (e.g., less than 2 minutes)
3. Critics give feedback, ask questions
4. Presenters respond, take notes on what is discussed
Critique is Neither Criticism nor Design

Seriously, not just a list of complaints

Critics offer honest feedback
Both positive and negative

Presenters should be able to learn *what works well* and *what is problematic* about their artifact

It is then presenter’s responsibility to sort through feedback, decide what is important, how to act

You must take notes for later review
Tips for Presenters

Critique can be hard, especially at first

Try to avoid being defensive

You are not your work, separate yourself

Remember the expertise you bring

Even if “the room” knows more about design, you know more about your problem / artifact and your rationale for the current design
Tips for Presenters

Taking advice is not giving up authorship

You still make the final decisions
A half-baked suggestion does not contain all the details of a finished solution

Design your critique

What you show invites different forms of feedback
Verbally indicate what kind of feedback you want, but also provide an artifact of appropriate form
This course will guide you in a variety of forms
Tips for Presenters

Keep an eye out for design rationale

You probably made some decisions without thinking through good reasons at the time
Critique can help give a rationalization for past decisions as you explain the artifact to others

Exploit failure

A “failed” artifact should teach you about the design space, what won’t work, and why
The goal is to improve, this requires failure
Tips for Critics

There are many strategies for giving critique

Hamburger method

I like, I wish, what if

Socratic method

These provide ways to give critique that can help the conversation go smoothly

Can give you a question to ask when you do not have one, provide a way to ask that is productive and less likely to create defensive reaction
Tips for Critics: Hamburger Method

“Bun, meat, bun”

Bun:
  Something fluffy and nice

Meat:
  Criticism on how to improve

Bun:
  Something fluffy and nice

Not a “shit sandwich”

Positives need to be genuine, enable learning from both positive and negative aspects of the artifact
Tips for Critics: I Like, I Wish, What If

I Like:

Lead with something nice

I Wish:

Some criticism, often leading from what you like

What If:

An idea to spark further conversation, better than: “I think you should have…” or “Why didn’t you …?”

Gives the presenter benefit of the doubt if they did already think of your idea, can present rationale
Tips for Critics: Socratic Method

Identify an aspect of the design and ask “Why?”

Can be good if unsure what else to say
Forces presenter to give, or develop, explanations for design decisions, which can help build up the design rationale
Not fundamentally negative, hard to get defensive
Tips for Critics

Limit your use of personal pronouns (e.g., “you”)
   Critique is about the artifact, not the designer
A designer deserves honest feedback
   Both positive and negative
   Including clarity and rationale
Help with actionable suggestions
   But it is not your design
   Perhaps several possible ways of thinking
Summary

Fall out of love with the things you build
  Let others help you see past the infatuation
Get feedback early, often, and cheaply
Focus on improvement
  In brainstorming, we were not criticizing
  In critique, we are not defending
You will learn to both give and receive critique
  If you are having difficulty, please come talk to us
Project Status

Looking Forward

2c: Design Research Check-In due Tonight
2d: Design Research Review due Tuesday 1/24
2e: Task Review due Friday 1/27
2f: Design Check-In (3x4) Due Tuesday 1/31
2g: Design Review (1x2) Due Friday 2/3

Other Assignments

Readings to be Posted Soon
Design Research Reminders

You are not doing science

You seek design insight, not knowledge or truth

Do the best design work you can

May find that self-tracking is not the opportunity

We designed the project sequence, but be flexible

Capture and keep your raw work products

Dedicate a note keeper, record if possible

Our collection is minimal, but you will want them
Structure of Section and Critique

Focus on peer feedback and learning
  Bring paper, keep the laptops put away
  Bring your artifacts, be ready to present them

Critique progression
  Reminder of your project
  What you have done
  What you have learned
    about your project, about your method
  Your plan going forward
  Time for critique
  Questions you have for the group
Developing Insight Is Hard

Design research yields a lot of data

Does not reduce to a statistical test

Need to get from data to design insight

But this is fundamentally difficult

Data

Insight
Affinity Diagrams

Generated during group session

Each observation, idea, note to a post-it

Notes are hierarchically organized into themes, based on project focus
Developing Models

