

# The Poetics of Vaccine Hesitancy and COVID-19 Response in Muslim, Black, and Indigenous Communities

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## Introduction

- As of September, over 100 million Americans are not vaccinated against COVID-19, despite vaccines being readily available and highly encouraged.
- Although pre-pandemic reasons for vaccine hesitancy persist—personal autonomy, bodily purity, and distrust in government and scientists—new shades of hesitancy are developing and proliferating through social media, shaped by the sociopolitical context of the COVID-19 pandemic.
- One example is Medical Freedom, a belief system against mandated public health interventions like masking and vaccinations (Fig. 4 & 5).

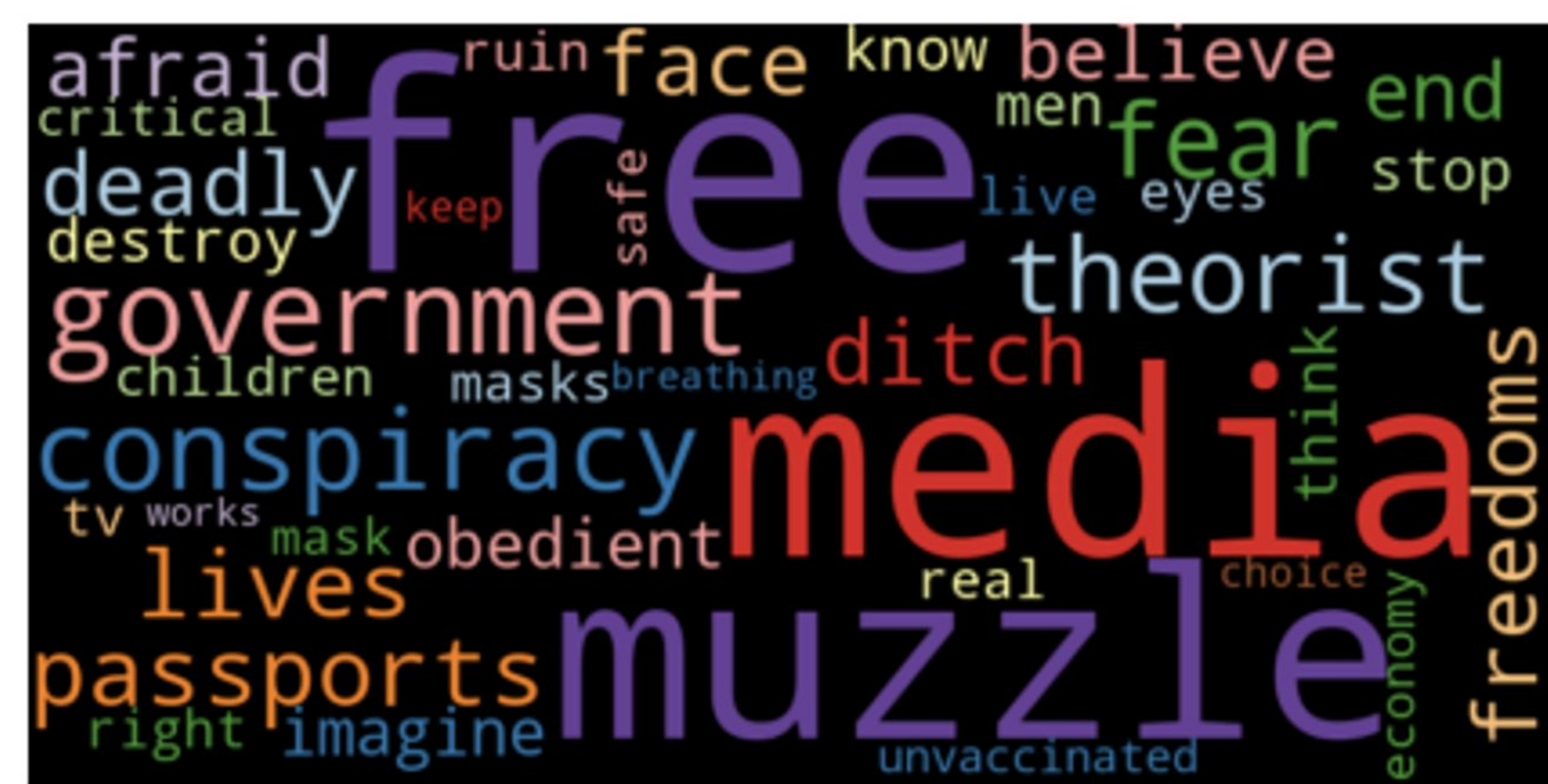


Figure 1 - A word cloud we generated based on the White Rose sticker archive with 100+ vaccine hesitant slogans. This rhetoric reflects the Medical Freedom movement. Find our white paper on Medical Freedom by scanning the QR code!

