Exploring Global Disparity in Freedom Indicators

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ABSTRACT

This body of research serves as an introductory and exploratory analysis of publicly available data on human morality. It compares the data of different countries on various "freedom indicators." The objective is to offer a data-driven approach for semantically discerning moral ideologies and to analyze how different cultures approach ethical decision-making via collection of social data from forums in which individuals' ideological frameworks and moral stances are discussed.

1 INTRODUCTION

Finding consistent approaches to morality is a challenging feat. The frameworks that are involved with making ethical decisions are large and complex things to wrangle with. In philosophy, deontology is the set of ethical theories that places special emphasis on the relationship between duty and the morality of human actions. One of the biggest challenges remains finding a unanimous framework under which moral actions can be judged. We enter into a contentious grey area when public and private behavior become intermingled. Most places in the world have moved away from legal enforcement of actions that fall out of the public or political sphere.

1.1 Motivation

The problem this project will try to address is moral disagreement. There are often drastic differences in people's mindsets and the way they approach making a moral decision for nearly identical situations. I hope that this visualization will help give perspective. A primary objective is to ensure our technologies serve as positive "forms of life" that make way for building order in the world.

One of the biggest objectives for this work is to create a system and tool that creators of systems (be it technical, physical, what have you) will be able use to test if the system they are creating and possibly implementing in a place other than the place of origin

2 RELATED WORK

While there has not been any related work that looks specifically to the problem that I am interested in, there has been some research from which I can draw inspiration from that touch on the same concepts. ;Along the same lines of the methodology I hope to carry out, Vaughan (2006) presented work on visualizing linguistic and cultural differences using web co-link data. [**?**] will

Moreover, there has been research that looks to similar types of politial nuances that can be found through social data. [7]

Moreover, the European Commission's Pew Research Center's Global Attitudes survey asked 40,117 respondents in 40 countries what they thought about eight topics often discussed as moral issues: extramarital affairs, gambling, homosexuality, abortion, premarital sex, alcohol consumption, divorce, and the use of contraceptives. [2] For each issue, respondents were asked whether this is morally acceptable, morally unacceptable, or not a moral issue. The chart below displays the median responses for each question across the 40 countries.

I also found an infographic which presented data from about 80,000 people from around the world expressed their opinions on what they value most in life and this infographic map shows their No.1 priorities in almost every country in the world.

However develop an eye for when visualizations might mislead us, and discuss ground rules to avoid common mistakes that can cause us to lie with data. [8]

Furthermore, since I was dealing with very human-centered data, it was important to acknowledge the influence of data that might get used to make decisions related to human pursuits, as well as their connections to ethical duties and what obligations we have when it comes to visualizations. [3] Correll, who is actually a researcher at Tableau which is the software I used, speaks in much more depth about the moral components of the design and use of visualizations and identifies some areas of visualization research with ethical dilemmas while proposing some potential moral obligations that those who make such visualizations (like me) might have .

3 DESIGN PROCESS

The first step I will take is creating the dataset I need for the visualizations I aim to produce.

In order to explore the different assets that factor into individual decision-making, data that reveals the

The data I used to drive this investigation was from the World Index of Moral Freedom[1], an international index which ranks one hundred and sixty countries on their performance on five categories of indicators. These categories include religious freedom, bioethical freedom, drugs freedom, sexual freedom, and family and gender freedom.

