CS147 Human Computer Interaction

Phase II - Brainstorming and Prototyping

Team Muncher

Monica Yupa

Peter Farejowicz

Gloria Chua

Kai Jian Chua

I - Our Studio Theme

While our broader studio theme is “mobility”, we decided to pursue the subdomain of “food mobility” for this project. As students living in Stanford housing, most of the time the reason why we go off campus is to get food. Hence, mobility around the procurement of food is a problem that is deeply personal for us. Having identified this problem domain around “food mobility”, we decided to hone in on the two areas most pertinent to us: group dinners and grocery shopping.

II - Original POV

We met Jeremy, a 21-year old college student eating out at a restaurant with his friend. We were amazed to realize that choosing where to eat is a social experience in and of itself — it reflects his friends’ cultures, backgrounds, beliefs and aesthetics. It would be game changing to create an intentional moment of deeper understanding and mutual appreciation among friends when choosing a place to eat out.

III - Additional Needfinding Results

User 1 (Farmer’s Market)

We interviewed Ellen, a 40+ year old housewife, who shops around multiple farmers’ markets in Portland more than 3 times a week, values providing her husband and son with fresh quality food, and is an extreme planner. Ellen knows what time the farmer’s market will be least crowded and have the shortest lines, which stands will be there each day, and which sellers will have her preferred ingredients. She values food markets because she believes they provide “ingredients with a certain flavor that you’ll never get from a supermarket.”

User 2 (Food Trucks)

We interviewed Jason, a 24-year old recent college graduate living in the Bay Area and working in tech. He is a major foodie and loves trying new food with his close friends. Jason keeps a calendar for food trucks, including some on Stanford campus by Y2E2. He appreciates these food trucks because they are conveniently located by open work spaces and the alternating food truck calendar means he has different food options each day.

IV - Refined Points of View and HMW statements

With this new information at hand, we divided into constructing three new point of view statements.

Grocery store POV

We met Judy and Tim, a retired couple, in the grocery store. They need a more efficient way to shop for groceries because they spent more than one hour in the store despite having a shopping list; it would be game changing if we could save their walking around time.

A select few of our brainstormed statements include:

- *HMW guide them to the item they are looking for?*
- *HMW repurpose the aimless time spent walking around?*
- *HMW enhance their shopping list for a more efficient route?*

Restaurant POV

We met Jeremy, a college student, at the restaurant with his friend. He needs to feel he and his friends collectively picked the most ideal place for a group meal based on its purpose and context, because deciding where to eat is a socially important experience, reflecting all parties' cultures, beliefs and backgrounds. It would be game changing if we can help him and his friends take into account individual values collectively, in deciding where to eat.

A select few of our brainstormed statements include:

- *HMW keep the human touch in a decision process that is typically not face to face?*
- *HMW discover new qualities about themselves in the process of picking a place to eat?*
- *HMW reverse the process — picking a place at random and seeing how it fits the group's collective values?*

Farmers' Market POV

We met Ellen, a health-conscious mother, who regularly shops at a farmers' markets. She needs access to fresh and organic groceries because she feels store products are not up to her standards (taste, quality, etc); it would be game changing if we could help her find the best spots to purchase these groceries.

A select few of our brainstormed statements include:

- *HMW let her know what is available at the market each week?*
- *HMW make her aware of locations that sell fresh produce?*
- *HMW make trying new shopping locations more rewarding?*

V - Top HMW Statements

From our brainstorming session and voting, the following HMW statements emerged as the most fruitful.

Our first choice was **how might we keep the human touch in a decision process (deciding where to eat) that is typically not face to face?** This statement stems from our second point of view regarding Jeremy at Umami Burger. We chose this statement because it focused on the social aspect of food mobility which we all agreed was a unique approach.

Next, our second choice was **how might we allow groups to discover new qualities about themselves in the process of picking a place to eat?** Like the previous, this statement also comes from our point of view about Jeremy, but we felt strongly about this particular one because it focuses on the self-reflection aspect of picking and getting to a food solution.

Finally, our last collective choice was **how might we repurpose the aimless time spent walking around a grocery store?** Unlike the previous two, this statement derives from the point of view about Judy and Tim whom we met at the Whole Foods grocery market. We thought this was a good statement to pursue because it opened the door to a lot of possibilities.

