Final Paper / Deliverables

Stanford Team + The Tech Museum 2018

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Project Purpose

According to a New York Times study conducted in 2017, most people think climate change will harm Americans, but they don't think it will happen to them specifically. Because many people don't see the immediate effects of climate change, or can't recognize its presence in their everyday lives, they think it cannot and will not impact their lives. Something needs to be done to close this psychological distance. While many have attempted to remedy this by sharing facts and figures with the public, a 2015 paper by the Yale Program on Climate Communication concluded that this is not an effective method. Rather, the paper explains, the best way to communicate about climate change is through sharing stories and lived experiences. Our project, titled Community Voices, hopes to do just this - make the issue of climate change more personal, by sharing stories of climate change adaptation, mitigation, and general community resilience from individuals across the Bay Area. Through these stories, we - and our partners at the Tech Museum - not only hope to educate people on existing climate efforts in their area but also to inspire hope and to motivate these people to get involved in climate activism. For our project we collected audio stories from members of different communities about how they have personally been impacted by climate change. The project aims to elevate the stories and lived experiences of individuals and organizations across the Bay Area who are not only feeling the impacts of climate change but adapting to and mitigating these impacts in creative and innovative ways. Through seeing and hearing about climate impacts in their communities, our audience will understand how urgent climate issues have become.

This project will be housed in the Tech Museum of Innovation in San Jose, as part of a larger exhibition called 'Solve for Earth' dedicated to the technologies being developed to combat climate change and its effects on humanity. It will consist of a map of the Bay Area, with a puck that visitors can move around. When the puck goes over certain areas where we collected stories, audio recordings of said stories will play, with pictures to further contextualize the stories. The goal of the exhibit is to convey through storytelling, that climate change is already affecting the lives of local residents.

The Tech Museum of Innovation is an interactive science and technology center located in downtown San Jose. It is a destination for schools, community members, and tourists interested in learning about the innovation capital that is Silicon Valley. Their mission is to inspire people from all communities and backgrounds to become innovators ready to change the world.

We set out with the mission of interviewing a diverse set of individuals. We began by looking at the contacts that our community partners had given us but then we mostly set up our own interviews and connections began to form thereafter. Networking through the first interviewees we had really helped us develop our system of people and organizations to interview. After having collected these interviews we divided up the work of audio editing. We had the goal of producing 30 second - 2 minute audio clips that will be integrated to the

Community Voices map which will display photos and captioning of the audio. We were able to accomplish collecting 11 audio stories that will be given as final deliverables to the Tech Museum.

This project is an opportunity to really engage the public in climate change dialogue and action. By showing visitors how climate change impacts them and their neighbors, we can get people thinking and talking more about climate change. Hopefully, this will encourage more Bay Area residents to get involved in climate activism and inspire civic participation. By hearing the voices of individuals in their communities elevated (especially POC and women), visitors may feel empowered to have their voices heard, and demand accountability and positive climate action from elected officials. This project is part of a larger push to engage people with climate science on a more personal, human level - something that will be very necessary in our fight against climate change. If we want to have cities that are sustainable environmentally, culturally, and socially, we need to focus on stories from all communities and ways of life - we must look beyond quantitative ways of knowing, and engage with knowing through experience, local knowledge, and direct action.

Literature Review

Given the nature of our project, most of our prior readings and research focused on the importance of storytelling, not just for climate change communication, but as a form of knowledge production and distribution. Storytelling is often an extremely effective way of communicating complex ideas and issues in comparison to numbers and graphics since it evokes natural human responses and focuses on emotion as a legitimate means to drive change instead of logic. Given that climate change is a very complex and long-term issue, the Tech Museum wants to focus on audio stories to try and convince its audience that climate change is here and that viable options to combat it exists.