- We particularly focused on barriers to COVID-19 vaccine uptake in Muslim, Black, and Indigenous communities in the U.S. through the analysis of both scholarly literature around vaccine hesitancy and and first-person sources collected from social media.

## Research Question

How does COVID-19 vaccine hesitancy appear in Indigenous, Black, and Muslim communities?

## Components of Vaccine Hesitancy

1. Complacency - perceived need of vaccines
2. Confidence - trust in vaccines and systems that produce them
3. Convenience - ease of access to vaccines

# Main Takeaways

“I’ll pass, no need to use black people to get other black people to take it.”

- Comment section from a Good Morning America YouTube segment on Black doctors push to establish trust in the Covid-19 vaccine

- Deep mistrust in the government and medical establishment prevents Black Americans from even trusting Black Doctors.

“The Bible says God does not want those whom are impure. I refuse to take this chemical weapon come hell or high water!”

- Comment under CNN titled “British Muslims and Hindus fight vaccine hesitancy”

- Lack of purity in the vaccine throughout different religious communities
- Betrayal of faith if one gets the vaccine

“Modern Day Genocide comes to mind with all of this.”

- Comment under Lummi Nation’s Public Health team Live Q & A Session on Facebook

- Referencing biological warfare & abuse against Native Americans (i.e. smallpox-infected blankets, forced sterilization of Native women)
- Continual colonial violence has created mistrust in federal government and its mass vaccination campaign.

