

# **Social Media in Praxis:**

## *Deconstructing Socio-Digital Culture*

*Process Book*

Team Immersive Experience:  
Spencer James, Vishwas Shetty  
UW HCDE Capstone 2017

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# *Executive Summary*

We question the value of the self-broadcasting culture promoted by social media. Services like SnapChat, Instagram, Twitter and Facebook have increased our ability to share content and communicate with one another, but have also promoted a culture in which self promotion and approval seeking behavior thrive. In light of this reality, we asked ourselves: how might we build an interactive installation that invites audiences to critically reflect on their self-broadcasting habits?

For this project, we challenged ourselves to use design as a lens to critically examine social practices. Our process involved developing, deploying, and digesting cultural probes, iterative hardware prototyping, and evaluation of a final installation concept. In the first stage of the project, we created sets of nine cultural probes, distributed them to five participants, and debriefed with each participant. We used the results of the cultural probes to inform three rounds of physical prototyping and concept exploration, returning to our cultural probes participants for feedback throughout. Building on these prototypes, we developed and evaluated a final prototype. The project culminates with an exhibition of The Reflector, an interactive work that encourages active social media users to critically examine their own habits within today's self-broadcasting culture.

# *Team*



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## **Spencer James:**

Spencer's background is in social science and biomedical research but over the past few years he has been building his skillset to encompass technical and design chops as well. He is interested in critically examining people's relationships with and through technologically, and in building tangible objects and experiences. He is looking forward to taking some time after graduate school to recalibrate.

## **Vishwas Shetty:**

After obtaining a Bachelor's degree in Computer Science Vishwas worked as a software developer for 2 years. It was then he picked up a passion for User Experience design and wanted to pursue a career in it. The idea for capstone was to invest time in a direction that he felt very passionate about. School provides a healthy platform for taking risks and this motivated Vishwas to pick a topic that has been on my mind for a while. People these days are quite self obsessed and live in their small bubble. He hopes to create an immersive experience that helps people to get out of this bubble and think beyond themselves.

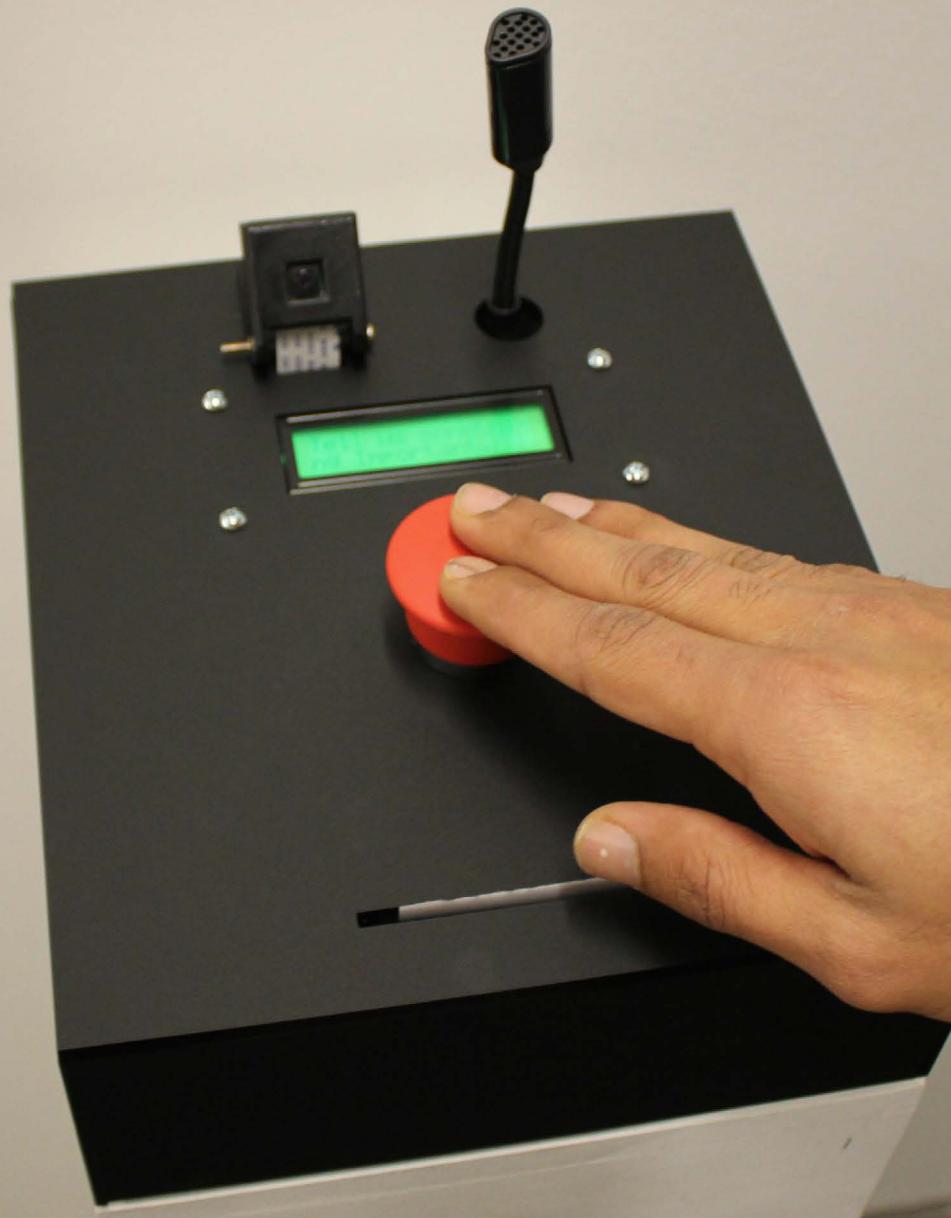
# *The Reflector*

*Acrylic, electronics,  
paper, internet*

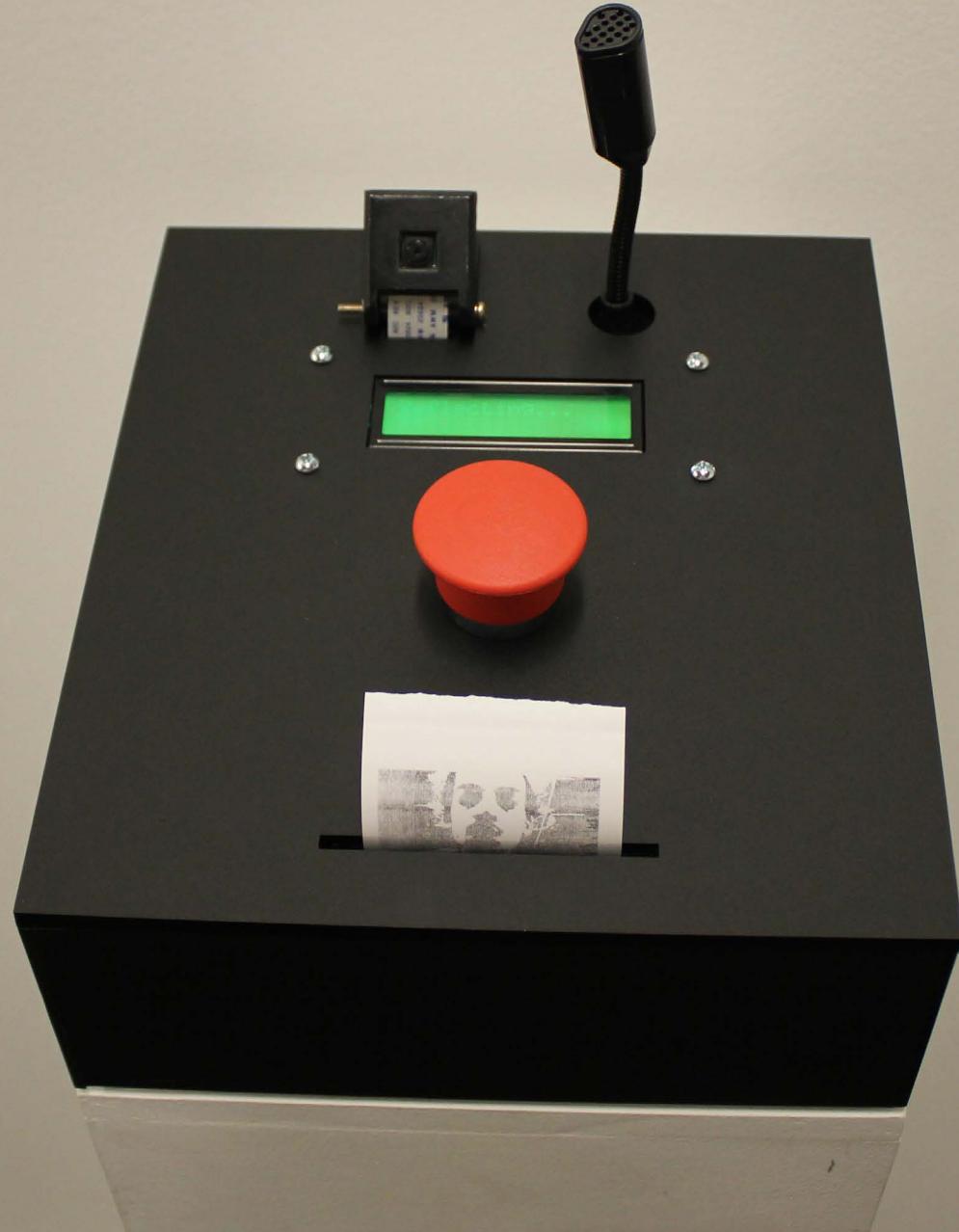














You said:

#Something

"hello I'm living in a dream  
world and I don't know what to  
do with myself right now it's  
almost over"

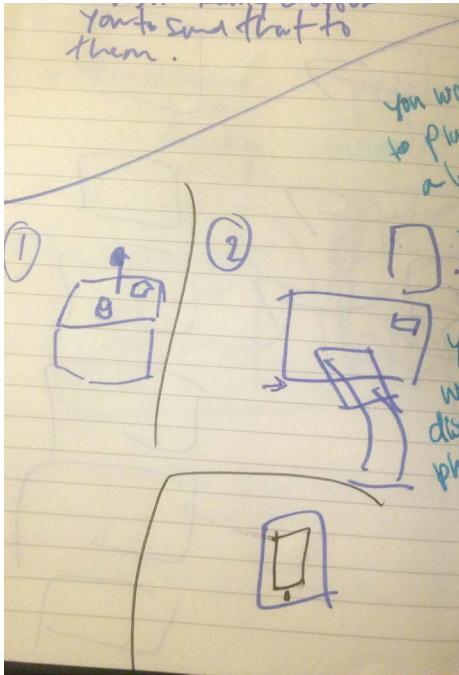


Someone else said:

#Something

"disgusting Best Window Outlet  
walk"

View your response, and other  
responses at:  
[twitter.com/SMinPraxis](http://twitter.com/SMinPraxis)



## Concept

Users push a button and vocalize a response to simple prompts: tell us something; tell us something important. The output is a slip of paper with a pair of responses: the user's photo and response, along with the photo and response of another. The slip informs users that they can view their response and others online.