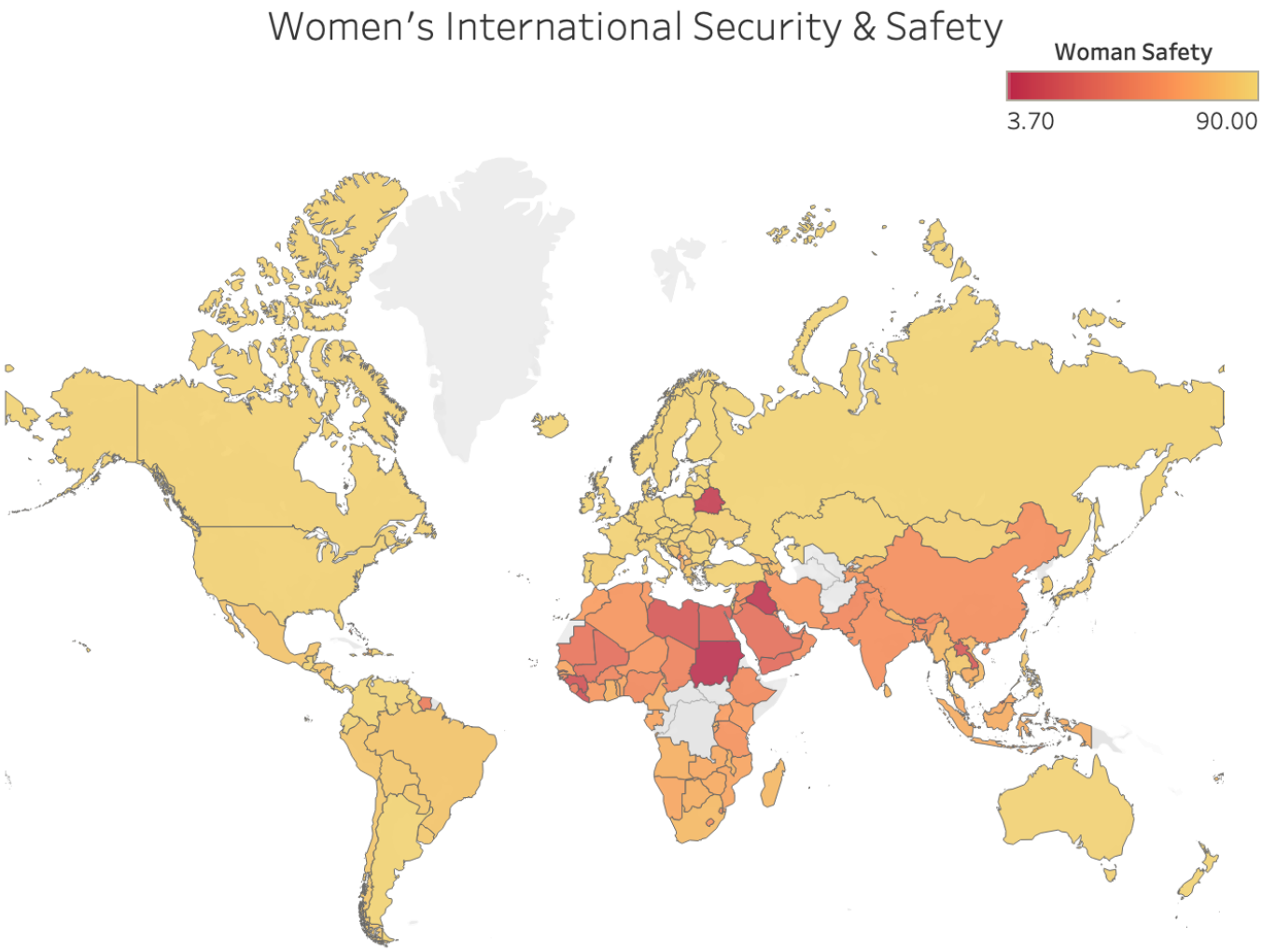
3.1 Design Elements and Considerations

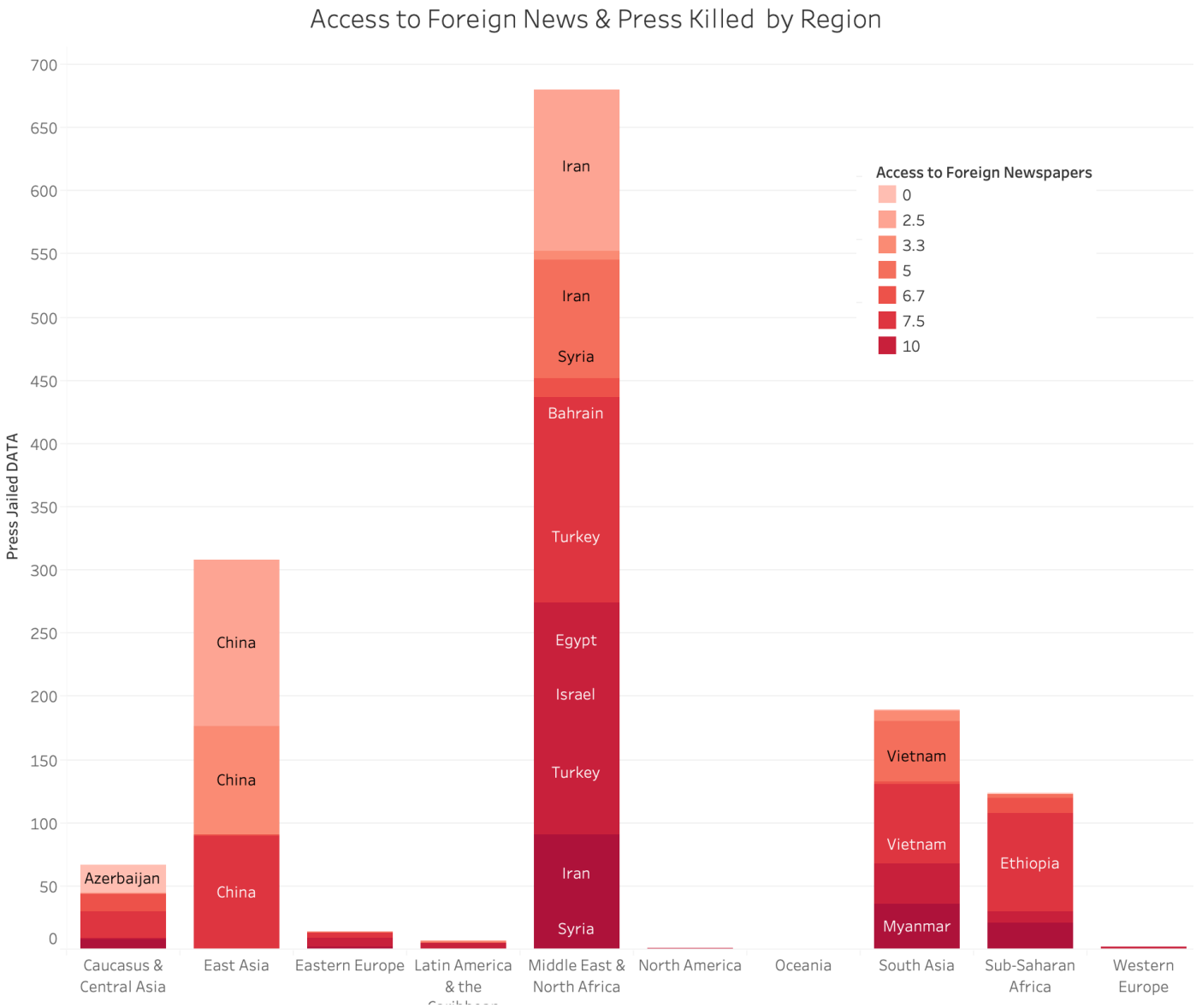
My design process started with sketching, as we learned was a very simple but useful first step for any kind of visualization. [9] Another aspect I tried to focus on was the use of color in my visualizations. This was something that was heavily discussed [5], and so I sought to visualize the information I had in a way that was easily discriminable for any audience. In doing so, I also noticed that Tableau defaults to the colorblind setting often which I thought was quite useful.

One other thing that I tried to take into consideration was the 'inhumanity of technical illustrations.' [4] Dragga and Voss discuss how conventional visualizations of human injuries and fatalities often ignore the misery behind that data, referring to it as "a pitiless depiction of statistical information." I did, as they suggested in their paper, try to adopt a "humanistic ethic of visual communication that considers both the sensitivity and efficiency of their illustrations."

