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Capstone Projects

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Climate Stories from Generations of Changemakers

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Climate Stories From Generations of Changemakers



Photo by Nicky Rosenberg | Scripps Pier

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Scripps Institution of Oceanography, UC San Diego

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UC San Diego



Capstone Report

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Abstract

The impact of human-induced climate change poses a significant danger to both the natural environment and societies worldwide. Despite being widely acknowledged, the situation persists and continues to deteriorate. Communicating this issue beyond the scientific community is a complex and difficult endeavor. Climate change is unfolding on a time scale that is difficult for humans to grasp and comprehend. My Capstone project is an example of using storytelling, rather than scientific results, to create a bridge that connects people to the world of climate change science and those who dedicate themselves to its pursuit. Storytelling has the power to invoke emotions, increase knowledge, and inspire action. It serves as a vital method of passing down wisdom from one generation to the next. By embracing storytelling across generations, we can preserve a baseline of what is considered normal and prevent it from shifting. My short film, "Climate Stories From Generations of Changemakers", shares the personal stories and emotions of young students and senior professors at the Scripps Institution of Oceanography, whose work is highly impacted by climate change. Through a series of interviews and conversations, the film offers glimpses into the life stories of these changemakers, showcasing their actions and hoping to inspire others to take action as well. Recognizing that motivation and ownership are crucial in engaging the public with science, this project aims to spark a sense of curiosity and empowerment among viewers.

Backstory

The idea for this project emerged out of a transformative period in my life before coming to graduate school. I resided in a retirement community in Florida during my late twenties, surrounded by individuals over the age of 65. I spent a majority of my time talking to them and listening to their stories. For example, a women's weekly card group shared stories with me of what it was like to be my age in a very different world. During this experience, I discovered that each narrative not only revealed their personal lives but also contributed to a collective tapestry of human experiences, reshaping my understanding of history.

Shortly after that experience, I came to the Scripps Institution of Oceanography, where a long history of groundbreaking scientific discoveries has taken place. My program introduced us to experts from a wide variety of scientific disciplines, all of which had the same underlying message that climate change is the biggest problem we are facing. Immersed in this environment, I was inspired and motivated by those around me, and I became deeply curious about their

personal journeys, thoughts, and emotions on climate change. The convergence of these experiences has propelled the creation of this Capstone project.

Problem Statement

On June 5, 2023, the record was broken for the highest level of carbon dioxide measured in the atmosphere at 424 ppm.¹ This shows that, even with the advances being made in policy and technology around the world, we are still experiencing an increase in the severity of climate change. Using scientific data and results to explain the impact of climate change has proven to have a minor effect on the public's concern about climate change.² Communicating the urgency of the issue, while instilling hope and empowering individuals to take action, is a delicate balance that needs to be achieved in order to close this "action gap."³ Integrating storytelling into science communication offers an alternative approach that enables a fresh understanding of the intricate challenges associated with climate change.⁴

Narratives and storytelling has been an essential part of human communication and culture.⁵ Narratives provide structure, evoke emotional responses, and expand understanding around complex topics by creating relatable contexts. It is believed that the human brain processes narratives differently than scientific information, with studies showing that humans are more efficient at this kind of processing.⁶

¹ "Broken Record: Atmospheric Carbon Dioxide Levels Jump Again." *National Oceanic and Atmospheric Administration*, www.noaa.gov/news-release/broken-record-atmospheric-carbon-dioxide-levels-jump-again#:~:text=Annual%20increase%20in%20Keeling%20Curve%20peak%20is%20one%20of%20the%20largest%20on%20record&text=UPDATED%3A%20June%205%2C%202023.,%22424%20parts%20per%20million.%22. Accessed 11 June 2023.

² Brulle, Robert J., et al. "Shifting Public Opinion on Climate Change: An Empirical Assessment of Factors Influencing Concern over Climate Change in the U.S., 2002–2010." *Climatic Change*, vol. 114, no. 2, 2012, pp. 169–88, <https://doi.org/10.1007/s10584-012-0403-y>.

³ Bushell, Simon, et al. "Strategic Narratives in Climate Change: Towards a Unifying Narrative to Address The Action Gap on Climate Change." *Energy Research & Social Science*, vol. 28, 2017, pp. 39–49, <https://doi.org/10.1016/j.erss.2017.04.001>.

⁴ Bayer, Skylar, and Annaliese Hettinger. "Storytelling: A Natural Tool to Weave the Threads of Science and Community Together." *The Bulletin of the Ecological Society of America*, vol. 100, no. 2, 2019, <https://doi.org/10.1002/bes2.1542>.