Distilling models that summarize data

- Highlights gaps in understanding
- Identify breakdowns and workarounds

Many types of models

- e.g., Flow, Sequence, Artifact, Cultural, Physical

None is perfect, they highlight different things
Flow Model: Secretarial Hub

President
- Run the business
- Keep abreast of what's going on
- Sign checks
- Go on trips

Worker
- Do the work of the business
- Meet with management

Vendor
- Invoice for services

Sales manager
- Run the sales department
- Travel to sales offices

Marketing manager
- Run the marketing department
- Produce proposal

Secretary
- Keep office organized
- Ensure bills paid on time
- Do final proof, print, and distribution of documents
- Manage and coordinate schedules
- Handle logistics of trips

Request to help with family vacation plans

Request to schedule meeting with president

Request to book trip

Proposal to proof and mail

Discussion of travel plans

Announcement

Signed checks

Invoices

Checks

Department's reports

Checks to sign

Requires lots of iterations

Bulletin board
- Announce events of general interest
- Hold documents that manage shared projects
Flow Model: Creative Work

- **Test user**
  - Run software and use documentation
  - Report all problems

- **Problem reports**
  - Discussion of problems

- **Documentation**
  - U2 (Documentation writer)
    - Create documentation from specifications and the actual product
    - Validate documentation with developers and the actual product
    - Test all examples

- **U2**
  - Marked-up drafts
  - Discussion of system problems
  - Discussion of review
  - Product versions
  - Specifications

- **Drafts for review**
  - Discussion of assignments
  - Discussion of review

- **Editor**
  - Check drafts for accuracy, consistent layout, grammar, and terminology
  - Assign writing tasks

- **Developer**
  - Write the software
  - Review documentation for accuracy and completeness

- **Writing standards**
Sequence Model: Doing Email

Intent: Handle emergencies
Trigger: Return to the office
Scan message list for important message—
Use sender, subject
Choose urgent message
Read message about unhappy user
Decide more info needed
Make phone call
Had to put off issue of unhappy user
Leave phone message
File in phone folder
See list of messages
Choose message 9: subject indicates university news relevant to department
Read message
Delete message
See message 10 automatically
Read message 10

Intent: Get back to people easily
Sequence Model: Equipment Audit

Assigned to do equipment audit

Retrieve required form from database

Print form

Collect data at site

Record data on paper form

Type data into form on computer

Print completed form

Leave hardcopy of form with customer

Send electronic form to supervisor

Store electronic form on form database
Cultural Model: Developer

Marketing

Our new features are top priority
If I say do X, you figure out what that means

Competitors

We have 50 new features; catch up

U9 (Developer)

Base technology group

You aren’t our primary user; we’ll fix bugs for you in our own time
Our technology is standard; use it even if it doesn’t work

Customer support

Our bug reports are top priority
Artifact Model: Calendar

- Past (seldom accessed)
- Future (quick access)

- Scheduled events
- Unscheduled but associated with the day
- Reminders (storage with quick access)

- Business cards (storage for later)

- Rubber band
Physical Model: Work Site

- Maybe outside
- Large area (up to square mile)
- Tight spaces
- Climbing
- Awkward positions

Approximately a 5 minute walk. If doing an audit at a site under construction, then safe path frequently changes and may need to wait for construction equipment to pass.
Tasks Matter

System will fail if:
- It is inappropriate for the person
- It does not meet a person’s needs

Your contextual inquiries will emphasize getting to know people and their needs.

Can you then just make ‘good’ interfaces?
Why Task Analysis?

‘Good’ has to be interpreted in the context of use
   Might be acceptable in office, but not for play
   Infinite variety of tasks and customers

Guidelines are too vague to be generative
   e.g., “give adequate feedback”
   Can be used to critique, but not to generate

Design is often about tradeoffs
Why Task Analysis?

Task analysis is a lens on the information you obtain through design research methods.

Use what you learned in your research to answer the questions in the task analysis.

Your assignments order the two, but in practice you should iteratively decide how to best draw upon all relevant methods throughout a process.
11 Task Analysis Questions

Who is going to use the system?
What tasks do they now perform?
What tasks are desired?
How are the tasks learned?
Where are the tasks performed?
What is the relationship between people & data?
What other tools do people have?
How do people communicate with each other?
How often are the tasks performed?
What are the time constraints on the tasks?
What happens when things go wrong?
Question 1

Who is going to use the system?