The visualization tasks I considered involved thinking about what the task inputs and outputs were for what I wanted to accomplish. While we learned about typologies that allowed for complex tasks to be expressed as sequences of interdependent simpler tasks, [1], I was not in need of such concise and flexible descriptions. There could have been different approaches, but since I found my tasks to be pretty domain and data-specific, I oriented the process around what I wanted to learn more about and ways to make viewers ask questions about the data.

Women’s International Security & Safety

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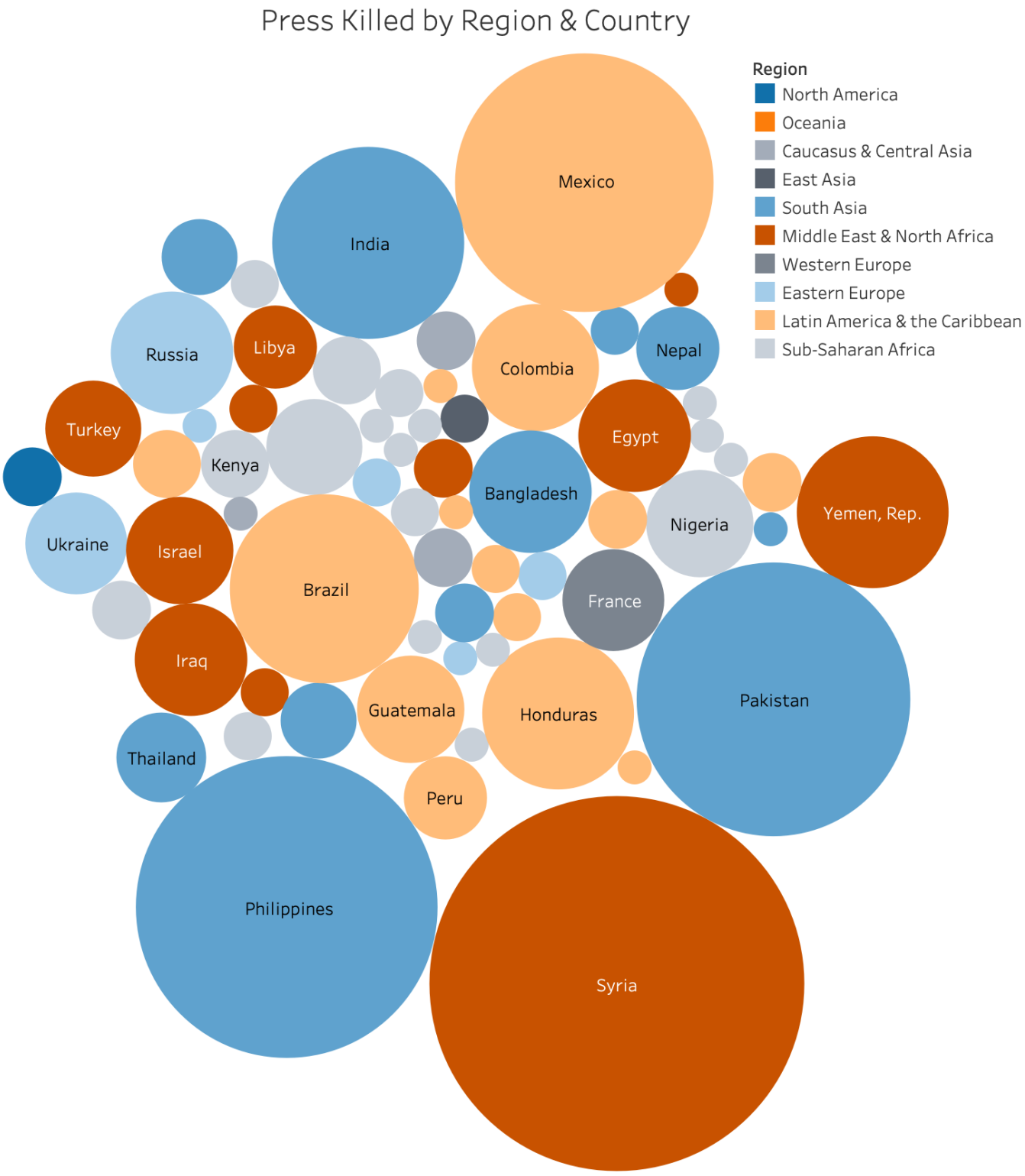