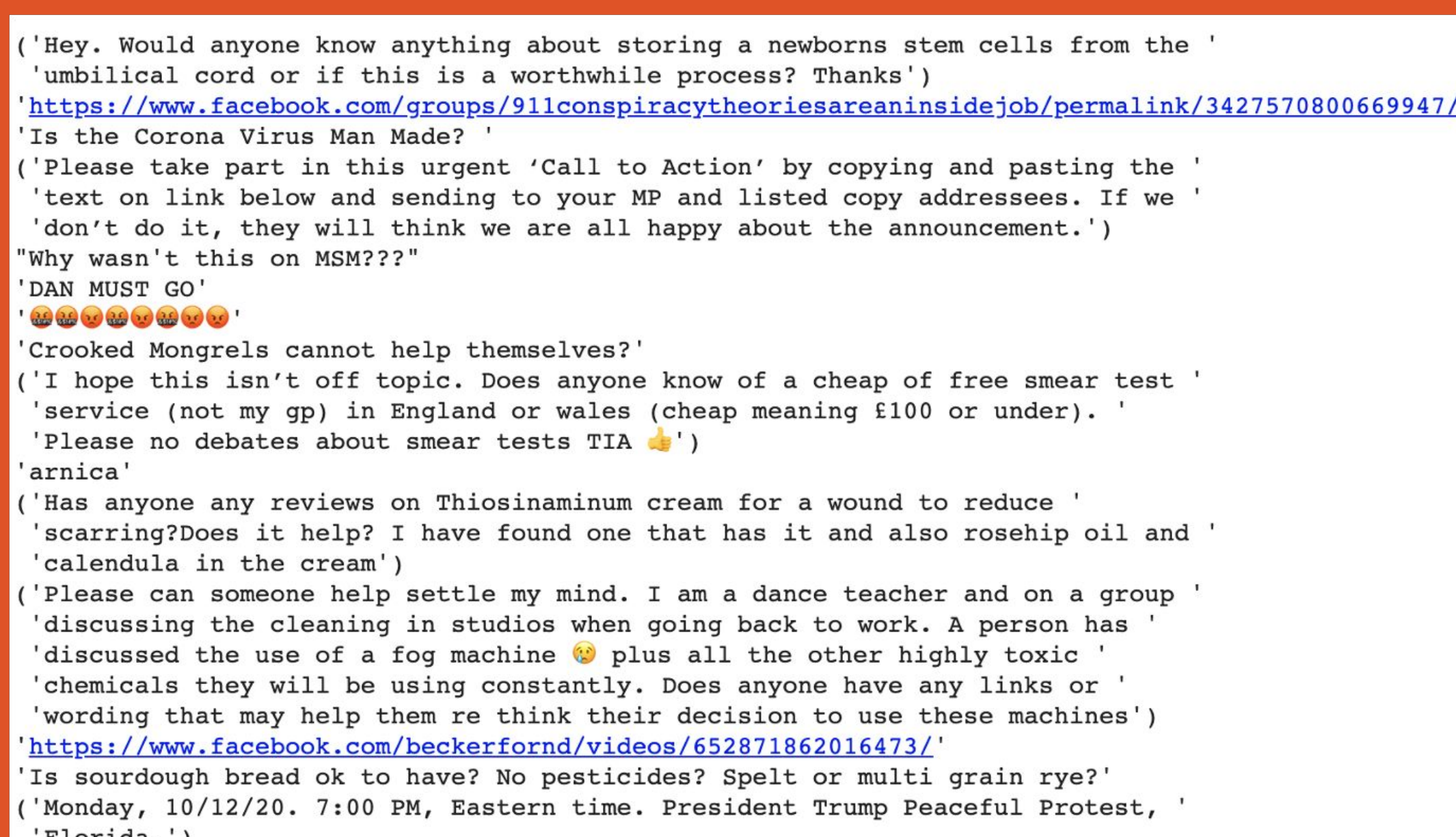


Figure 2 - A snippet of our biased sample—a corpus created from self-identified vaccine hesitant Facebook groups. We are currently using topic modelling to gain further insights into the recurring themes of hesitancy.



SCAN ME

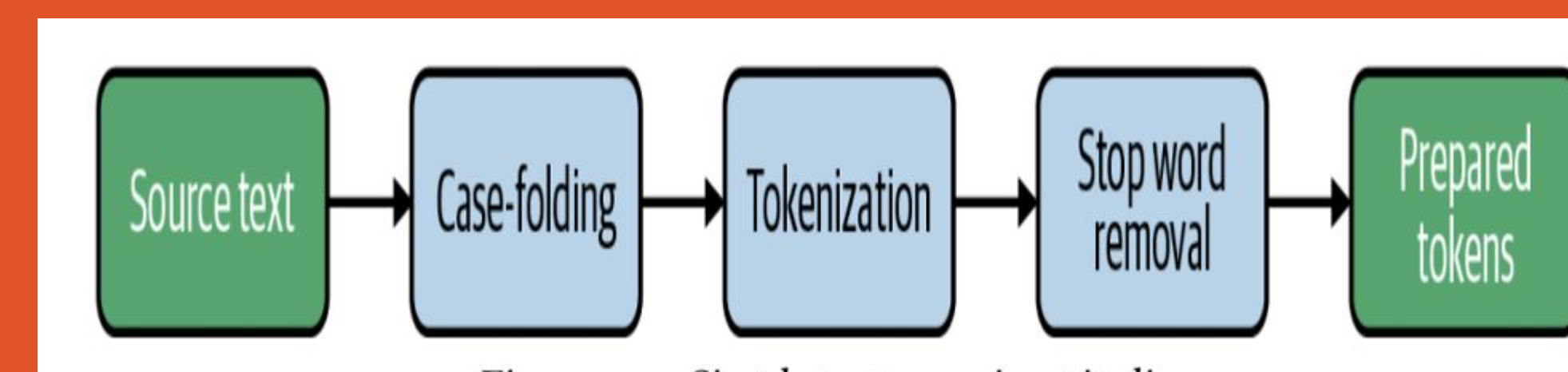


Figure 1-4. Simple preprocessing pipeline.

Figure 3 - Data pre-processing pipeline that we will use to analyze a large corpus of vaccine-related social media messaging.