Identity
In-house or specific customer is more defined
Broad products need several typical consumers

Background

Skills

Work habits and preferences

Physical characteristics and abilities
Seattle Parking Meter

Who is going to use the system?

Identity?
People who park in Seattle
Business people, students, elderly, tourists

Background?
Have used parking meters before
May have an ATM or credit card
Have used other fare machines before
Seattle Parking Meter

Who is going to use the system?

Skills?
May know how to put cards into ATM

Work habits and preferences?
Park several times a week, a month, a year

Physical characteristics and abilities?
Varying heights, do not make it too high or too low

Anything else?
PARK, PAY & DISPLAY
Parking Pay Station Instructions

Insert card and push BLUE button to buy time OR Insert coins to buy time

Push GREEN button to print receipt

Remove card quickly wait for receipt and display properly

Display one receipt only to park in any meter or pay station space until your time expires

Use the removable backing to tape receipt to INSIDE of a front-seat side window

PARALLEL curbside

For MOTORCYCLES, tape to headlight cover

Questions? Call 684-ROAD (7623) paystations@seattle.gov

SDOT Seattle Department of Transportation

泊車、付款並顯示
泊車付費站使用說明

插入卡並按按鈕購買時間，或投入硬幣購買時間

按綠色按鈕打印收據

迅速將卡取出等候收據並適當顯示

僅限顯示一張收據，以便在任何咪表或付費站的車位泊車，直到您的時間到期

請使用可黏貼的背面，將收據貼在前座側車窗內側

DÀU XE, TRẢ TIỀN & ĐÁN BIỆN NHÂN
Hướng Dẫn về Trả Tiền Đậu Xe

Dút thẻ vào và bấm nút để mua giờ HOẶC Bỏ tiền các để mua giờ

Bấm nút XANH để in biên nhận

Rút nhanh thẻ ra chờ biên nhận và dẫn dụng cach

Chỉ dẫn một biên nhận để đậu xe tại bất cứ chỗ nào có đồng hồ hoặc tram trả tiền cho đến khi hết giờ đậu

Dùng miếng dán mặt sau có thể gõ ra để dẫn biên nhận vào MẶT TRONG của kính bảng trước

有問題嗎？請致電 684-ROAD (7623) paystations@seattle.gov

Thắc Mặc? Hãy gọi số 684-ROAD (7623) paystations@seattle.gov

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Question 2 and Question 3

What tasks do they now perform?
What tasks are desired?

Important for both automation and new functionality
Relative importance of tasks?
Observe people, see it from their perspective

Automated Billing Example
small dentists office had billing automated
assistants were unhappy with new system
old forms contained hand-written margin notes
e.g., patient’s insurance takes longer than most
POPOVERS

2 cupfuls flour  2 eggs
⅔ teaspoonful salt  2 cupfuls milk
2 teaspoonfuls melted fat

Beat eggs slightly. Sift flour and salt, and add alternately with milk to eggs. Add melted fat. Beat with egg beater until smooth and full of bubbles. Fill hot greased cast aluminum or iron pans or glass or earthenware custard cups, ⅔ full of popover batter. Place immediately in a hot oven of 450°F. and bake for 30 min. Then lower temperature to 350°F. and bake for 15 min. longer. Makes 9 popovers.

CORNBREAD

2 cupfuls cornmeal  2 cupfuls sour milk
1 teaspoonful soda  2 eggs, beaten
1 ½ teaspoonfuls salt  2 tablespoonfuls melted fat
3 tablespoonfuls sugar

Sift dry ingredients together. Mix milk with beaten eggs and add to dry ingredients. Stir well together and add melted fat. Pour into a hot greased baking pan or muffin tins and bake in hot oven of 400°F. for 20-25 min. Makes 24 pieces.
Question 4

How are the tasks learned?

What does a person need to know?

Do they need training?

academic

general knowledge / skills

special instruction / training
Question 5

Where are the tasks performed?
Office, laboratory, point of sale?
Effects of environment on customers?
Are people under stress?
Confidentiality required?
Do they have wet, dirty, or slippery hands?
Soft drinks?
Lighting?
Noise?
Question 6

What is the relationship between people & data?

Personal data
- Always accessed at same machine?
- Do people move between machines?