The Reflector's primary function (although initially hidden) is to create Twitter posts from voice and image input at the push of a button. The output is a thermal print-out similar to Twitter's scrolling feed and presents similar opportunities: recipients can see their own content alongside content created by others. The full experience of the Reflector is both physically and virtually embodied, simultaneously existing in the exhibition space and at [twitter.com/SMinPraxis](http://twitter.com/SMinPraxis).

This device asks: what does it mean to have the ability to post content to social media at the push of a button? What kind of discourse does this create? Users are immediately confronted with the unforeseen consequences of their actions.



# *Process*

# Cultural Probes

Cultural probes are an exploratory research method pioneered by Gaver et. al. (1999). On a high level: probe artifacts are created and distributed to participants whose reactions provide insight into their subjective experiences and perspectives. The probes, and the conversations that result, are designed to provide unexpected inspiration for the design process. Though the results are often hard to interpret, the method's pioneers maintain that this uncertainty can be useful (Gaver et. al. 2004). Ambiguity is baked into the method: while Gaver et. al. recommend that the probes themselves be open-ended, they are otherwise vague as to how to go about producing them.

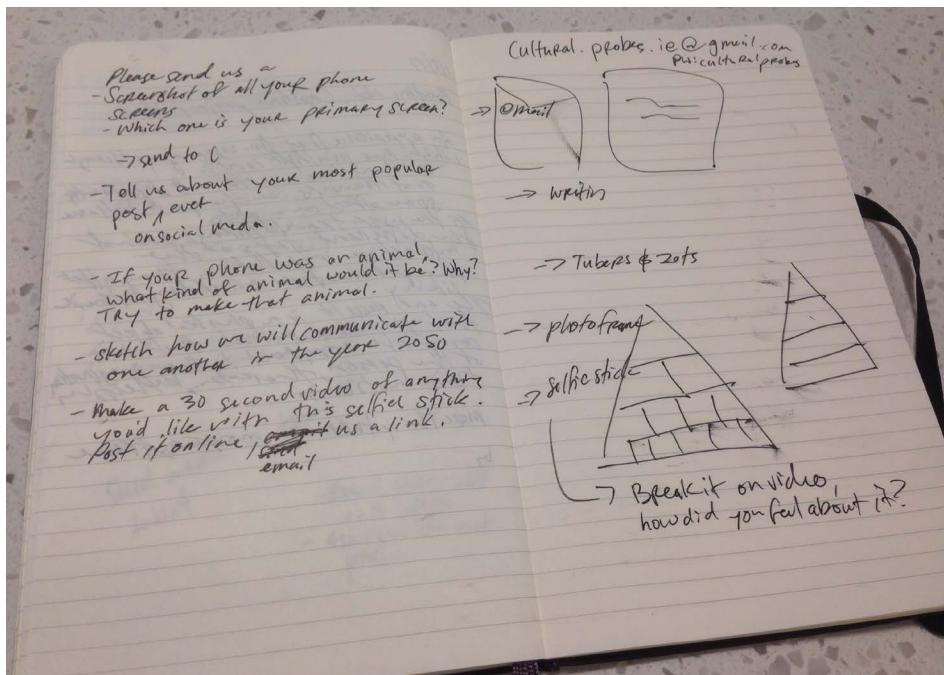
## Development

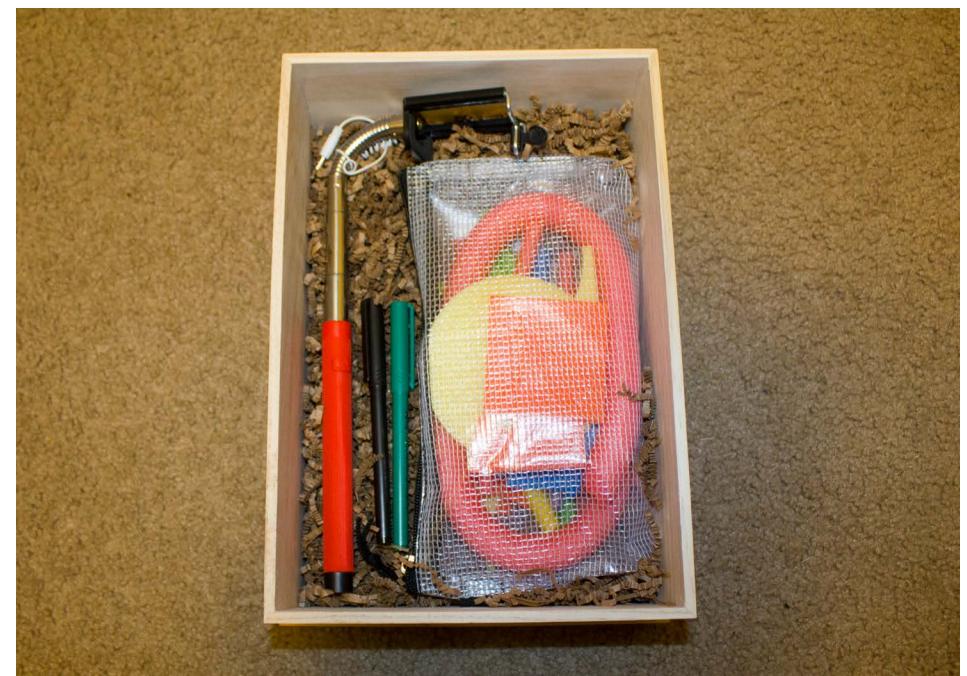
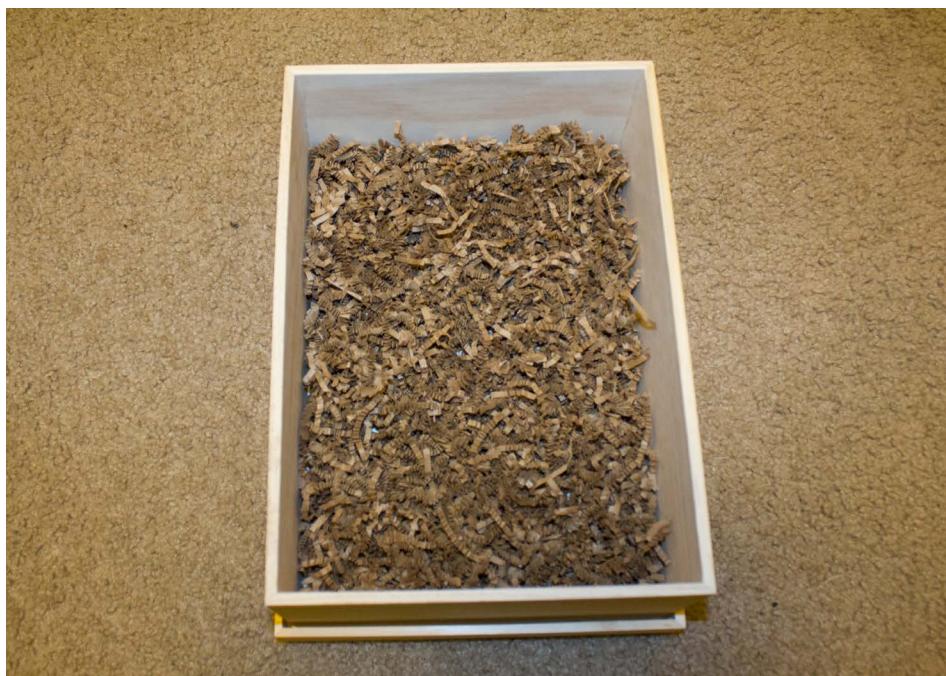
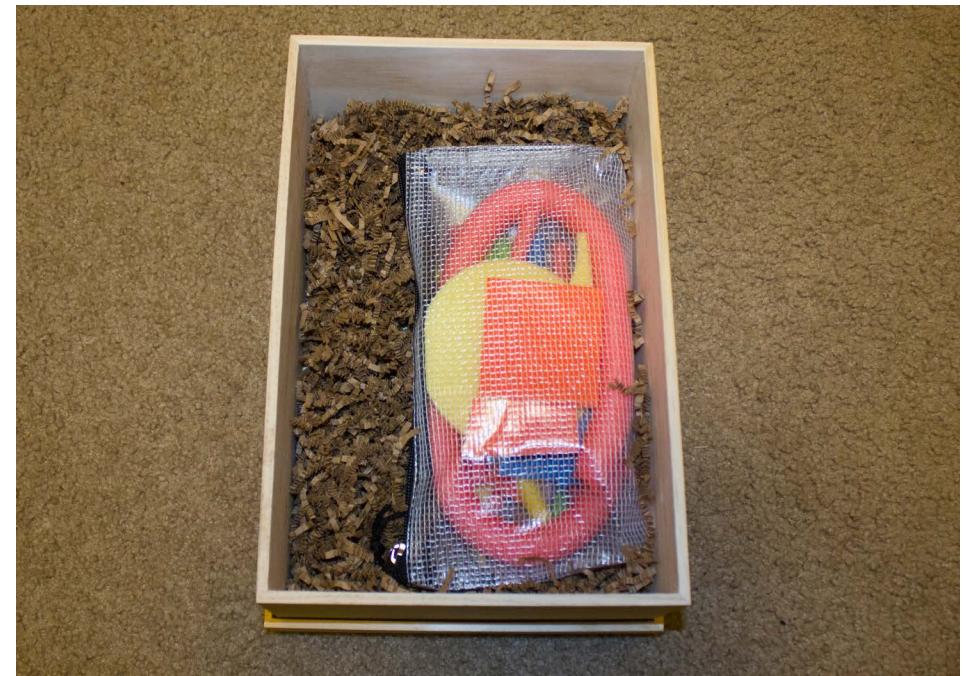
Creating the probes was our first design challenge; we didn't really know what we were doing. We started out by simply generating prompt ideas, with preference for those that were wacky, unexpected, and fun - regardless of the degree to which they were related to the topic of social media. Some of them were vague ('life on Mars'); some were dangerous ('take a picture while driving'); some were absurd ('how would you explain your day to a dog?'). Looking at these ideas, we realized that the phrasing of the prompt influences the form of the response. To generate diverse sources of inspiration, we wanted to create a set of probes whose outcomes were varied. We went through the list and tried to predict what the outcome of each might be. These predictions included words, photos, videos, links, screenshots, drawings, and in one case "?".