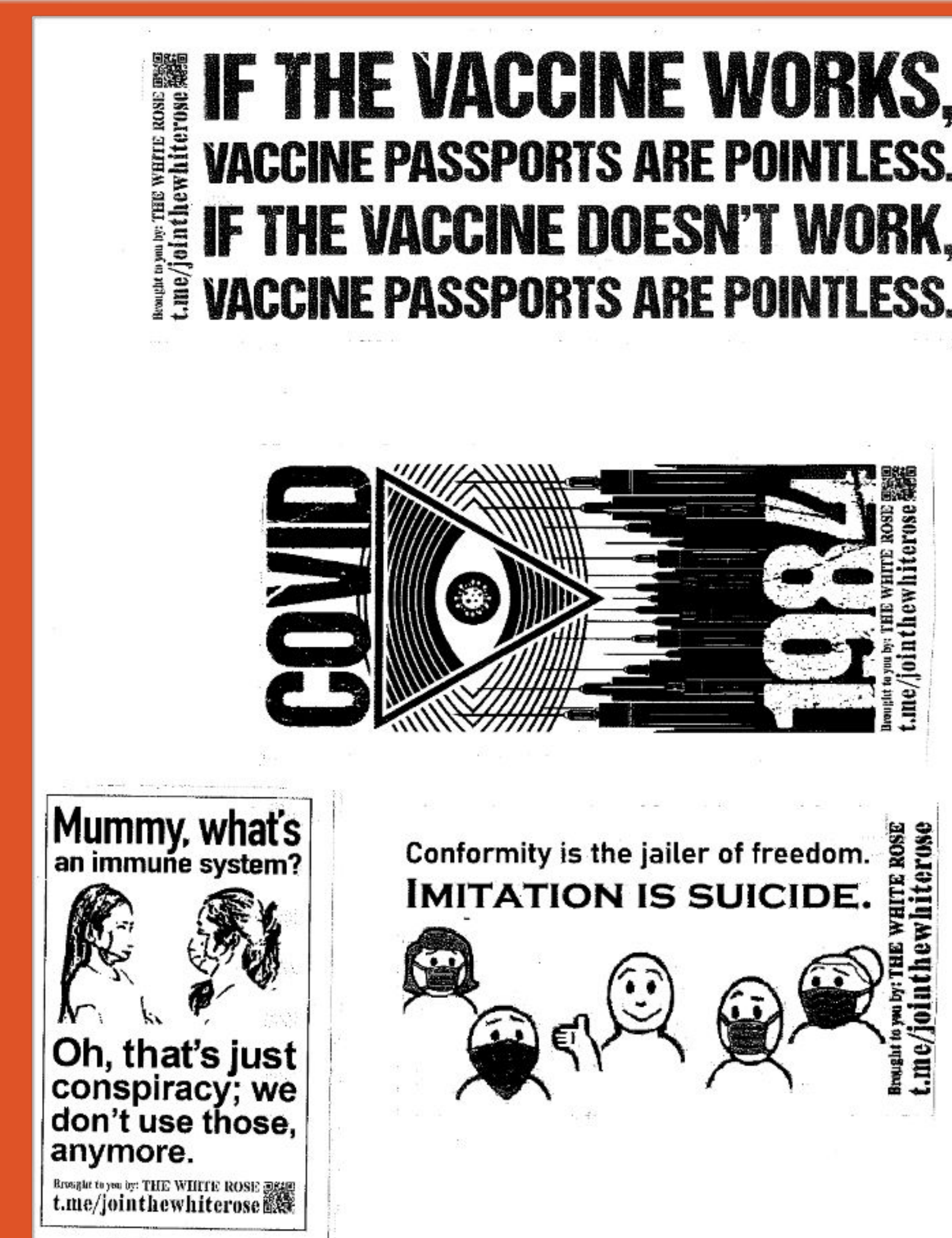
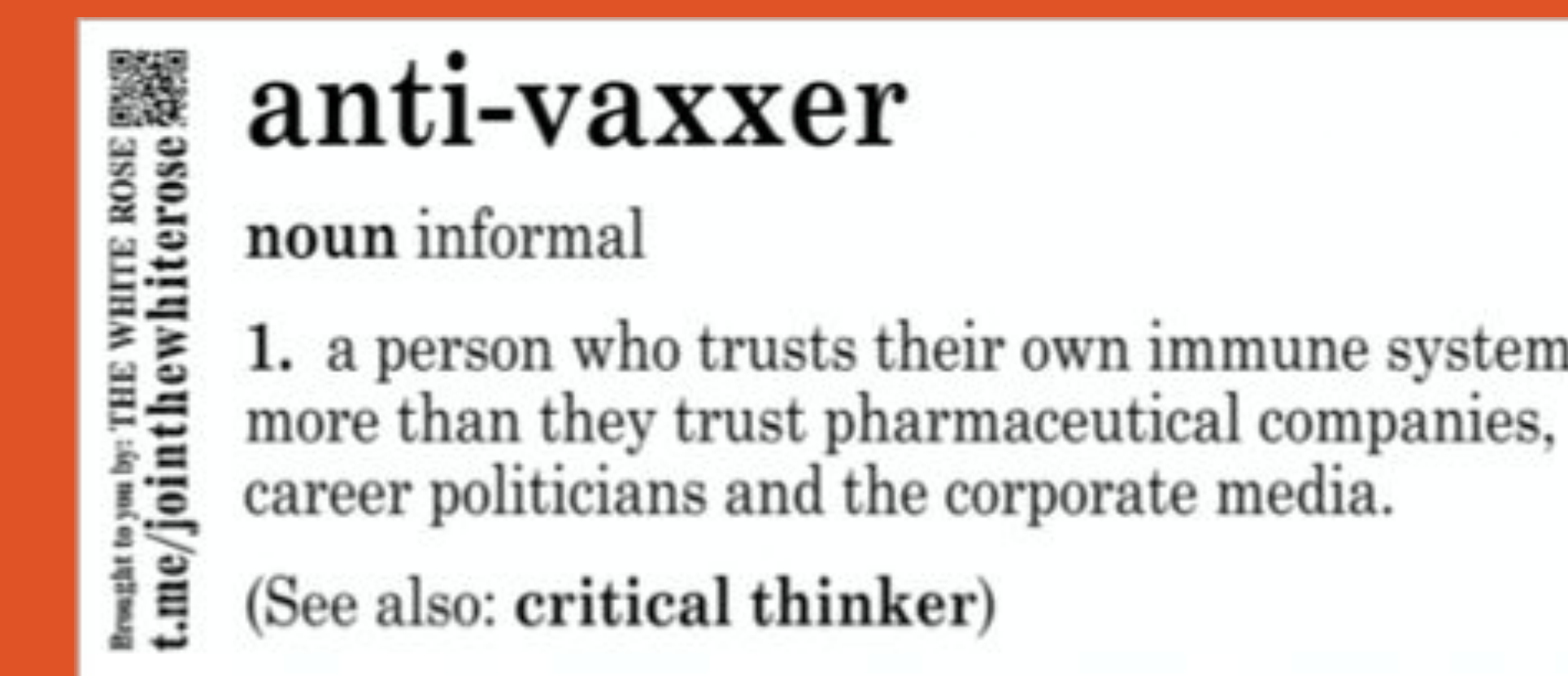