Common data
- Used concurrently?
- Passed sequentially between customers?
- Remote access required?
- Access to data restricted?
- Does this relationship change over time?
Question 7

What other tools does a person have?
More than just compatibility

How customer works with collection of tools
Automating lab data collection example:
how is data collected now?
by what instruments and manual procedures?
how is the information analyzed?
are the results transcribed for records or publication?
what media/forms are used and how are they handled?
Question 8

How do people communicate with each other?
Who communicates with whom?
About what?
Follow lines of the organization? Against it?
Question 9

How often are the tasks performed?
Frequent use likely remember more details
Infrequent use may need more help
Even for simple operations
Make these tasks possible to accomplish
Which function is performed
Most frequently?
By which people?
Optimizing for these will improve perception of performance
Careful about initial use scenario
Question 10

What are the time constraints on the tasks?

What functions will people be in a hurry for?

Which can wait?

Is there a timing relationship between tasks?

e.g., pregnancy in web search
Question 11

What happens when things go wrong?

How do people deal with task-related errors?

practical difficulties?

catastrophes?

Is there a backup strategy?

What are the consequences?
Plantr Task Analysis

1. Who is going to use the system?

Anyone who owns indoor plants is a potential user of Plantr. All of the plant owners that we interviewed forgot to water their plants at some point regardless of age, experience, and background. Even Lucy, who spent most of her time at home because she worked from home, struggled with timely watering.
Plantr Task Analysis

2. What are the currently possible tasks?

When people purchase a plant, they often look up information about the proper lighting and temperature conditions for their plants. Additionally, people must find out how much and how frequently to water and fertilize their plants.
Plantr Task Analysis

3. What are currently unavailable, desired tasks?

People want a way to remember to water and care for their plants. Forgetting to water plants was the most cited reason for plant death, and the only task that participants in our inquiries mentioned completing on a regular basis.
Plantr Task Analysis

4. How are tasks learned?

Most people learned how to take care of their plants through trial and error. Some consulted the Internet, nursery staff, or friends for more information on plant care.
Tasks like watering and fertilizing are performed at the plant's location. People keep plants in their workplace, like Jack, or at home, like Lucy and Caroline. Getting information about plant care was performed in a variety of places. People who consult the Internet could be anywhere with a platform that supports web browsing. Those who go to the nursery to talk to plant experts are required to go to a specific location to talk to someone in person.
Plantr Task Analysis

6. What is the relationship between a person and data?

We identified three different types of data: a plant’s current state, information about plants, and data that reflects the person’s plant care history.

A plant's current state is data on the moisture level of its soil and the general appearance of the plant (e.g., color, stiffness/limpness of leaves). People use this information to determine the plant's needs. Caroline and Lucy watered their plants when the soil felt dry or the leaves began to droop.
6. What is the relationship between a person and data?

People consulted various plant care information databases when they wanted to know how to care for their plants.

People used their personal history of plant care to determine how to take care of plants. Caroline said that she used to underwater plants, but she learned from her mistake and now tries to water them more often. People also base their buying decisions based upon their plant care history. Caroline noted that she tries to buy plants that require minimal water.
Plantr Task Analysis

7. What other tools do people have?

Caroline, Lucy, Jack, and Kacy all have phones and computers. People also have a water source, pots, and soil for their plants. Most people probably have access to a nursery or library.
Plantr Task Analysis

8. How do people communicate with each other?

Plant owners communicate on online forums and message boards. People who happen to be in the nursery at the same time might talk to each other about plant care. Likewise, people who have friends with indoor plants may share plant care tips.
Plantr Task Analysis

9. How often are the tasks performed?

Watering is performed with a frequency between twice a week (Jack) and twice a month (Caroline). Fertilizing is performed less frequently, between once every two weeks to once every three months. Plants do not become sick often enough to make a good estimate about how often people try to get help.
Plantr Task Analysis

10. What are time constraints on the tasks?

Plants must be watered with some regularity, so if people do not water their plants for long enough, the plants will start to die. Likewise, if plants are in need of attention for other reasons - pH imbalance, environment too dry - and they do not receive attention within some amount of time, they will die. Watering, caring, and learning how to care for a plant takes time. People who are very busy might not have the time or attention required for plant care.
Plantr Task Analysis

11. What happens when things go wrong?

When plants became "sick", people take action, seek help, or ignore the problem until the plant dies. When people forget to water plants, they usually notice that the plant needs water and give it water. Sometimes people may not realize that a plant needs water until it is too late.
Selecting Tasks

Real tasks people have faced or requested

- collect any necessary materials

Should provide reasonable coverage

- compare check list of functions to tasks

Mixture of simple and complex tasks

- easy tasks (common or introductory)
- moderate tasks
- difficult tasks (infrequent or for power use)
What Should Tasks Look Like?