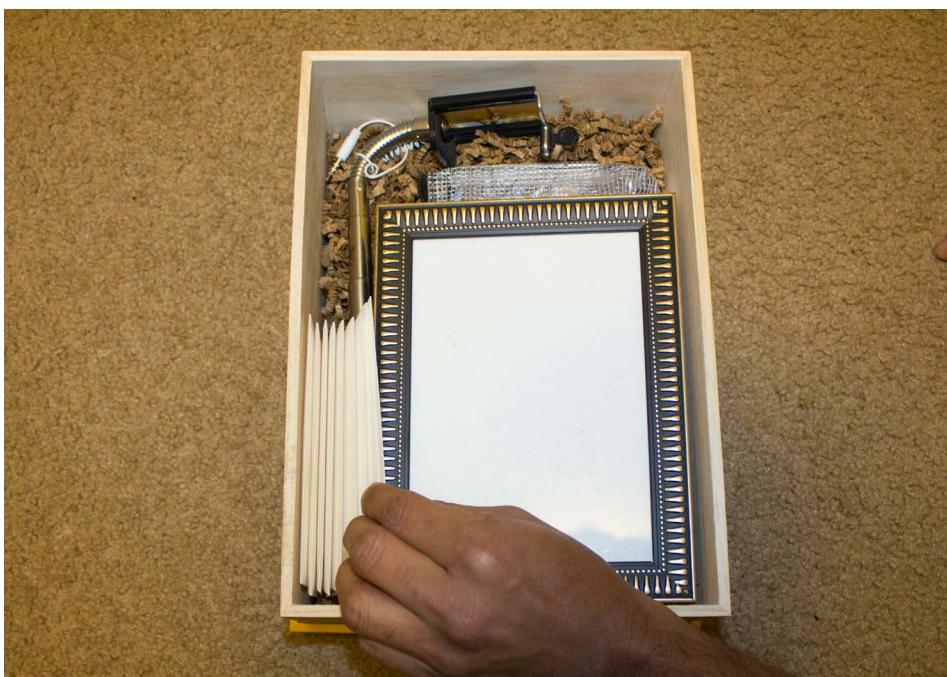
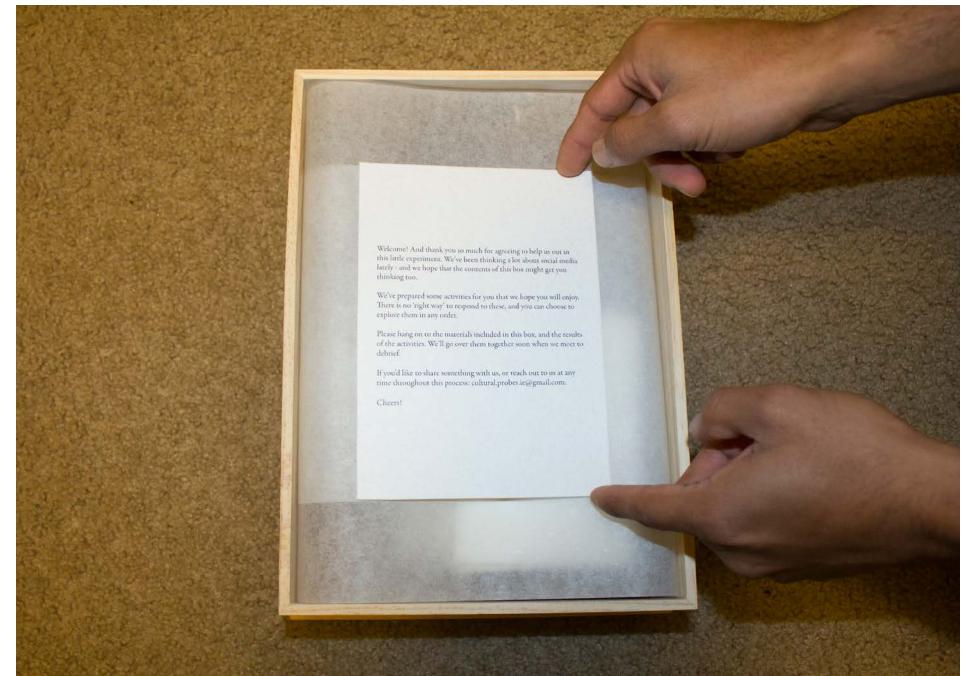
Armed with our list, we went out into the world to hunt for artifacts. The search was a bidirectional process of browsing for inspiration and trying to match what we saw in the store with our brainstormed prompts. We jotted down ideas and created a shopping list as we searched. Having completed our scouting, we returned to our list of probe ideas and selected the top eight based on the items we'd seen and our projections about the form of each probe's results. Based on advice from our project advisors, we revised the wording of certain tasks to improve clarity, wrote up text for an introductory topsheet, and added a ninth prompt that invited our participants to give something back to us.

## Probe Artifacts

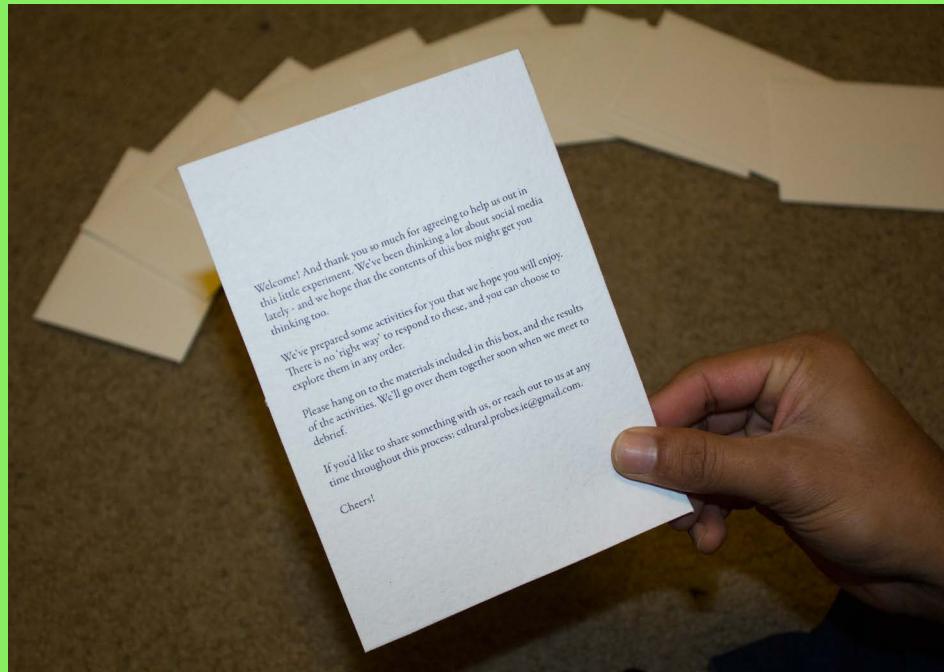
Early on, our advisors had impressed upon us the idea that at their best cultural probes are a gift to your participants. In order to make the probes feel special we very carefully curated a refined, yet approachable aesthetic. We selected unfinished pine boxes, pulpy off-white stationery, and matching cards and envelopes, and we nestled the probe artifacts among neutral colored paper shreds. We typeset the written materials in Garamond, placing the prompts in sealed envelopes for dramatic effect.







# *Topsheet*



Welcome! And thank you so much for agreeing to help us out in this little experiment. We've been thinking a lot about social media lately - and we hope that the contents of this box might get you thinking too.

We've prepared some activities for you that we hope you will enjoy. There is no 'right way' to respond to these, and you can choose to explore them in any order.

Please hang on to the materials included in this box, and the results of the activities. We'll go over them together soon when we meet to debrief.

If you'd like to share something with us, or reach out to us at any time throughout this process: [cultural.probes.ie@gmail.com](mailto:cultural.probes.ie@gmail.com).

Cheers!

# Probes



1. Use the selfie stick to make a 30 second (or longer?) video of anything you like. Post it online and email us the link at [cultural.probes.ie@gmail.com](mailto:cultural.probes.ie@gmail.com)
2. Sketch a snapshot of how we will communicate with one another in the year 2050. How will this shape our lives?
3. Tell us about a time that technology got in your way. What did you do to get around it?
4. Take a picture of something that one of your friends hates. How did you come to find out? Email it to us at [cultural.probes.ie@gmail.com](mailto:cultural.probes.ie@gmail.com)
5. Show us things that you read on the toilet. Send screenshots, pictures, messages, articles, videos, and whatever else to [cultural.probes.ie@gmail.com](mailto:cultural.probes.ie@gmail.com)
6. If your phone was an animal, what kind would it be? Why? Using the foam pieces, try to make that animal.
7. Tell us about your most popular post on social media ever. Share it if you can: [cultural.probes.ie@gmail.com](mailto:cultural.probes.ie@gmail.com)
8. Send screenshots of all your phone's home screens to: [cultural.probes.ie@gmail.com](mailto:cultural.probes.ie@gmail.com). Which one is the primary screen?
9. Please add something to the box that you'd like to share with us.



## Participant Recruitment

Our recruitment approach was predicated on an early decision we made: beyond simply participating in the probe activities, we hoped to recruit people who would be interested in providing continual feedback throughout the course of our project. Thus from the outset, we recruited creative partners. We met individually with each of our five participants to hand over the materials and briefly explain the ‘rules’ of cultural probes: the instructions are in the box; the probes should be fun; every item is there for a reason; there are no wrong answers; you can choose not to respond to any item. We used this meeting as an opportunity to schedule an hourlong debrief session about a week later, and to share our excitement about the conversation to come.

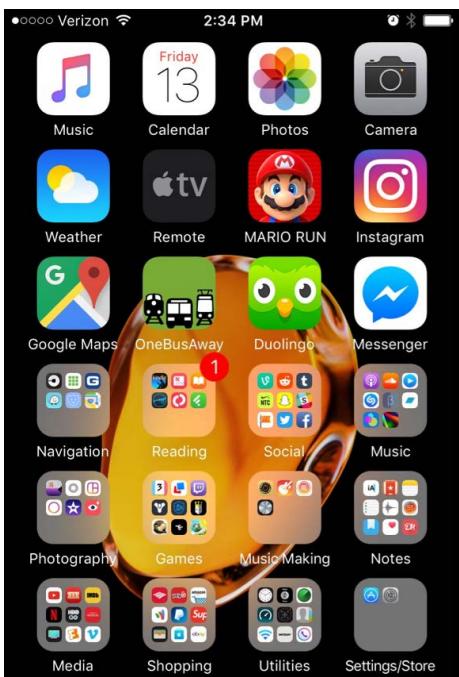
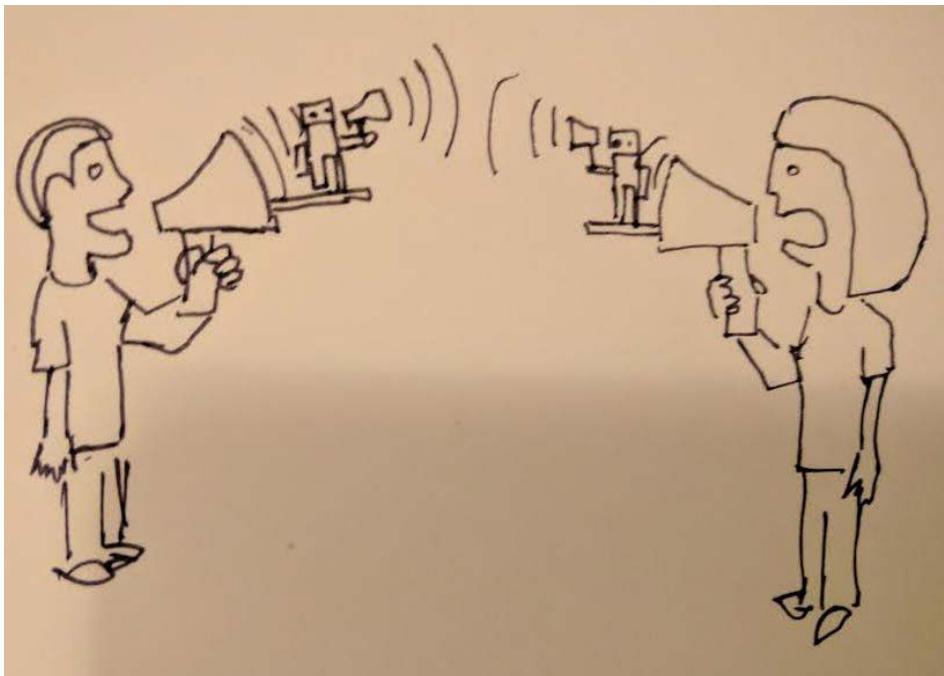
## Debrief Sessions

We conducted each debrief session at a location of our participant’s choosing, including campus meeting rooms, participant’s homes, and a rented musician’s practice space. Each session was scheduled for an hour, but because of the richness of the discussions most ran closer to two. In total we spent close to ten hours of debriefing with our participants.