In addition to many graphs created by the New York Times and the Yale Program on Climate Change Communication, a great resource to our project was the handbook, Listening to the City: Community Research and Action through Sound and Story, which promotes unconventional and aesthetic inquiry and engagement with the public. The handbook stresses the importance and relevance of sound as a legitimate methodology in particular to maps: “Maps that incorporate sounds present an alternative and participatory method for collecting, sharing and analyzing information about a community’s resources. Audio maps are enriched by the assignment of sounds to symbolize data points. They have the potential to facilitate the delivery of data by activating new neural pathways that solidify memory, and like a new language, illuminate nuances that might be otherwise overlooked.” In more depth, the visual-audio map would help to identify community needs, support community-change making, to understand how different phenomena in a place interact with one another, and finally assess whether the distribution of community resources is equitable. Although we didn’t get to interview an exhaustive list of community members, especially low-income communities of color that will disproportionately be affected by climate change, we hope that our work will help future groups and the Tech Museum create a representative map of those impacted and adapting to climate change in the Bay Area.

Because of the research that encourages audio stories as a way to communicate

information, we wanted to use storytelling techniques to produce deliverables that are accessible to a wide variety of audiences. We relied on past experiences and tips from Danny and Michelle to craft the interviews and edit the files into effective stories. The goal was to convey the severity of climate change in a hopeful and inspiring way.

Despite the insight the provided research articles gave us, the process of reaching out to organizations, recording interviews, and editing stories was a process of trial-and-error. Along the way, we became more comfortable with each of the tasks and found methods that worked best for us. Most importantly, we learned how to adapt to different situations and to the individuals or organizations with which we worked. During every step of the process, we let them show us what they want known and what they think is important. Ultimately, we attempted to incorporate knowledge gained from readings about communication, climate change, and ethics into our project.

Methodology

The start of this project consisted of our group meeting with Danny and Michelle at the Tech Museum in San Jose. We discussed the goal of this project, and the steps we would take over the ten week quarter to reach our goal. The general outline of the project - reaching out to organizations, companies, individuals - that we were interested in reaching out to for climate change impact or resilience stories - was predetermined by the Tech Museum.

Our first step was establishing a great pool of contacts. We began this project with a list of contacts provided by The Tech Museum - organizations and companies that they had preexisting relationships with - and added many others to the list through our own research on urban resilience and sustainability efforts in the Bay Area. Our next step was creating an email template to send to those on the list, and actually sending out the emails. We continued to send these emails throughout most of the quarter as we discovered more and more potential stories. We set up meetings with those who replied, and sent follow up emails and/or called those who did not reply on the phone. Some contacts connected us with other individuals they knew, which proved to be extremely helpful, as many of those we initially emailed and called did not reply.

The complete list of those we collected stories from is found below:

<u>Anja Scholze</u>

Anja works at the San Jose Tech Museum, and designs biotech experiences at the museum. Anja designed the “BioTinkering Lab” at the museum which is a hands-on exhibit that educates visitors on the process of turning mushroom mycelium and any waste materials from agriculture into usable building bricks that could one day replace types of plastics that commonly pollute our earth.

<u>Mike Balma</u>

Mike works at SunWork which is a company dedicated to making solar panels affordable for

more folks. SunWork trains volunteers, and has them help install solar panels as a way to decrease the cost.

Mike is also a board member of Carbon-Free Mountain View which is a board of climate and sustainability educated activists who help set sustainability goals for their community in an attempt to make Mountain View the most environmentally-aware and sustainable city in the Bay Area.

Violet Saena

Violet works at Acterra, a nonprofit based in Palo Alto which helps bring communities together to address current environmental problems. Acterra staff provide environmental education that uplifts and empowers communities focusing on those that may be disadvantaged. Violet is responsible for linking organizations together to help vulnerable communities prepare for climate change impacts.

Jessian Choy

Jessian Choy runs a blog called Fun and Draconian where she writes about fun ways to live a greener lifestyle. Jessian also manages SF Approved, a site of green products she helped create while working for San Francisco Department of Environment. Lastly, Jessian serves on the board of the Earth Island Institute, which has been the organizing power for more than 200 grassroots environmental action projects and is currently overseeing a network of more than 75 projects.

Zoe Siegel

Zoe is a program manager at Resilient by Design Bay Area, a year long design competition featuring innovative projects aimed at tackling environmental problems the Bay Area will face in the coming years, such as sea level rise.