VI - Brainstorms

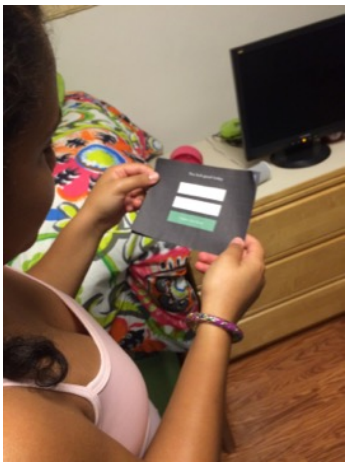
Experience Prototype #1

Our first prototype was a 'human concierge' that coordinated and facilitated the process of choosing what to eat in a group. It centered around this "How might we…" statement: *how might we keep the human touch in a decision process (deciding where to eat) that is typically not face to face?*

Our group created two different versions of this prototype to focus on different user problems and assumptions. In the first version of the 'human concierge' prototype, we targeted an extreme user, by testing our assumption that non-native English speakers will experience an English speaking concierge in a different, but perhaps fruitful way. For example, designed correctly, a 'human concierge' could help make our app interface more inviting and easy to use to a user set back by language or technology. The second version focused on testing this prototype in a group setting.

First version prototype

We designed our experience prototype by making a computer sketch of a minimalistic interface with concierge-like messages throughout. These sketches were printed out (which made for easy improvisation, change of flow, and note-taking on the back).



We tested our first prototype with two users — Dalton, a 22-year old native-English speaking student and Ignacio, a 40+ year old man on a dorm's cleaning staff.

We validated that a human concierge was an overall comforting experience but in different ways to each user. Dalton felt that the concierge was a good mediator that lessened group indecisiveness while Ignacio felt that the concierge was helpful in understanding the prototype's purpose and would help him connect with his kids in a different way.

We were surprised to discover some assumptions overturned.

- One user felt comfort while the other liked the group efficiency it created
- The clarity of messages was most important to one user while the other valued humor
- Both users appreciated the group aspect
- Ignacio also found that the concierge was useful in guiding him through a technology experience unfamiliar to him. Although the focus was not meant to be food discovery, he was delighted by the idea that the app could help him find food places in an area unfamiliar to him

Second version prototype

In this case, the prototype was to test if a third-party 'human concierge' can help provide the human touch by bridging friends together through a central intermediary. A group of friends have already decided a time and place to meet for a meal, and these friends are not located at the same place, but are interacting real-time.

We thus designed our prototype to encompass this ‘human concierge’ experience, through copies of a paper prototype accompanied by one of us acting as the human concierge, providing its voice.

We tested the prototype with a group of 4 friends in the same room. We set up the scenario verbally, explaining the context described above. We then handed each one the set of paper prototypes, while one of us pretended to be the voice of the human concierge, and we observed passively what they said and did.

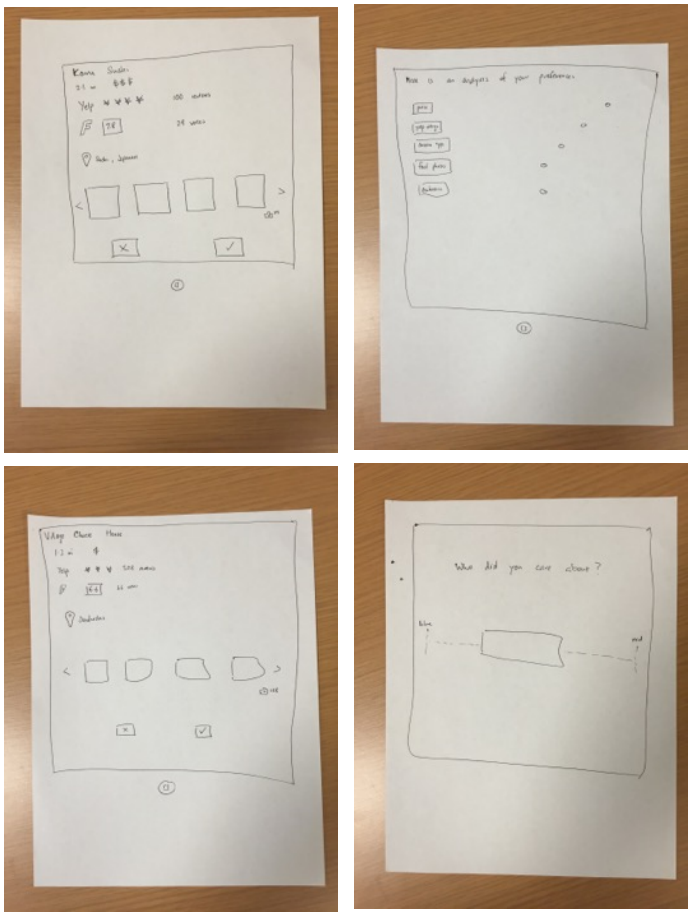
Assumption	Observation
A third-party mediator, in a human form (e.g. human face and voice) is crucial in providing the sense of a human touch	• Not important to the users: they hardly noticed the face on the prototype • Users were more interested in interacting with each other than they were with the ‘3rd-party’ concierge - Reflected they wanted to verbally talk to friend - “It would be dope if it could show what the other person says
A third-party mediator greatly facilitates and reduces the difficulty in the decision-making process People want complete freedom in voicing their opinions about their preferences, so prompts for input were designed to be as broad as possible	• Users reflected how difficult it was to make a decision of where to eat in groups of 3-20 - “It would be perfect e.g. for Sierra camp!” • Users thought they might prefer the concierge shortlisting vs. selecting their choices, although this needs to be tested further
People want complete freedom in voicing their opinions about their preferences, so prompts for input were designed to be as broad as possible	• Users were quite lost by the generic prompts (“What do I do with this?” “What do you mean by What do I feel like? In general? For today?…” • Likely they need more guidance

There were other more surprising findings.