Our intention for the debrief sessions was to use the completed probe artifacts to facilitate a dialogue around the topic of social media use and to explore participants’ relationships with social media, with others, and with the devices and technologies they use every day. We allowed participants to lead the conversations whenever possible, encouraging them to walk us through the probes as they saw fit. Though sessions were informal, with a conversational feel, we did prepare a set of prompts related to each probe to fall back on should the conversation stall. At the conclusion of each session, we asked our participants if they would be willing to continue their involvement as collaborative partners, providing feedback on prototypes as they were developed. They seemed quite eager to help.

## Outcome

In the course of this research, we had nearly ten hours of discussions layered with rich physical, technological, emotional, and practical realities. The probe responses and debrief sessions provided data that was incomplete, unclear, and biased as a result of personal contexts as well as interpersonal ones. Thus we did not attempt to analyze the probe responses, instead retaining these as inspirational data. Rather than an exhaustive list of inspirational anecdotes, we present a few here, in brief.



- We had planned on asking our participants to break their selfie stick on camera during the debrief session, thinking it would be a fun and possibly cathartic experience. While one of our participants expressed reluctance to use the selfie stick and placed it in the trash in his video, he did not want to destroy the artifact. Two participants had fun using the selfie stick and asked if they could keep it. One of the participants lost theirs.
- In the context of talking about social media use, one of our participants made an offhand reference to how their Facebook "is full of junk people." We thought this was very telling of the participant's perspective towards the service.
- As one of our participants was giving a tour of his phone's home screens, he mentioned that he keeps certain apps that he uses "way too much" in the third screen of his phone in order to prevent himself from using them. We followed up by asking whether the technique worked, to which the response was: "maybe for a few milliseconds each time." This combination of guilt and indulgence provided insight into the nature of social media's allure.
- Responding to the "how will we communicate in 2050" task, one of our participants produced what we refer to as The Megaphone Drawing. In his words: "two people have megaphones, and the megaphones have robots, on a platform, also holding megaphones. It's like, you're talking but you're talking to a robot, who is also talking for you."

The probes were amazing fodder for conversation. One of our participants put it particularly well in reflecting on the experience: "You get to know people very personally. At least that's what is for me. Maybe if you had people who were high social media users you'd get a different view because you're only getting that view of what they do with their device... and I don't know if that's a narrower view, or just a different view." The probe responses and debrief conversations that resulted opened us to new parts of our participant's lived experiences and allowed us to connect with them in new ways. By presenting our participants with open-ended tasks, we received ambiguous responses that led us down tangents we never would have expected. We are still not sure what a lot of this data meant, and much of it had no direct impact on the final outcome of our project, but there is no doubt that the experience inspired us.

Beyond creative inspiration however, the cultural probes were valuable in that they changed our perspective. We began this project focused on approval seeking behaviors, but the probes imprinted us with a more nuanced understanding of the role that social media plays in people's lives. Self-promotion and approval seeking are certainly aspects of social media culture, but through our research we also saw evidence that our participants were already aware of, and to some extent were actively avoiding this type of behavior in their own lives.

# Physical Prototyping

Inspired and informed by the process of creating, distributing, debriefing, and synthesizing knowledge from our cultural probes, in the second stage of our process we gave our ideas physical form. Each of the steps in our prototyping process represents the evolution of our concepts as well as the incorporation of new knowledge from our ongoing research and development.

## First Iteration

### Concept

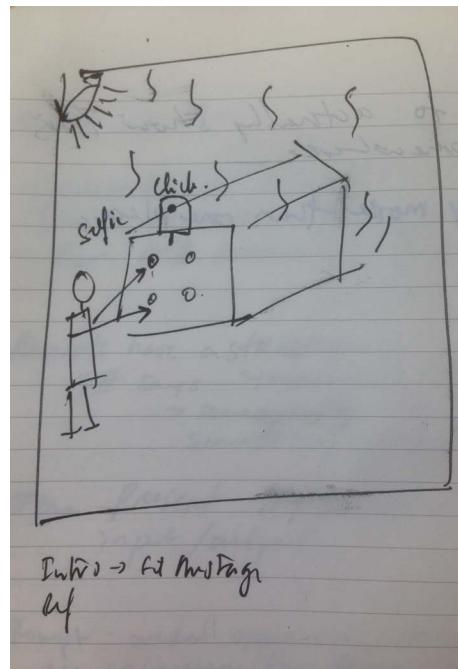
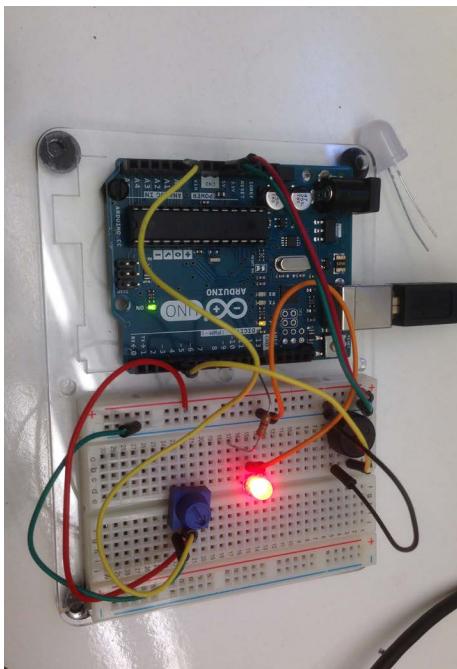
At the outset of prototyping, we envisioned creating a space that simultaneously facilitated and irritated the act of taking selfies. We imagined an elevated platform in a gallery setting with a stage and dim lighting. A control panel on the stage with a series of knobs, levers, and buttons would allow those interacting with the piece to control various environmental effects that would ‘enhance’ their selfie-taking experience, such as fog machines, flattering lighting, confetti, fans, and sounds. The controls would be orchestrated in such a way that increasing a selfie-facilitating effect would also increase the presence of an effect that was a selfie irritant (e.g. flattering lights paired with the sound of thundering applause). These pairs of effects would dramatize the actions of exhibition users, such as increasing lighting to garner greater approval from others with a more flattering image, and seek to provide an immediate reward (in this case, the sound of approval).

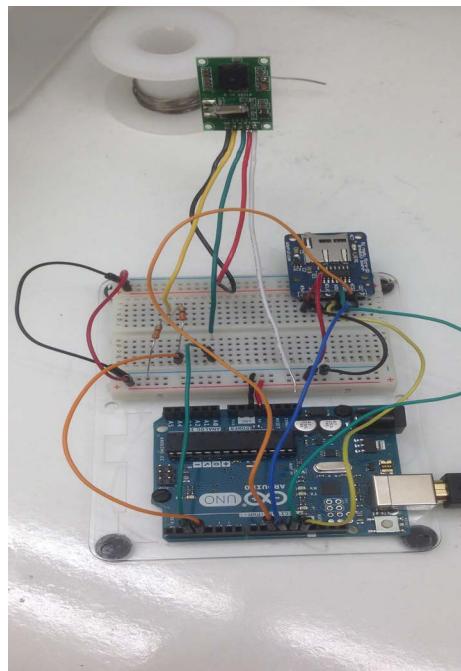
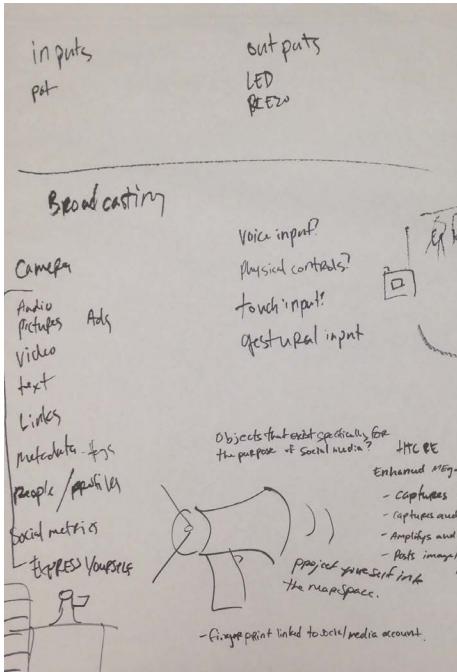
### Build

In order to get a sense for what this experience might be like we built a simple Arduino prototype consisting of a potentiometer that controlled the brightness of an LED and the sound output by a piezo buzzer. This was meant to simulate the manipulation of lights and a clapping sound, but due to the limitations of the equipment we were using there was no way to modulate the buzzer’s volume - only pitch.

### Feedback

Upon completing the prototype we realized that it, along with the more sophisticated version we envisioned, failed to address the topic of social media habits. Thus, we decided against soliciting feedback from our creative collaborators at this stage. The concept was a critique of the act of creating selfies but fell short in creating a dialogue with their broader socio-digital context. This was a critical moment in our process because at this point we realized that only by interfacing directly with social media we would have the means to engage with the subject matter. We needed to get our device connected to the internet.





