I Felt an Earthquake Today

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ABSTRACT

This project attempts to explore how people consume and react to news of a devastating natural disaster. It began as an exploration in visualizing data in a more humanistic manner. Rather than merely reading facts and understanding data points, this project allows users to connect to the people and emotions involved in news stories. A number of design prototypes were created to test how data can evoke emotional resonance. The current iteration is represented as a web-based interface, which provides users with two possible pathways for interaction. These pathways engage users and connect them to important, earthquake-related content.

Keywords

Data visualization, interface design, user experience design, earthquakes

INTRODUCTION

Applications like Pulse News Reader [1] and Newsmap [2] excel at delivering news in an easily digestible manner, by highlighting trending headlines and allowing users to read content that is relevant to them. Where they often lack, however, is in emotionally connecting users to the content. Because technology has densely connected the world, we are constantly bombarded with news and information. Thus, every local crisis becomes a global crisis. The inter-connectivity we experience makes us feel more responsible for others' problems because we are made aware of these problems. We are bombarded with information and we can no longer feign ignorance. Inspired by the 11 March 2011 Tahoku earthquake and tsunami, this project attempts to connect viewers to their media consumption of natural disasters.

RELATED WORKS

Many projects served as inspiration and precedents for this project. *Hope/Crisis - NYT Word Frequency, 1981-2010* by Jer Thorpe [3] is a data visualization of the frequency of the words "hope" and "crisis" in the New York Times from 1981 to 2010. The visualization reads between the lines of a traditional media outlet and translates its content into a graph of a country's emotions. Marcos Weskamp's Newsmap.jp [2] successfully visualizes the hierarchy of aggregated popular web media content. The intersection of these two manifestations is where this project attempts to live.

Other projects of note are Paul May's *From Over Here* [4], a data visualization of news about Ireland from an American perspective; *Who We Pay* for [5] by Jeanna Hamilton, Nidhi Malhotra, and Tamara Evnin, which showcases the people who contribute to and reap the benefits of US taxes; and R. Luke Dubois's *Hindsight Is Always 2020* [6], a visualization of the history of US State of The Union Address and its content. Each of these projects inspired the content and design choices of this project.

METHODS

This section will explain the process I undertook in developing this project.

Strategy

Inspired by the 11 March 2011 Tahoku earthquake and tsunami, this project began as an exercise in how to connect viewers to their media consumption of natural disasters. The Sci Art Sci blog speaks of an earthquake as a "physical sensation" and "spectacle" which entrances victims of actual disasters and users of interpretive art pieces alike [7]. With these thoughts in mind, how would the user experience news of an earthquake? Should the physical shaking of such an event be simulated? Is there another way to represent the shaking, but in such a way that users are experiencing something?

Three possible data feeds were explored to illustrate to "movement" of data regarding earthquakes by creating a sort of social Richter Scale. The New York Times (NYT) Article search API would serve as a representation of "media movement", a Twitter keyword search would serve as a representation of "social movement", and a

seismographic information feed would serve as a representation of the "physical movement." Early iterations attempted to create an experience in which users could "feel" these movements through physical and screen based manifestations.
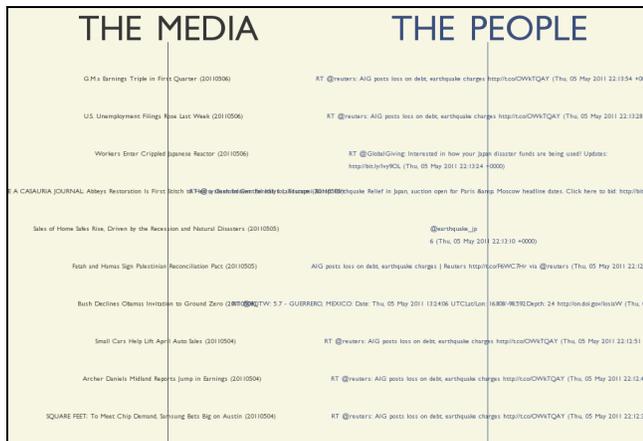

Figure 1 Social Richter Scale Prototype

While this early prototype captured the feeling of physical movement, it was hard to read the text being printed and thus hard for users to connect to or understand the data being represented. Further prototypes explored better visual representation of the data.
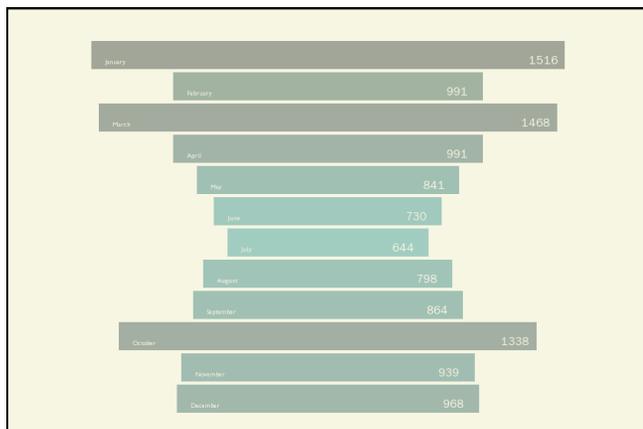

Figure 2 Infographic showing the number of mentions for the word "Earthquake" in the NYT in one year.

Manifestation

After various attempts to create an interactive data visualization, the project was ultimately developed as a web-based interface. The web interface allowed users to interact with dynamic content more seamlessly. Users are shown a static visualization of the number of NYT article mentions of the word "earthquake" since May 2010, compared with the number of article mentions of "earthquake aid" in the same time period. This

juxtaposition was included to give users a sense of the disparity between the media's focus on disaster news and the amount of aid we, as news consumers, contribute to these disasters. Additionally, users are provided with two possible pathways for interaction. Users can decide to learn more about a recent earthquake or about how to give help to those who have recently experienced such a disaster. Twitter tweets are shown, and with each mouse click, a new tweet is displayed to the user, encouraging them to continue reading and clicking. The interaction engages users, connecting them to important content.
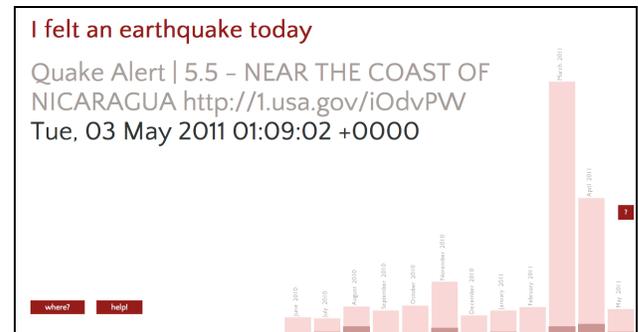

Figure 3 Screenshot of web interface

CONCLUSION

While this project resulted in many experimental prototypes of data visualizations and interfaces, there is still much to be resolved as a final project. The current manifestation does not provide a completely unique user experience or the emotional resonance that the designer intended. I would like to continue exploring how to combine the multiple data sources together to tell one compelling story, instead of piecing together many disconnected stories.

REFERENCES

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