The last part, through integration of a tooltip feature, will allow users to click on a particular country on the map which will present them with some sort of hierarchical display of my findings. Maybe something like this:

4 Discussion

4.1 Women's Security and Safety

After seeing the data on women's security and safety visualized on a world map, my interest was piqued. It seemed really odd to me that there would be a country, like Belarus, nthat was There are currently 181 occupations from which women in Belarus are banned.

Sudan's public morality laws discriminate against women; prescribing their dresscode, limiting their participation in public life, and impose humiliating corporal punishments of lashing/stoning.

Human Rights Watch's [10] visits to two Iraqi prisons revealed conditions that failed to meet international standards on women's detention, including no facilities for child care for the children who are frequently incarcerated with their mothers, poor hygiene, and overcrowding. Iraqi law allows for children under the age of four to remain in prisons with their mothers, but women reported that there have been instances of children remaining in prisons until they are 7-years-old. A prison employee told Human Rights Watch that in one instance a child who was incarcerated with his mother on death row remained in the prison for several weeks after she was executed.

4.2 Limitations

The goals of this project are lofty, and while I do hope it will act as a stepping stone for my future research, it is important to note the limitations. First, the dataset I create is going to have inherent biases in the type of users it samples. Needless to say, the population of Quora users is a very specific demographic For example, India makes up the largest user base at 38%, followed by the United States at 26

Evaluation While evaluation is a large and crucial component for any visualization artifact, it remains one of the biggest limitations for the work that I was able to accomplish for this project.
I am still unsure of my exact method for evaluation, as it poses the age-old problem of how to quantify an inherently qualitative topic. [6] Model cards are short documents accompanying trained machine learning models that provide benchmarked evaluation in a variety of conditions, such as across different cultural, demographic, or phenotypic groups (e.g., race, geographic location, sex, Fitzpatrick skin type [15]) and intersectional groups (e.g., age and race, or sex and Fitzpatrick skin type) that are relevant to the intended application domains

4.3 Future Work

There are still many unanswered questions that I am interested in exploring further, as well as extending the visualizations I've created to address different tasks.

4.3.1 Constructing a Better Dataset

Ideally, I'd like to make possible an approach which leverages social media data, in the form of Quora discussions around my topics of interest, to learn distributed representations of cultures and their ethical perspectives. The end goal is to extend this to create a comprehensive ethical-semantic map. Quora is a question-and-answer website where questions are asked, answered, and edited by Internet users, either factually or in the form of opinions. I will be creating a unique corpus of Quora responses to a wide range of morality-related topics. Since many Quora users include their locations included on their profile which appears with their post, I will be leveraging this data (even though not all respondents' profiles include their location or nationality, some of these questions have over 100-200 answers so I will use as many questions as necessary for creating a sufficiently-sized dataset). Examples of the types of questions I will sample from Quora include:

- What is right and what is wrong in life?
- How do we decide what is moral?
- Is gambling bad?
- What is your opinion on abortion?

While not all respondents' profiles include their location or nationality, some of these questions have over 100 answers so I will use as many questions as necessary for creating a sufficiently-sized dataset. I'll use this data set for getting some basic statistics from the data, what topics occur the most, and possibly the sentiment associated with certain topics

Furthermore, while the current visualizations lack mechanisms for users to interact with the data, through integration of a tooltip feature, users will be given the opportunity to click on a particular country on the map which will present them with some sort of hierarchical display of my findings.

5 Conclusion

This body of work is only the tip of the iceberg in the work that needs to be done to start understanding the different ideological frameworks that go into ethical decision-making worldwide. This is an extremely challenging problem to address The end goal to create a comprehensive ethical-semantic map. This will take come in the form of a world map which will use some sort of ordinal sclae to display what I find to be the salient features of the discussions at play.

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