Figure 4 & 5 - Anti-vaccination messaging stickers from the White Rose sticker archive containing Medical Freedom rhetoric.



Figure 6 - Poster from the Worldwide Wakeup (anti-vaccine protest in NYC from June 2021).

## Methodology

- This project analyzes the rhetoric of social media discourse around vaccine hesitancy to explore how it has emerged in the U.S. as a political movement during the COVID-19 pandemic.
- The undergraduate team produced a literature review consisting of primary sources (social media posts), secondary material, and a public syllabus.
- Literature was sourced from: Web of Science, ScienceDirect, PubMed.
- Social media vaccine sentiments were sourced from Reddit (ex. r/BlackPeopleTwitter, r/IndianCountry), YouTube, Facebook, and Twitter.
- Public syllabus includes journal articles, podcasts, web articles, and YouTube videos.

## Results

### MUSLIM COMMUNITY

- Religious rulings in countries such as Indonesia and Malaysia concerning the vaccine being haram have contributed to vaccine hesitancy in different Muslim communities
  - Connotation that the vaccine will lead a betrayal of faith due to the 'lack of purity'
- Lack of understanding and trust

### AFRICAN AMERICAN COMMUNITY

- Undervaccination is rooted in 2 institutional factors
  - lack of access to proper intervention
  - lack of trust and confidence in medical establishment
- African Americans have the highest prevalence of COVID-19 vaccine hesitancy
- Mistrust stems from a history of institutional racism in healthcare against Black Americans:
  - James Marion Sims experimentation on Black women without anesthesia
  - Tuskegee Syphilis Experiment
  - Henrietta Lacks Controversy

### INDIGENOUS COMMUNITY

- Distrust in the federal government and mass vaccination campaigns created by a history of mistreatment and medical abuse
  - Smallpox vaccination campaign in the 19th century by the federal government was used to “enable Indian removal” and facilitate “relocation of Native Americans to reservations”
  - In the 18th century, the U.S. military gave Natives smallpox-infected blankets as a tactic to weaken their resistance to U.S. expansion
  - Indian Health Services forcefully sterilized thousands of Native women in the 1970s without their knowledge or consent
- Resistance to a focus on Western medicine and its disregard for traditional Native medical practices
  - In response, some sites have spaces to smudge with medicinal plants for spiritual cleansing after getting the vaccine.

## Next Steps

Our work is being used in public health recommendations to our lab’s partners at Ulster County and Maine Departments of Public Health. We are still a ways away from resolving vaccine hesitancy in the U.S., but we intend to continue our working on this project and continue along the data pre-processing pipeline (Fig. 3), making adjustments to our ideas as government policies and online conversations continue to change.

References included in literature review (accessible through QR code!)