Say what person wants to do, but not how
  allows comparing different design alternatives
Be specific, stories based in concrete facts
  say who person is (e.g., using personas or profiles)
    design can really differ depending on who
    give ‘names’ (allows referring back with more info later)
    characteristics of person (e.g., job, expertise)
  story forces us to fill in description with details
Sometimes describe a complete “accomplishment”
  forces us to consider how features work together
Task: Park in a New Neighborhood

Peter is going to brunch on a Sunday with his roommates. He is trying a new place he found on Yelp. He has the address for the place and he is using his phone’s GPS for directions. He leaves the apartment with his roommates at 8:30am and he wants to beat the crowd so they won’t have to wait in line. He is driving a Toyota Corolla that he has owned for five years. It is a rainy day and he doesn’t have an umbrella.
Hierarchical Task Analysis

Steps of the task execution (detailed in a hierarchy)

park in new neighborhood

- determine destination
- drive to destination
- locate parking spot
- secure parking spot
- park

- enter address in GPS
- follow directions
- arrive at destination

...
Hierarchical Task Analysis

Steps of the task execution (detailed in a hierarchy)

- Park in new neighborhood
  - Determine destination
  - Drive to destination
  - Locate parking spot
  - Secure parking spot

- Enter address in GPS
  - Follow directions
  - Arrive at destination

... Or step back a level and motivate Uber
Using Tasks in Design

Write up a description of tasks formally or informally run by people and rest of the design team get more information where needed

Manny is in the city at a restaurant and would like to call his friend Sherry to see when she will be arriving. She called from a friend’s house while he was in the bus tunnel, so he missed her call. He would like to check his missed calls and find the number to call her back.
Using Tasks in Design

Rough out an interface design
discard features that do not support your tasks
or add a real task that exercises that feature
major elements and functions, not too detailed
hand sketched

Produce scenarios for each task
what person does and what they see
step-by-step performance of task
illustrate using storyboards
Scenarios

Scenarios are design specific, tasks are not

Scenarios force us to show how things work together settle arguments with examples but these are only examples, and may need to look beyond flaws

Show people storyboards

topic for Tuesday
Tasks, Personas, and Scenarios

Task: a design-agnostic objective
Persona: a fictional person with a backstory
Scenario: narrative that demonstrates a persona completing a task using a particular design

Use Case: in software engineering, describes requirements using one or more scenarios
Tasks in Your Projects

Say what is accomplished, not how

Real tasks that people currently encounter, or new tasks your design will enable

Reasonable coverage of the interesting aspects of your problem and your design space

Range of difficulty and complexity

Park at the zoo
Park Friday night in Ballard
Park at the airport
Combine with Other Methods

Personas
Concept Mapping
Competitive Analysis

“If you want to create a product that satisfies a broad audience ..., logic will tell you to make it as broad in its functionality as possible to accommodate the most people. Logic is Wrong.”

Method 63
Combine with Other Methods

Personas
Concept Mapping
Competitive Analysis

Example Personae:
Parent concerned about safety
Carpenter transporting tools
Executive wants a sporty car

More specific is effective
Give the person detail
Give them a name
Make it believable

Careful of stereotyping
Web littered with examples

Method 63

Universal Methods of Design
Combine with Other Methods

Personas
Concept Mapping
Competitive Analysis

Method 16
Combine with Other Methods

Personas
Concept Mapping
Competitive Analysis

Method 16
Combine with Other Methods

Personas
Concept Mapping
Competitive Analysis

Method 15
CSE 440: Introduction to HCI
User Interface Design, Prototyping, and Evaluation

Lecture 06: Critique and Task Analysis

James Fogarty
Eunice Jun
David Wang
Elisabeth Chin
Ravi Karkar

Tuesday / Thursday
10:30 to 11:50