CS 147 - Introduction to Human Computer Interaction Design
Assignment 2 - POVs and Experience Prototypes

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Studio Theme: Art and Culture
Problem Domain: Music as a Social Activity

I. Initial POV:

Andreas Garcia is a composer who really enjoys playing his own compositions with friends. We were amazed to learn that many of Andreas' most fruitful musical experiences arose out of spontaneous social situations. It would be game-changing to make it easier for people like Andreas to create such musical opportunities.

II. Additional needfinding results

In order to refine this POV, we conducted additional needfinding interviews. During our interviews, we found that people all have strong feelings about the social aspect of music in terms of practice, communication and performing. We found that social interaction was central to creating experiences that our interviewees learned from and enjoyed.

1. Gabe Barajas

Gabe is a jazz musician who plays saxophone, flute, and piano. Although his performances appear to be completely improvised, Gabe only plays things that he has tried out to some extent in his practice sessions. In his practice sessions, Gabe tries to take as many risks as possible so that he is prepared for a good performance.

This planned risk taking also carried over to his experiences trying street performance. Going outside his usual domain was intimidating at first. By performing with a friend, Gabe received musical and social support that allowed him to overcome this barrier. We were struck by his ability to manage the risk of trying new things.

Gabe Barajas,
Jazz Musician

2. Melissa Du

Melissa is a Stanford student and violinist who used to play competitively. In high school, she would derive most of her motivation from music competitions. At Stanford, she was unable to find a music community that challenged her in this way, so she drifted away from playing violin to study CS. One of her regrets was that she was unable to appreciate classical music as a creative pursuit without the competitive aspect.

Melissa Du,
former violinist

3. Derek Wu

Derek is a Software Engineer at Google who is trying to get back into music due to the amount of free time he has. He used to play piano competitively, but is now more interested in the self-expressive aspects of music. He regrets not exploring music as a creative medium earlier, and feels that audiences need to appreciate the technical and artistic decisions of the performer.

Derek Wu,
Software Engineer

III. Three Revised POVs and corresponding HMWs:

1. Gabe is a jazz musician who has occasionally tried street performance at home and abroad. We were amazed to find that risk-taking forms a central part of Gabe's improvisation process. It would be game-changing to empower musicians to take more musical risks.
   HMW...
   a. make risk-taking in music like sky diving?
   b. change the structure of performances so that risks are 'less risky'?
   c. remove the anxiety from public failure?

2. Bo is a hip hop artist who raps to promote social causes. We were amazed to learn that he grew up in a neighborhood that used rap to elevate the performer, rather than others. It would be game-changing to empower artists to share information about the social contexts surrounding the music they encounter in their everyday lives to audiences.
   HMW...

  a. illuminate the social or cultural issues behind music and facilitate the conversation between artist and audience?
  b. encourage artists to lift both themselves and others up?
  c. connect artists who have similar goals together?

3. Derek is a software engineer at Google who plays piano. We were surprised by the importance Derek ascribes to personal technique and the very act of performance. It would be game-changing to effectively convey this nuanced enthusiasm to audiences in a relatable, accessible way.
HMW...
  a. help the audience appreciate the role of personal technique in performance?
  b. get rid of ignorant, unappreciative audiences?
  c. we make the act of performance like a religious ritual?

IV. Three Best HMWs:
1. HMW we make risk-taking in music like sky diving? (POV 1)
2. HMW illuminate the social or cultural issues behind music and facilitate the conversation between artist and audience? (POV 2)
3. HMW help the audience appreciate the role of personal technique in performance? (POV 3)