⁵ Garcia-Pelegri, Elias, et al. "The Ape That Lived to Tell the Tale. The Evolution of the Art of Storytelling and Its Relationship to Mental Time Travel and Theory of Mind." *Frontiers in Psychology*, vol. 12, 2021, <https://doi.org/10.3389/fpsyg.2021.755783>.

⁶ Dahlstrom, Michael F. "Using Narratives and Storytelling to Communicate Science with Nonexpert Audiences." *Proceedings of the National Academy of Sciences*, vol. 111, no. supplement_4, 2014, pp. 13614–13620, <https://doi.org/10.1073/pnas.1320645111>.

Storytelling also serves as a way to pass knowledge from one generation to the next, a practice highly valued in indigenous culture.⁷ The shifting baseline concept in science describes how each generation's perception of "normal" conditions is adjusted based on their limited historical knowledge, leading to underestimation of long-term environmental changes. It emphasizes the need to consider historical data for accurate assessment and addressing of environmental issues.⁸ Merging this concept with the art of storytelling, I believe that preserving the stories of the oldest living generation can help stop the baseline from shifting so that future generations understand the historical context of climate change.

Project Objectives & Deliverable

There are three main concepts I explore in my short film deliverable; the power of a person's story, scientists as humans, and stories across generations. The film, spanning five minutes, features six subjects consisting of two retired professors and four young students. Its overarching goal is to capture the diverse stories and profound insights of the scientists and conservationists at Scripps, spanning multiple generations. By doing so, I have constructed a narrative that showcases the collective wisdom and transformative impact of these exceptional individuals while adding to the discourse on climate change. It is my hope that their vulnerability, honesty, and stories can create an emotional response and even inspire hope and action in those that watch the film.

Link to Film: <https://www.youtube.com/watch?v=a-ls4vTG5d0>

Methodology

Preproduction: I began the process of contacting students and senior professors at the beginning of Spring quarter. I wanted to allow enough time to meet with people more than once in order to build a relationship and comfort around discussing difficult topics. I conducted many initial, informal, one-hour interviews with the goal of casting my final subjects for the film. I did not film or record during this stage, I simply used pen and paper to take notes while I asked questions. The main themes discussed were about the subject's childhood and upbringing, role models, their journey to Scripps, and their experiences with climate

⁷ Iseke, Judy. "Indigenous Storytelling as Research." *International Review of Qualitative Research*, vol. 6, no. 4, 2013, pp. 559–77. *JSTOR*, <https://doi.org/10.1525/irqr.2013.6.4.559>. Accessed 15 June 2023.

⁸ Pauly, Daniel. "Anecdotes and the Shifting Baseline Syndrome of Fisheries." *Trends in Ecology & Evolution (Amsterdam)*, vol. 10, no. 10, 1995, pp. 430–430, [https://doi.org/10.1016/S0169-5347\(00\)89171-5](https://doi.org/10.1016/S0169-5347(00)89171-5).

change and how it has impacted their work, thoughts, and feelings.

Production: I narrowed down my list to eight subjects by the end of Spring quarter based on their initial interviews, schedules, and willingness to be filmed. I had all subjects sign an appearance agreement before being recorded. Then, I set up time with each subject to do a formal, filmed interview, as well as a time to shoot b-roll footage. I spent the month of April and beginning of May filming my subjects and gathering b-roll footage.

Post Production: In May, I began editing down the interviews to the best clips, building sequences with different layers of story. This process happened very organically, where I spent weeks immersing myself in the content I gathered, looking for threads to weave and connections that made sense. By June, I created a cohesive edit that is five minutes long and showcases six subjects.

Conclusion

Following the screening of the film to both a live audience and online community, I have received overwhelmingly positive feedback. The viewers expressed experiencing emotional responses, gaining new insights, and feeling inspired to take action. There has been a significant level of interest from the audience, as they expressed a desire to stay engaged and follow the progression of this project. Beyond graduation, my intention is to continue this project by expanding the existing short film into a more extensive version. This entails reaching out to additional communities, conducting a broader range of interviews, and circulate the film to the public through various online platforms and events. The Capstone project serves as the foundation, offering the necessary structure to delve deeper into the concept and create a more comprehensive film.

Communicating climate change is crucial given the urgent need for global action to mitigate its impacts. Effective communication plays a pivotal role in raising awareness, mobilizing public support, and driving meaningful change at individual, societal, and policy levels. As Patrícia Rendall Rocha says in the film, "It's not climate change. It's climate changed. Period."