- *Users wanted to hear the voice of their friends and have a two-way conversation real-time*
- *But users felt having this concierge was a distinct experience from having a phone call, because it "pulls the group together" and "brings in [the] group aspect" of the experience*
- *Users also enjoyed how the selection was a recommendation more than a list ("not just a list, like Yelp", one said)*

Experience Prototype #2

Our second prototype centered around the "How might we…" statement: how might we allow groups to discover new qualities about themselves in the process of picking a place to eat? This prototype was made to help users tease out their preferences and test whether pattern recognition was important to them.



This is how we designed our experience prototype. First, we had multiple profiles of restaurants that the user has to swipe yes or no on, which includes price, ratings, distance, cuisine type and food photos. After which, we got them to express, on a temperature slider bar, how much they cared about each factor. At the end, there was a summary chart that ranked these factors to let them know their preferences.

We validated that pattern recognition is valuable to users in helping them identify their preferences when it comes to picking restaurants. In the first interview, May highlighted that she would not mind doing this exercise each time she meets with a new group of friends, because her view on price is not static. It would be great if the app can track and remember her preferences over time. Our second interviewee, Jessica, would only do it once during the setup, and thought that it would be great if the process of restaurant swiping contributed towards identifying her preferences.

We were surprised to discover some assumptions overturned.

- People need to swipe through restaurants before they think about their preferences
- People thought that there is a purpose behind the restaurant swiping

Experience Prototype #3

Our third prototype aimed to address the solution of searching for coupons online for items in your basket while shopping. This solution was one of the top contenders during our brainstorming session that centered around this "How might we…" statement: *how might we repurpose the aimless time spent walking around a grocery store?*

By choosing to implement this solution as a mobile application, and by working off our need finding interviews, we made the assumptions that our users are frustrated with inefficient use of

time, users want to find coupons to save on prices, and users are willing to add the extra action of scanning product and swiping for coupons on their phones.

Similar to the other prototypes, we made this one out of paper. We modeled different screens on each sheet and simulated the flow from one screen to the next by shuffling through the cards. Being in San Francisco for the day, we were able to test our prototype at a high end food market, Bristol Farms, at the Westfield in Union Square. Out target interviewee was a young adult male named James who was shopping there.

Our paper prototype worked surprisingly well. James was receptive to adding the extra step of scanning a barcode before grabbing each food item to search for coupons. From this portion of the project, we were able to validate that users are open to taking the extra step of swiping for coupons during their shopping trip. While this solution does not strictly cut down on the time users spend walking around the grocery store, we were surprised to see that by filling the time spent in between grabbing items with this new coupon action, users did not care as much about the downtime because they anticipated saving money.

VI - Conclusion

Based on the three experience prototypes, we found that a **'human concierge'** was the most well-received by users as it retains the human touch in a decision-making process that is not typically face-to-face, while acting as a fair, efficient arbiter of the final outcome, for both friends and family. The pattern recognition feature was highly desirable too, which we felt is complementary to, and could be integrated into the 'human concierge' concept. Having such a function helps users identify their preferences by learning from each successful group meal. This eases the process of expressing preferences each time a different group meets.

(1878 words)

Appendix

All four of us care a lot about food, and as students living in Stanford housing, most of the time the reason why we go off campus is to get food. We eat out at restaurants during the weekends, and make trips to supermarkets to get groceries and supplies frequently. Hence, mobility around the procurement of food is a problem that is deeply personal for us.

Having identified this problem domain around “food mobility”, we decided to hone in on the two areas most pertinent to us: group dinners and grocery shopping.

We encounter a common coordination problem when it comes to organizing group dinners, usually with five or more people. The usual process involves a series of texting, yelping, debating and a lot of time investment before a restaurant that is suitable for everyone’s tastes and preferences is chosen.

Often, we find ourselves lost in the grocery shop, walking up and down the aisles looking for items we want to purchase. Stepping into a supermarket like Safeway, we are confronted with our first decision of which direction to take out of a dozen routes we could take.

As discussed in our initial presentation, we broke down food mobility into 2 segments: mobility in grocery stores, and mobility pertaining to restaurants. Taking into account the feedback from our first presentation, we also decided to do additional needfinding in the domain of mobility regarding food trucks, farmer's markets, and on-demand food delivery services.