## Second Iteration

### Concept

At the outset of our second iteration we brainstormed possible inputs and outputs for an internet connected device. During the session, we came up with the idea of a social media megaphone. Posting content to social media is an act of broadcasting thoughts into a digital public space. The range of this transmission is typically limited to local social networks, though in rare circumstances (such as viral posts) may be extended to a global audience. Though public these actions are distinct from 'real world' behavior in that they are preserved and reviewable online, and separate due to the nature and logistics of social media. Similarly, megaphones provide a means of broadcasting thoughts in a hyperlocal public space - although these transmissions may easily transcend social networks and are primarily limited by amplitude rather than digitally-formalized connections. By combining these two methods of mass communication we hoped to establish discourse with the social norms surrounding each practice, and to critically highlight the ways in which they overlap and diverge. The fact that our cultural probes participants shared sketches which highlighted similar themes served to further underline the strength of the concept:

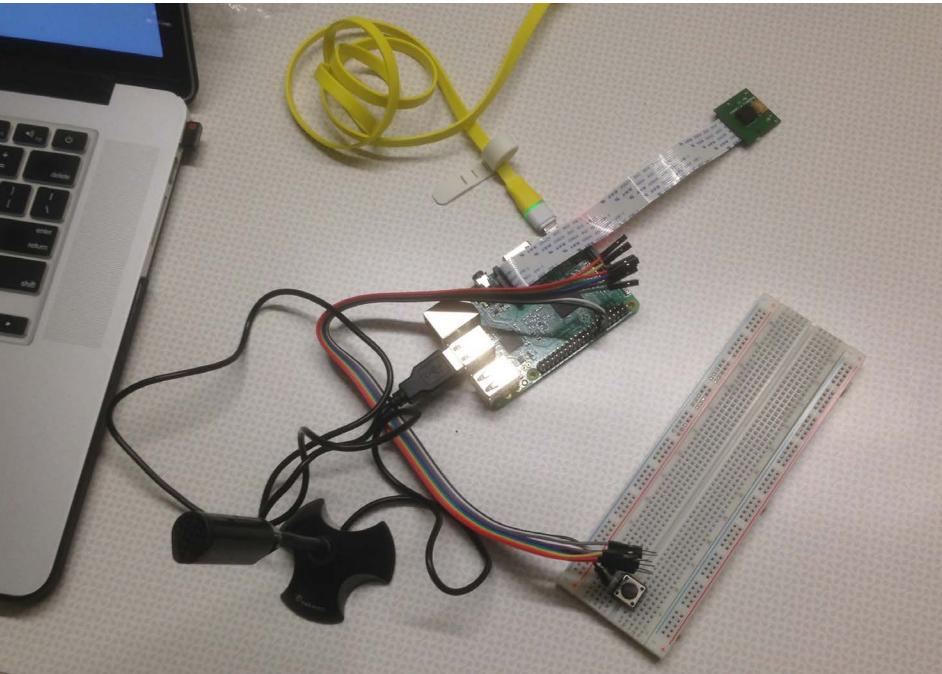
### Build

This stage of iteration encapsulates our most significant development period and might best be characterized as multiple iterations. Continuing the work of our first iteration, we built versions 2.0 and 2.1 with Arduino. These prototypes were focused on adding audio and video/image capture and playback features. Versions 2.2 and on were built on Raspberry Pi.

In version 2.0, we integrated image capture functionality. Using a JPEG camera breakout board, push button, and an external memory breakout (the Arduino does not have enough memory to handle image files), we were able to capture and save out-of-focus images with a single press of a button.

For version 2.1 we built on the push button input with an electret microphone and MP3 playback/recording breakout board. This configuration enabled us to record and save audio files to the MP3 breakout board's memory card.

With these two functionalities built out, the next step was to integrate simultaneous image and audio recording. Meanwhile, we were also looking into getting our project online. This research phase was another critical moment in our prototyping process, as we soon realized that integrating internet connectivity meant changing platforms from Arduino to Raspberry Pi. In addition to the learning curve associated with starting out on a new platform, this meant



rewriting our code from scratch and learning through trial and error that we would not be able to use the same hardware that had gotten us to this stage. At the same time, we reaped some immediate rewards from switching platforms, including a GUI, SSH capabilities, wi-fi capabilities, and the ability to import and access Python software libraries. Within the first few days version 2.3 was complete and we re-engineered push-button image capture capability using an RPi camera module and were capturing focused, high-resolution images.

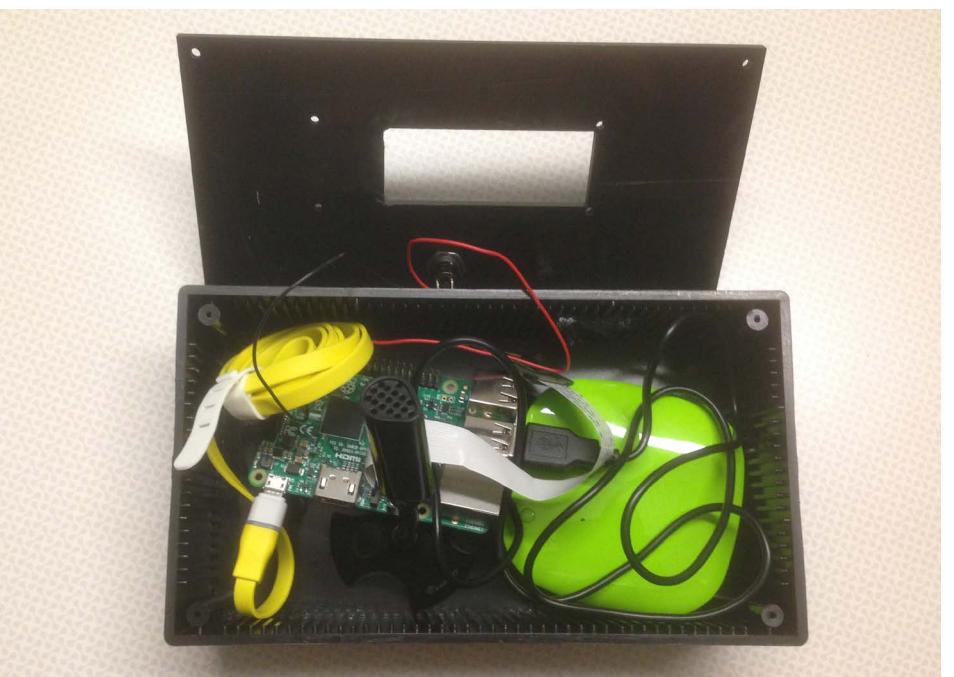
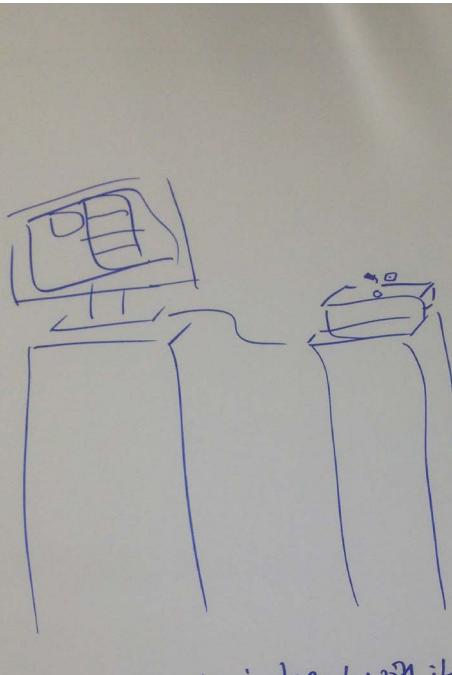
Capturing synchronous audio and video proved more challenging than anticipated. The matter was further complicated by our desire to emulate the functionality of a megaphone by playing back the captured audio in real time. While working through audio/video issues, we located a tutorial that guided us through registering a Twitter application and posting tweets from Python. In this process we discovered that posting video content to Twitter programmatically is essentially impossible (the implementation of the Twitter API is such that manual authentication is required - presumably a means to limit the load on Twitter's servers). Nevertheless, we were able to automatically capture audio and an image and post the image with hardcoded text to Twitter. Having built out this functionality, we created a dedicated Twitter account for the project - @SMinPraxis.

The next step in our development process was to build out a pipeline for converting the audio input to text so that the thoughts expressed to the device would be broadcast as well. After experimenting with several speech to text services, we successfully integrated Google's Speech to Text API into version 2.4 and built out a service that allowed us to post the algorithmically converted text along with the accompanying image - on the push of a button, our device was able to record and playback realtime audio, capture an image, convert the audio to text, and post the text and image to Twitter. We were eager to begin showing our device to our creative collaborators, so we placed our electronics in a readily available enclosure and began testing.

## Feedback

In order to get a sense for the baseline experience, we presented the device without explaining its functionality or providing instructions for its use. After this first experience, our participant told us that he felt a bit uncomfortable having his picture taken by the device - he didn't know exactly when the photo was happening, and doesn't like to post selfies to the internet in the first place. Additionally, he felt that the device wasn't providing him anything to respond to, and that he didn't know what to say to it. Overall, he felt slightly confused by the experience - there was no real indication of what the device was doing or what was going to happen at any point while he was using it, and it was unclear why it would do this in the first place.

At this point we reminded the participant of the goal of our project in order to provide context for conceptual feedback: we were trying to create an installation that would invite users to critically reflect on their social media use. The fact that we needed to set this context in order to make the experience decipherable was itself very telling. With this framing, our



participant told us that he felt the project was moving in a good direction, stating that the device was doing a good job of connecting with the subject matter and we had ‘a lot to work with.’ He encouraged us at this point to keep developing the concept of the device and to work on clarifying the way that we framed the experience.

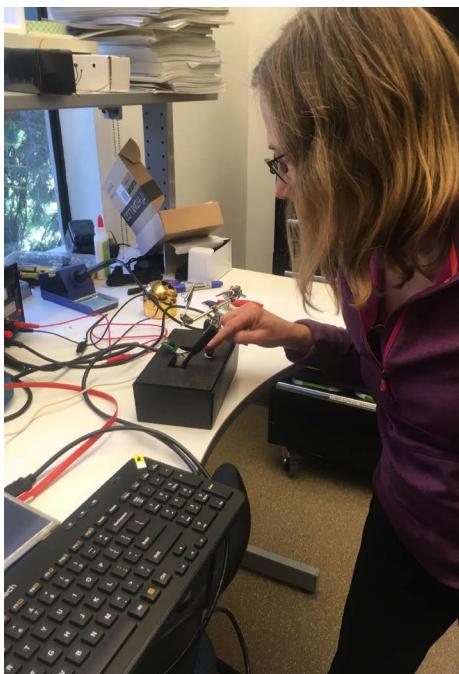
## Third Iteration

### Concept

Our third iteration was focused on furthering our concept of a social media megaphone. Though we had uncovered some usability issues in the feedback from the previous round of iteration, at this point we were ambivalent about how to make use of the information. Unlike traditional products and services, for this specific application ambiguity and opacity had the potential to be useful to us in creating a critical experience. In addition to critically examining the practice of self-broadcasting through social media, we were also conceptually interested in the black-boxing of technological complexity and in the process of abstracting meaning from ambiguity. Thus we decided for our third iteration to make only a minor usability-minded change to the device. Whereas in previous iterations image capture took place after voice recording, the third iteration captured an image prior to recording audio so that the red indicator LED on the camera was turned on for the duration of audio recording. We felt that in combination with real-time audio playback, this indicator light provided enough feedback that the device was indeed active.

### Build

We used this build to further refine our aesthetic communication and to explore the device’s experiential properties. While in the previous iteration we had used materials and components that were readily available, this time we made a conscious effort to develop an aesthetic that would dramatize the experience and assist users in reading the device. We acquired a literal black box to house our electronics, and added emphasis to the button by incorporating a larger red pushbutton that we placed in the visual center of the object. We hoped that by increasing the fidelity of the device’s fabrication and improving the tactile experience, users would be more easily able to read the functionality - the button, microphone, and camera were clearly the centerpiece of the device. We made a purposeful choice to exclude any social media iconography from the aesthetic; this facet of the experience was meant to be black-boxed until the ‘reveal’ phase of the experience.