Josie Dominguez-Chand

Josie teaches about recycling and other sustainability efforts to schools in San Francisco. Josie spoke to us about engaging younger generations in the climate conversation, as well as how important it is to involve women of color in environmental education as well as the overall movement. Josie also spoke powerfully on her experience as a sustainability educator and how it has allowed her to reflect thoughtfully on her ancestry.

Jim Castro

We met Jim at the weekly farmer's market in Tresidder Union on campus. Jim sells honey at the farmer's market. Jim talked with us about how climate change is impacting his life and property, but interestingly did not make any connection between climate change and his hives.

Deborah Gordon

Deborah is a Biology Professor at Stanford, and she also works with Jasper Ridge Biological Preserve. Deborah spoke to us about her studies on an invasive species of Argentine Ant, in particular, how this species is affected by drought, and how environmental conditions shape its behavior in Jasper Ridge.

Laura Martinez

Laura is a board member at Canopy, a nonprofit organization whose mission is to plant and care for trees in urban communities who need them most, often working with communities in East Palo Alto.

Arnav Ravi Mariwala

Spoke about how we can use natural ecosystems to minimize the effects of climate change, specifically sea level rise and flooding.

Shawn Rosen Moss

Shawn is an experienced climate and social activist who lives in San Francisco, but is originally from southern Louisiana. Shawn spoke to us about her experience visiting New Orleans after hurricane Katrina - helping schools and families amidst the wreckage, and just how devastating is was to witness so many families suffering. Shawn spoke about the importance of community action and community resilience after a disaster like hurricane Katrina.

Some of the individuals listed above work for more than one nonprofit or company, and so we were able to collect a few stories from a select few of the individuals. The interviews were spread out throughout the quarter, and we used public transportation to get to most of the locations. After we collected the stories listed above, we edited them using Hindenburg editing software, and sent the stories back to those we interviewed in order to get their approval.

We worked on this project knowing that our goal was not to create a finished product, but to create a pool of stories and information for the Tech Museum to use along the way as they finish this project and the wider museum exhibit. To provide a fuller picture of Bay Area climate impact and resilience, we believe that individual community members should be interviewed as well in order to create a well-rounded conversation of climate change.

Conclusion: Next Steps

The stories we collected were super insightful for us as students learning about sustainability and will hopefully be as informative to the tech museum visitors. Although some stories were about the impact of climate change on specific populations, the majority of the stories continue to be from perspectives of business leaders--whether that be a nonprofit or corporation. These stories share personal insights but not enough to specify and create

connections that museum visitors need. As has been mentioned above, the majority of Americans believe in climate change but cannot personalize the impacts that will occur to them. The map having a moveable puck helps reduce this disconnect, however, stories that are more reflective of average citizens experiences will help reduce this disconnect even more. We recommend continuing to work with the connects we began to establish, especially the nonprofits, but to continue to expand stories, we would suggest asking to speak to the average citizens that these nonprofits collaborate or provide services for. There need to be voices of people of color, low-income populations, immigrant groups, and other marginalized identities because these are the groups that will be hit in the most extreme ways for climate change. Another possibility for reaching out to more everyday peoples would be to research what events have been occuring in the Bay Area, for example flooding, and then target that specific area. Once the team enters this space, we believe it would be more effective to ask residents about their experiences with the flooding and stray away from mentioning the words “climate change.” The student can draw the bridge that connects increased floods to climate change without shutting out the speaker’s story because of how people cannot familiarize themselves with climate change and it is now becoming a political buzzword. At the end of our project, we also discussed that another effective and qualitative way to reach out to broader ranges of people would be to give out a survey to residents of the Bay Area. This survey would consist of questions asking if residents have seen increased wildfires, a reduction of green spaces, etc. Questions that will ultimately display the data of what types of climate change impacts are being held within the Bay. These questions would aid in targeting an area to interview and also potentially facilitate the interview process because the survey would have the option to leave personal contact information at the end in order for the students to follow up and schedule an interview. A resource that will be crucial to the ability to reach out to a broader audience is an increased budget for travel. Our group had extensive travel because of the nature of being flexible to the people we were interviewing.