V. Three Experience Prototypes:

Prototype 1:
  We prototyped a solution to help artists take risks in a social setting. The solution would present fun challenges for groups to participate in. Then the user would have a short amount of time to perform the challenge. The solution would record this performance and allow it to be shared on social media. Our assumptions were:
- Thinking of new different things to try is challenging.
- Musicians will become better at taking musical risks if that activity is turned into a social game.
- Other people would be interested in watching these performances
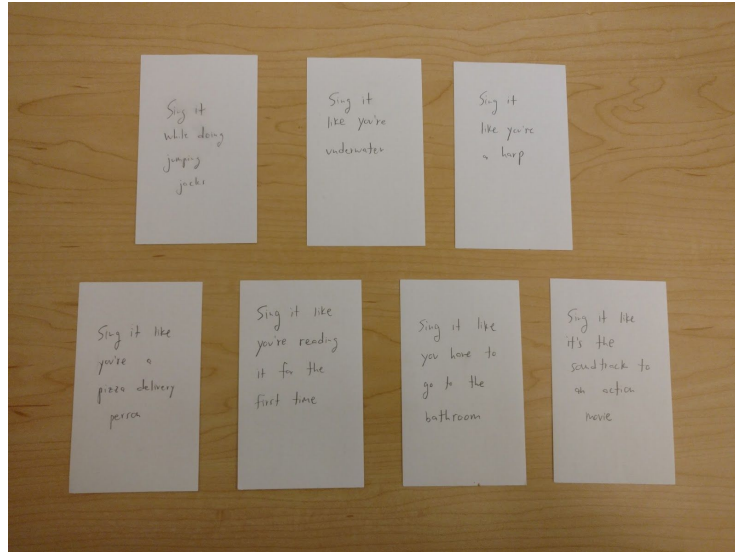
We tested this by creating a set of index cards with different challenges on them. A group of singers (Diego, and volunteers Sonja and Shu Chen) took turns trying out the different challenges on each card. The users seemed to really enjoy the interaction. Participants were smiling and having fun, and there were no awkward pauses or hiccups.

The initial reaction from Sonja was that this seemed more like something for an acting class, not a voice class. However, Shu Chen enjoyed the activity, and mentioned that her voice teacher sometimes uses similar techniques. The perceived suitability of the game, therefore, had more to do with the challenges we chose rather than a flaw in the concept. Our assumptions were confirmed as the singers immediately started trying different things out once given the cards and said that they had a fun time performing the activity. Furthermore, the testers did enjoy watching other people perform these silly challenges and laughed several times.

Prototype 2:

The second solution attempts to bring out the social context surrounding a song. Our solution listens to a song being played, and then brings up a curated list of relevant news articles or personalized collections of similar songs by the artist or the community. The audience can also comment and discuss topics relevant to the music. Our assumptions were:
- Listeners of music are interested in learning more about the social context surrounding a song
- Listeners are unable to directly connect a song they like with the social context of message of the song
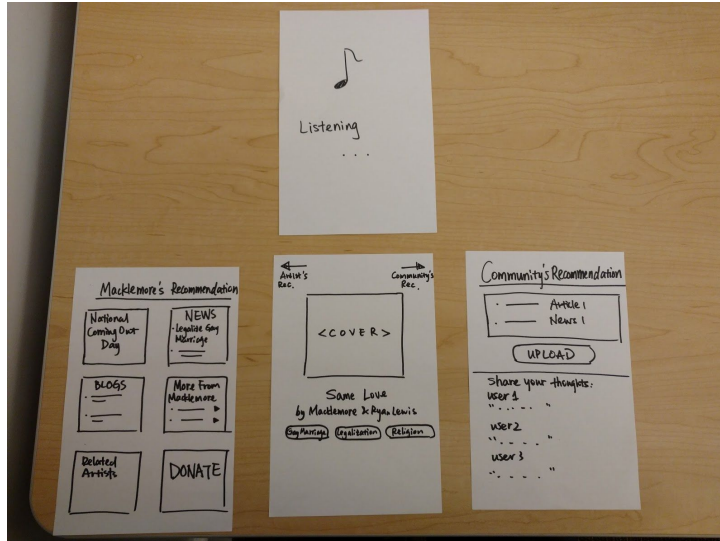
We tested the solution on Maria, a social activist. This test was in the context of waiting in line in a coffeeshop playing the song *Same Love* by Macklemore. Maria used the app to capture the song which brings up basic information about the song as well as relevant tags. She then swiped left to find the curated recommendation list from the artist and right for the one from the community.

Maria liked that the prototype was an easy way for her to learn about the social issues surrounding a song, and said that it is also a good way to discover new artists and their stories. However, she feared that our app could unwittingly advance an unnecessarily narrow interpretation of a song. Moreover, she was concerned that users who don't care about the issues won't be compelled to use the app in the first place.