## Feedback

In total we tested the third iteration prototype with 12 people. Three of these were cultural probes participants; the remaining nine included our capstone advisors, friends, significant others, and coworkers.

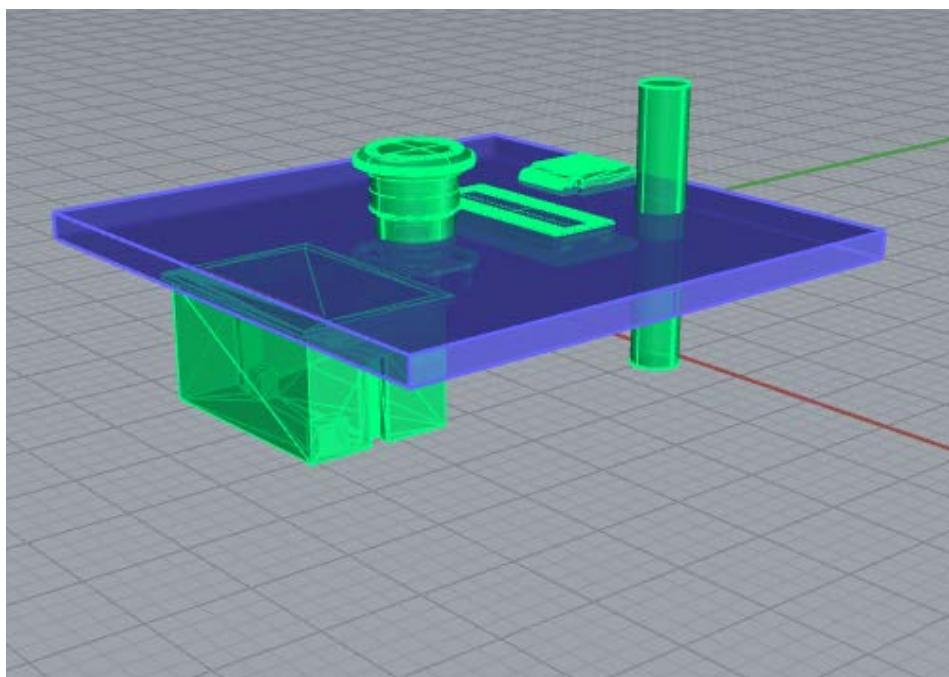
Unsurprisingly, many of the same usability issues persisted from the previous iteration - participants remarked that although it was clear that the device was doing something after they pushed the button, it wasn't clear exactly what was happening.

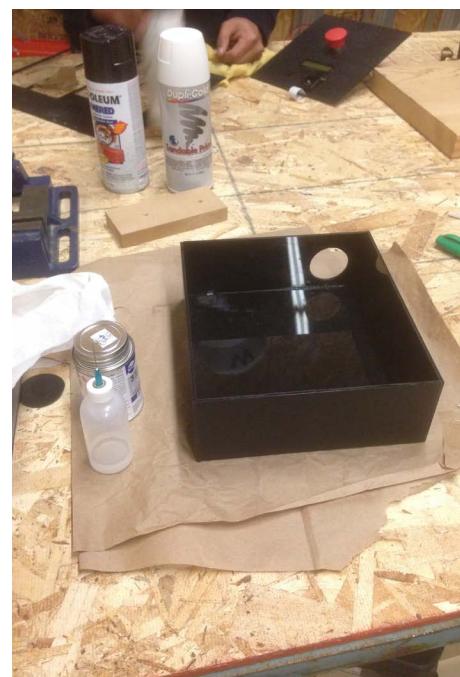
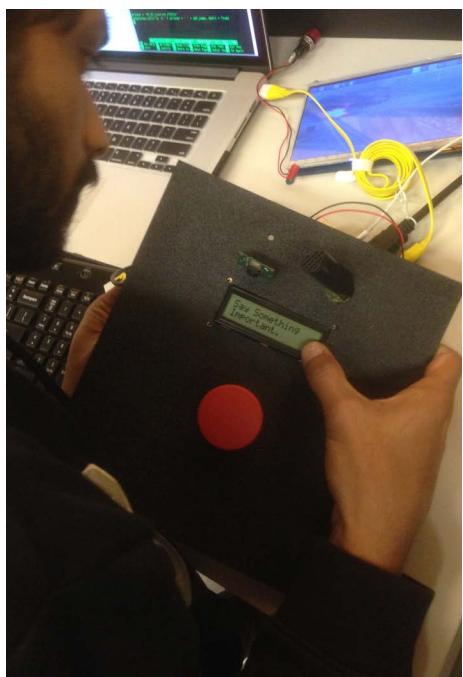
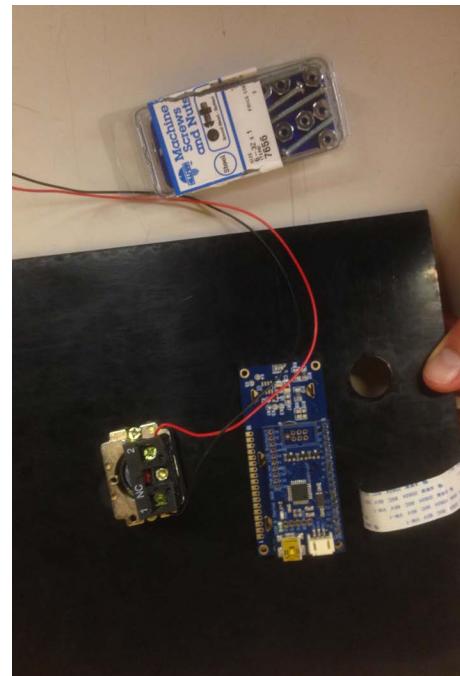
Another common theme in this round of testing was that participants did not know what to say to the device. Many participants' first use of the device was similar to a sound check - "testing one, two, three" and "is this thing on," were common utterances. Though the updated aesthetic and tactile experience clearly communicated what was to be done (push the button and talk) context as to why to do so was still lacking. We provided direction to participants in subsequent attempts, and this led to a more fluid and natural interaction.

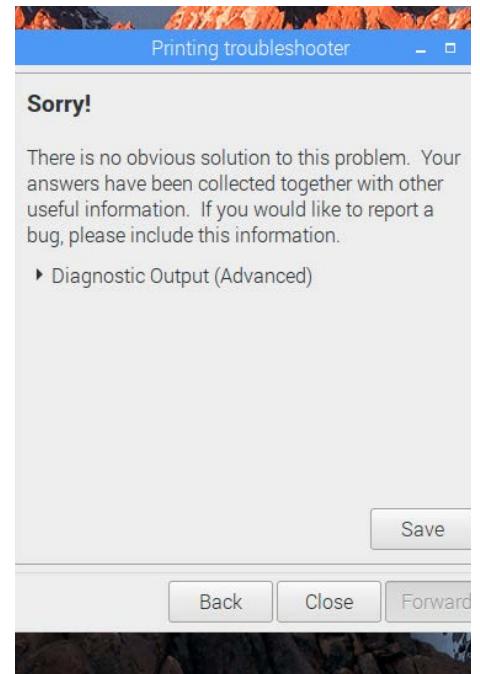
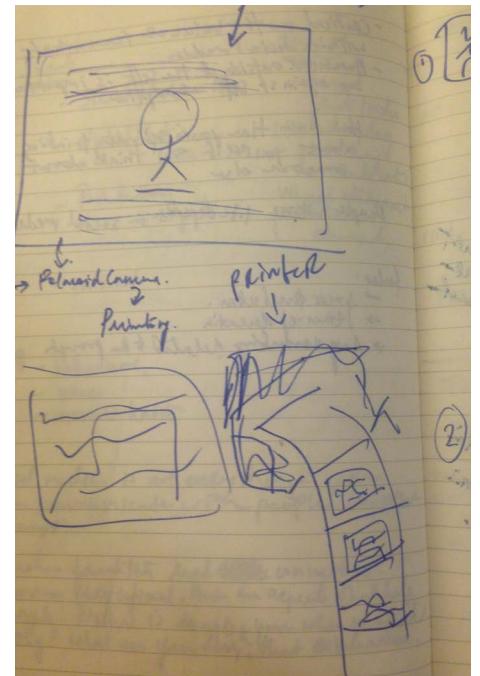
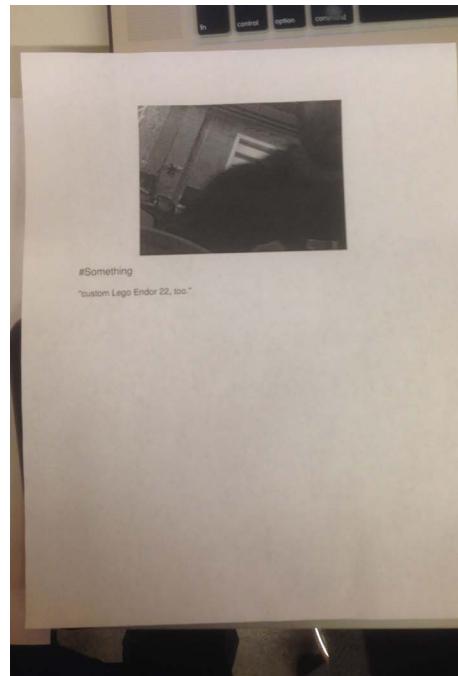
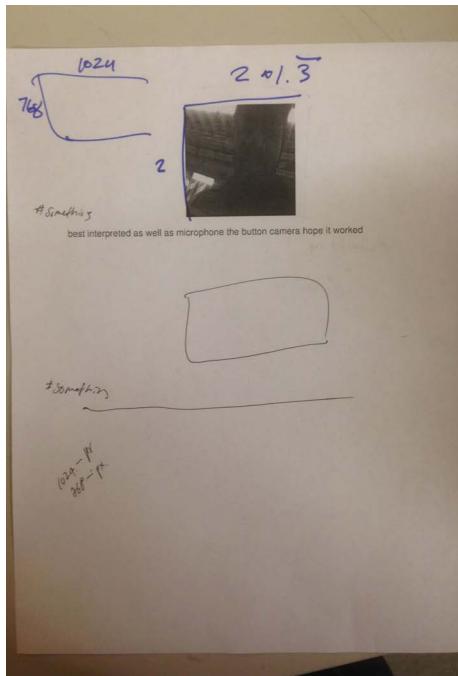
Though much of the feedback we received on the third iteration mirrored that from the previous prototype, the higher level of fidelity enabled participants to comment more insightfully on how we might further develop the experience. Ideas ranged from incorporating prompts from our cultural probes into the prototype to giving the device itself a character that provoked reflection. One of the biggest insights we received at this point was that in addition to lacking a reflective context, the experience felt incomplete because there was no sense of closure. Furthermore, after interacting with the device once there was nothing new to experience and no reason to return to it either physically or mentally.