Sonja was less skeptical of the social issues aspect. She mentioned that social issues were the core reason she was interested in music. However, she didn't seem to have any problem with finding more about the social context of the song and was actually quite familiar

5

with the song we were playing. The problem is that people who would be interested in the app already know how to engage with the social issues, while everyone else won't even download the app.

Prototype 3:

The third solution is to encourage audience participation during a performance. We have a paper prototype which has a window to allow scrolling a piece of paper with the lyrics as well as informative annotations from the performer. The paper is scrolled in time with the performance of the song. We also give the tester cards which they can write comments on. These comments are passed to the performer in real time during the performance to the performer. Our assumptions are:
- The performer wants to determine whether the audience notices the nuances of his/her performance.
- The audience wants to further understand these nuances.
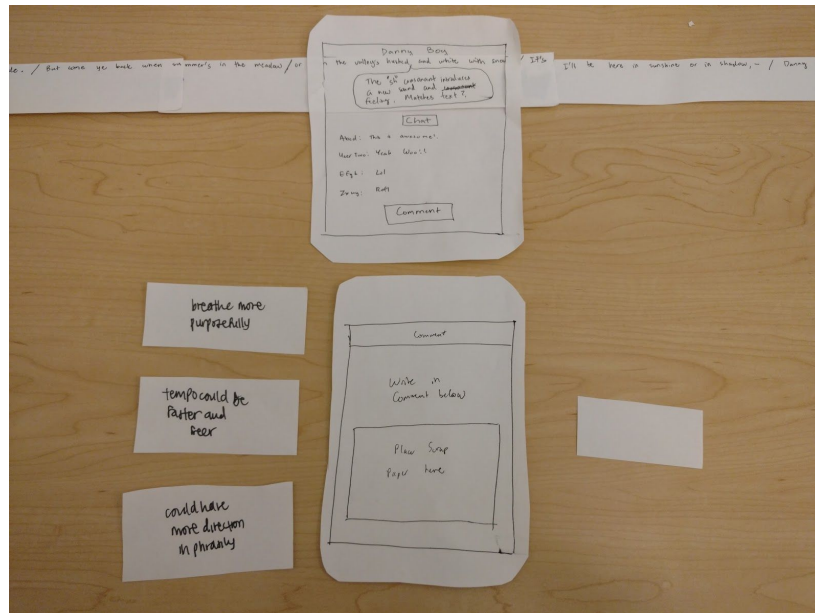
We invited Shu to Diego's performance. Shu was given the paper scrolling prototype where she can see lyrics with Diego's annotations. She was provided cards to comment on during Diego's performance of "Danny Boy."

Although Shu Chen enjoyed being able to send feedback during the performance, she was concerned that thinking about what to comment would distract her from the performance itself. She did feel that it would work in a learning environment where listeners were specifically listening and writing comments to help the performers. Furthermore, she thought that annotated lyrics would be useful to tell a music teacher what specific regions the performer was working on, which would guide the teacher to offer focused feedback. She also thought the comments would work well in an opera, where the lyrics are in a different language.

6

The problem with providing feedback is that the audience generally isn't as informed as the performer. Therefore, the annotations aren't particularly useful unless the information is fairly low level, like translations for an opera. Furthermore, due to the lack of musical knowledge of the audience, they can't really provide more feedback than "I like" a section or "I don't like" a different section. In a pop concert, this is essentially the crowd cheering, so there could be use for silent cheering in a classical music concert. In a teaching setting, this could be useful, as this knowledge asymmetry is not present or may even be reversed.

VI. Conclusion

We decided to move forward with Prototype 1. We felt that the concept itself addresses our needs while affording us the opportunity to customize the challenges to suit its audience better.

For Prototype 2, we felt that the solution was suited for too small a subset of people: namely, people who are already motivated to learn more about the social issues surrounding a song, but aren't already able to find that information. People who knew about the social context already know, while people who don't know may not be motivated to try our solution.

For Prototype 3, the audience simply doesn't know enough about music to give more detailed information compared to traditional audience cheering. Furthermore, thinking about comments might take the audience out of the performance.