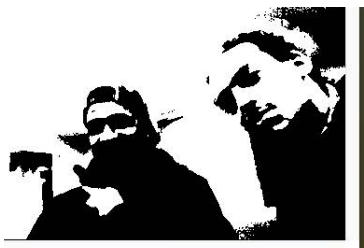
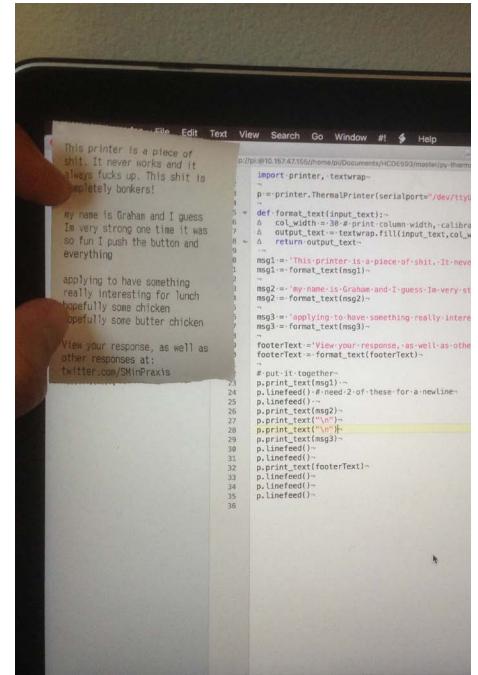
# *Final Prototype*

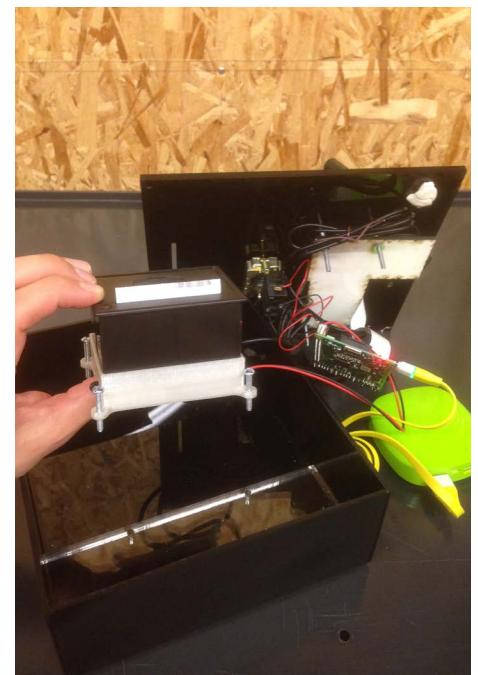
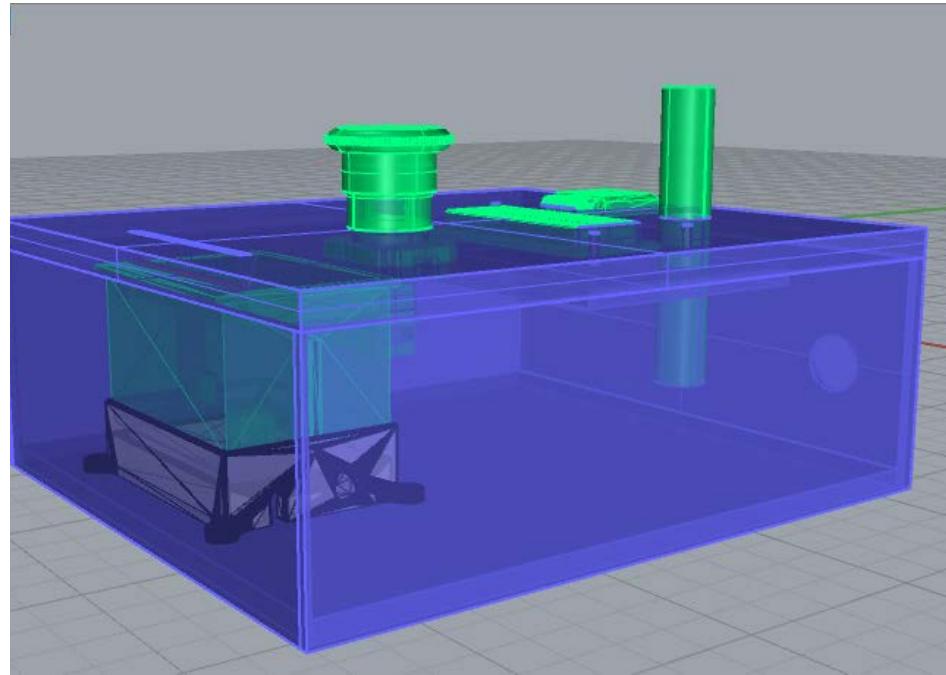
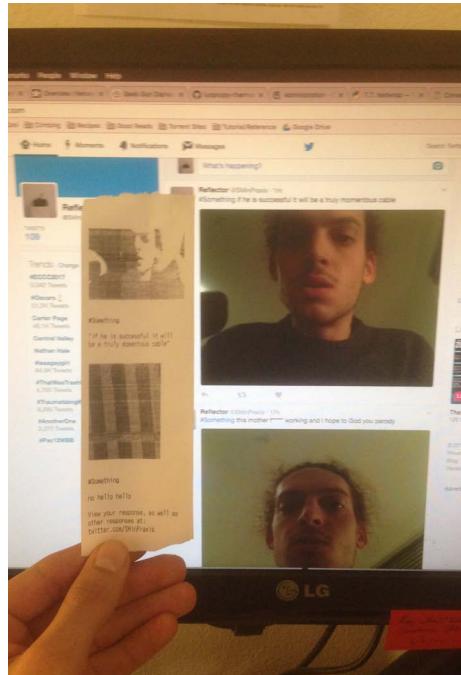












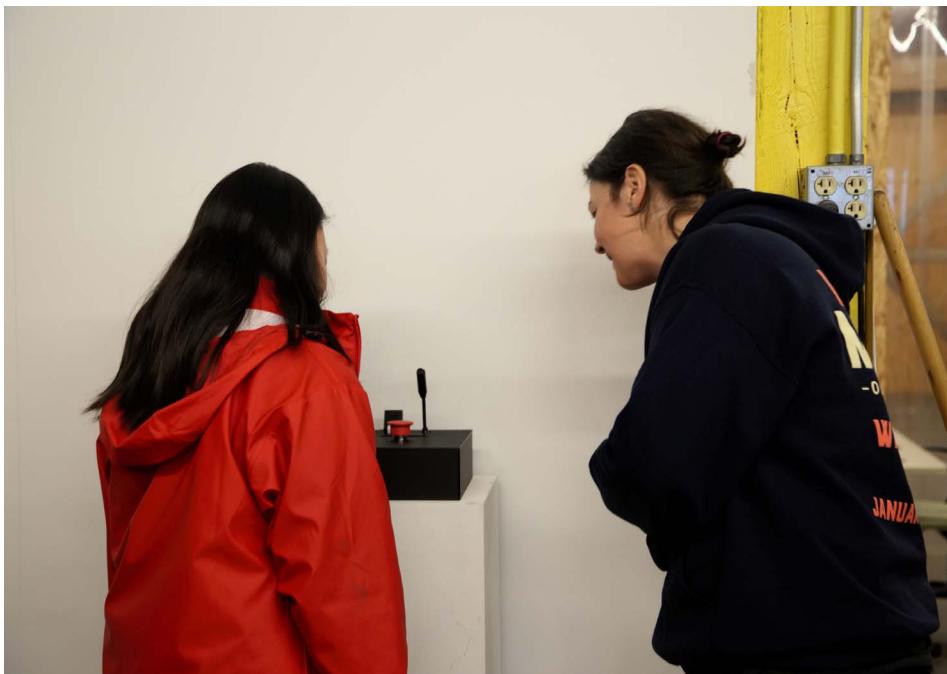


## Exhibition

This work was exhibited temporarily in the Ballard Fab Lab gallery space before an audience of 12 student artists. It has also been shown guerilla style in Sieg Hall and privately in the residences and workplaces of our collaborative partners. It was exhibited again during the HCDE MS capstone poster presentation to a wider audience. At the time of this writing, future exhibitions are still pending.

## Evaluation

At the outset of this project we set the goal to create a physically embodied experience that encourages audience members who are active social media users to critically examine their own habits within today's self-broadcasting culture. Through evaluating our prototypes during the iteration process we unpacked this goal into subcomponent parts and developed criteria that we used to evaluate the outcome of our final installation. To conduct our evaluation we interviewed collaborative partners and guerilla participants about their experiences with our final prototype, and analyzed the content of The Reflector's Twitter account - @SMinPraxis.



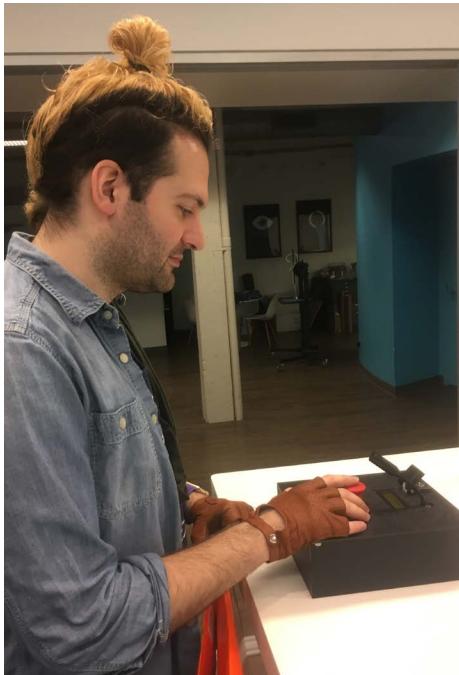
## Content Area

- Does the installation engage with the subject of self-broadcasting through social media?

Though it was not immediately obvious, our guerilla evaluation participants understood and experienced The Reflector's connection to social media. Multiple participants read their thermal printouts and opened the Twitter page on their computers and phones. Their reactions to this revelation varied from surprise to shock, though the most common response was "that's so cool." Our collaborative partners are excluded from this evaluation criteria; they were already aware that this project was about social media use.

## Engagement

- Do audience members use the device repeatedly?
- Are audience members taking the thermal printouts?
- Are audience members engaging with the @SMinPraxis Twitter account by following, retweeting posts, or commenting on posts?



We left the device unattended in the HCDE student lounge for half an hour while eating lunch one day and during this period a passerby pushed the button and spoke to The Reflector. We caught up with him later and he told us that he simply couldn't resist trying it out; one of our interviewees echoed this sentiment: "there's something about this button that makes you want to push it. It just screams push me."

Across our interviews and guerilla exhibitions, participants chose to use The Reflector multiple times (although for the purpose of this evaluation, repeated use during a formal interview or across interviews is excluded). For many of those who experienced imperfect speech-to-text conversions (e.g. "nope my anus to do I work for Amazon in Seattle"), this was in an effort to understand the device's functionality and achieve better translation. Others were more interested in the thermal print-out: one of our interviewees said it was "like a fortune cookie - you don't know what you're going to get." Unexpectedly, taking the print-out was a learned behavior: while most guerilla participants did not think to tear the print-out on their first use, those who had seen this behavior repeated it. One participant even said they were "going to keep it forever." This may have been sarcastic.

Despite multiple exhibitions, we saw limited engagement with the @SMinPraxis Twitter account. One of our guerilla participants mentioned that they were interested in following The Reflector on Twitter, but it seems as though they forgot or chose not to follow through. As of this writing @SMinPraxis has five followers aside from our project advisors. There have been a few replies and retweets of @SMinPraxis otherwise.

## Reflection

- Is evidence of reflection present in the content, replies, and retweets of @SMinPraxis?
- Is there evidence in our interviews with collaborative partners or guerilla participants that the device has prompted reflection?

We believe that The Reflector presents multiple opportunities for a moment of critical reflection to take place: pushing the button and responding to the device, receiving the print-out, viewing the Twitter page, recalling the experience afterwards. Qualitative analysis of the Twitter posts created by The Reflector yielded very little evidence of reflection in the moment of use: most posts were variations on "hello" and "testing." There was one shining exception, when a guerilla participant proclaimed: "The only Zen you find at the top of mountains and visit you bring up there."

Interviews are reflective by nature: giving an interview is a process of recounting your experiences and perspectives for outside consumption. Some participants called their experience with the Reflector "fun" or said that it was "interesting." Others thought that the device would a great photo booth/marketing gimmick at industry conferences. Nevertheless,



#SomethingImportant the only Zen you find at the top of mountains and visit you bring up there



it was clear that the experience of using The Reflector had prompted reflection in a few participants. One of our collaborative partners commented that using the Reflector was “like hitting send on that email you wish you hadn’t written - once it’s said it’s out there,” and expanded with “it’s good for responses in the moment but I don’t think it’s good for reflection.” “I think you’re trying to satisfy two different things that are almost polar opposites - semantically different. In the moment, social media and something more reflective. Those things just don’t seem very compatible in the same box.” Another participant reflected on the thermal print-out: “Even though this piece of paper is a physical object, the piece that exists online is even more permanent to me.”

## Putting the Evaluation Results in Context

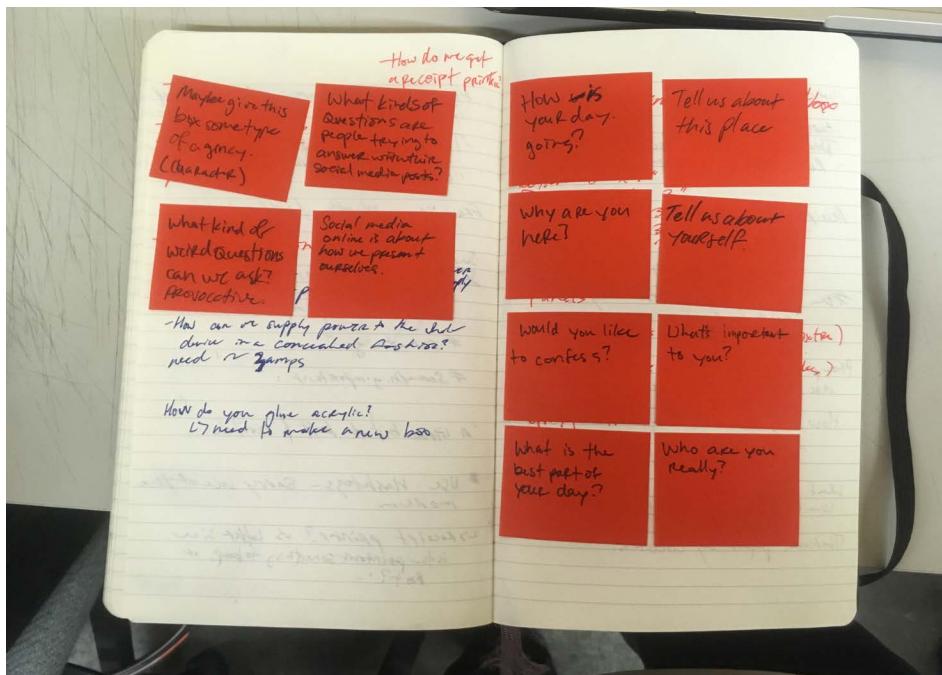
While the results of our evaluation thus far are certainly useful information, their validity is fundamentally limited. We conducted our evaluation sessions in homes, classrooms, prototyping labs, student lounges, and for 20 minutes (in front of a very small audience) in a gallery. A few of our evaluation participants had been involved with our project since its inception; most others we approached spontaneously and only interacted with for a few moments.

Context and framing are paramount for a project such as this. The Reflector is meant to provoke reflection and the transient experiences we have been able to create thus far are simply not conducive to deep thought. Participants who are ‘on the inside’ enter with too much information about the project and too much involvement with its creators - it would be unreasonable to expect them to see the experience with fresh eyes. Moreover, even with our guerilla participants, we had yet to show The Reflector to anyone we didn’t already know.

# Future Work

In a recent meeting, one of our project advisors told us “projects never really end - time does.” Keeping this in mind, here are a few things we would like to continue to develop going forward:

- Iterate on prompts. Perhaps we could make explicit some of the questions we think people are trying to answer when they post to social media: Who are you? What is important to you? What should we know about you? How cool are you? How awesome is your life? Who are your friends? How is your day? What are you thinking of? What's happening in your life?
  - Start from scratch, with only user-generated content. Right now roughly 75% of the posts that have been made are the results of us testing the system. Much of the rest is the result of our participants testing the system. With better prompts and a fresh start, we would expect to see a more powerful experience.
  - Better camera/lighting setup for photos. While we appreciate and intentionally tried to capture candid photos by withholding feedback upon image capture, the current camera setup is such that participants' nostrils tend to be prominently featured. Additionally, the quality of the thermally printed photo output has been variable due to overexposure/inadequate lighting. Presenting The Reflector in a consistent environment would enable us to fine-tune this setup.
  - Show this work in a gallery setting. Future exhibitions are still pending.



Here are a few things we would not like to change:

- The speech to text API. The Google speech to text API is limited in its ability to accurately transcribe speech input, especially when users have an accent, are speaking softly, or there is a lot of background noise. This flaw makes the experience more interesting - somewhere in there is a statement about the folly of blindly relying on a piece of technology to achieve a goal.
  - The experience of using The Reflector is not immediately self-explanatory. We have purposely preserved this sense of interaction friction as a means to put users in an inquisitive mindset.
  - The experience and output are candid, with no opportunity to edit or delete. The element of surprise leads to some very honest moments that we have been fortunate to capture.
  - No GUI.

# Reflections

Since its inception, this project has been about three things: thinking critically about social media culture, expanding our skillsets with new methods, and pushing our creative boundaries. In the course of this project we have done all three.

## Spencer

When we decided to make an installation, I don't think we really knew what we were getting ourselves into. Having gone through it now, I have a much deeper respect and appreciation for creating experiences in three dimensions (along with all of the technology and artifacts that support the experience). In contrast to much of the work I've done previously, this project has been a process of solving the problem of how to best articulate a question. As opposed to the verbal, visual, and sometimes tactile communication of screen based experiences, making The Reflector has challenged us to communicate through material objects, interactive friction, and time. Speaking through an experience is a subtle art, and we've endeavored to create an experience that extends beyond the experience we created. The real impact of interacting with The Reflector isn't likely to happen until hours or even days later. Only time will tell us if we succeeded - although it's likely we will never know.

Through this process I've thought a lot about directionality - was the installation the device, or the experience built around it? Were we pursuing a concept or a piece of technology? It took some time to realize that these were the wrong questions to ask. There is no divorcing the device from the installation. The concept gave rise to the device; it in turn influenced our concept. Perhaps these questions arose from the desire to determine where to best focus our time and effort. What I've learned is that this is a gestalt process - but that the details of each part do matter. Getting the components working in alignment is a true skill.

This undertaking has led me to question many things - my technical skills, creative vision, dedication to this project, and even my life goals. I wouldn't change a thing about the team, or how we approached and executed on this project. But I wish I had known years ago that I was capable of producing this kind of work.

## Vishwas

While working as a software developer, I had to deal with a lot of office politics and long hours in front of a computer working on something that I did not believe in, which made me lose the love for coding. I found solace by spending quality time with the UX team in the company. After having built The Reflector from scratch, I feel like that hate has subsided. When you work on something that you are so deeply invested in, there is a self-fueled push to get it to completion and bring it to life.

Working on this capstone, had helped me better understand where I fit in this ever evolving UX spectrum. I have come to realize that I'm a developer who can understand design and bring them to life and that is where I see myself fit.

Touching & feeling the physical product that closely resembles the initial concepts is very rewarding. There is more to just building softwares. When a custom hardware is built to support the software, it feels more complete. Most often than not, we end up building applications or websites which run through a specific predetermined medium. But you feel more invested if you end up building a custom object to facilitate the abstracted software. You get a holistic picture of how software and hardware work in tandem to help achieve harmony.

People often say that you become based on who you surround yourself with. I feel very happy to be around some of the smarter minds, but more importantly good human beings. Knowledge is not worth if you contain it within yourself. If you are willing to share and teach it, the world benefits of it. This capstone has given me an opportunity to meet people with a similar mind sets and learn new things and how as a person I can become a better and a responsible human being. In the current world people can often get absorbed with their own personal lives, it is important to be able to spare a thought about another individual and provide a lending hand when approached.

There were times where I just started working on aspects of the projects based on what someone suggested on StackOverflow, without fully understanding the inner workings of that piece of technology, which came to bite my sweet behind. I feel that the time constraint was always lingering in my mind, when I was developing a part of the experience, and that retracted me from being a good software engineer. I would probably spend more time understanding the nitty-gritty details of the technology if I were to do it again.

I always felt that the capstone project should be on a topic that you personally believe in and can be extended even beyond the scope of class. I feel solving real life meaningful problems is important and being able to expand your thinking to align to that crucial. It feels great when you get validation from the participants who use the device that you helped create. When they see what you hoped them to see and in turn gives rise to a healthy conversation, is when I realized that the artifact has made an impact and has seeded the thought in their head. It helps reinforce the idea what it is just not the two of us thinking about it, but other are too.

It also helped me acquire new skills such as laser cutting, spray painting, fabrication, product aesthetics. This capstone gave me a glimpse into the world of art and I realized how different it is from design.

I procrastinate a lot and this leads to time management issues. Spencer once told me that I was late 9 out of 10 times we met and he found ways to work around that and was mentally prepared for that. It is something that I have been trying to work on, but have not been very efficient or successful at it.

I would call myself not very competent in articulating my thoughts into words that sounds very compelling. I'm not a big fan of composing mails or typing in general, unless necessary. I would rather have a face to face conversation with a person. This behavior of mine, put a lot of pressure on Spencer's young shoulders to take up the task of generating the content for the reports. I would write up some pointers and Spencer would use that to elaborate and make it sound cohesive. I'm very fortunate to have a team member who realized that writing wasn't my strong suit, and took it upon himself without complaining to get the content written. If there was any provision of hiring someone solely to take up the task of writing up the report, I feel I could have focussed a lot more on the experience.

## Thanks

We would like to thank:

- Morgan Tubby
- Tylex Fox, Ruth Kikin-Gil
- Sahil Anand
- Nikhil Venkatesh
- Kevin Danielson
- Tony Serna
- Collaborative Partners and participants
- Area 01, HCDE Make Lab, DXARTS Fab Lab

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