The Face of Geopolitics: Visualizing Wars

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Introduction

Historical awareness is a crucial condition to understand nowadays political crises. For example, current migration crises in Europe and in the Middle East can be better understood and coped with knowing the African political landscape, which is closely tied to decade-long conflicts. This project's aim was to create an interractive way to get acquainted with the major crises that have taken place in the most recent history, from the end of the Cold War until today. We define a crisis as a collection of events involving armed force and resulting in casualties.

1. Data Set

Our work is based on the UCDP data set that lists all the events involving armed force and resulting in at least one death by monitoring the media from a wide variety of regions. It covers all countries between 1989 and 2016 except for Syria and North Korea.

2. Data Enrichment

In order to have a more comprehensive understanding of the conflicts, we first classified the involved actors based on their motives. To do so, we scraped various Wikipedia pages (e.g. "List of designated terrorists") to obtain a new dataset on the geographical area, ideology (communism, islamism, nationalism ...) and other characteristics concerning armed actors. Then we merged this new data with our original data set by using a string distance measure matching the actors' names.

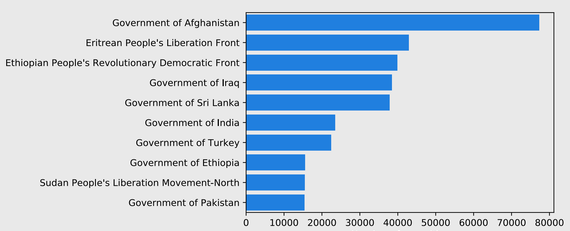
In addition, we considered the GDP data set from the World Bank, in order to unravel correlations between the economy and wars.

3. Data Analysis

Following questions among others were analyzed and visualized on the website:

What countries had the most important crises? This question was answered making a yearly count of deaths on national territory for each country and selecting the countries which have a yearly count 1000 times higher than the median.

Which are the most lethal organisations? Actor's scores were computed as the number of casualties they caused to their opponents.



Casualties by Actors (excluding Rwanda)

Which is the most lethal type of actors? Using the enriched data scraped from Wikipedia, we were able to visualize the importance of each type of actor in the global death toll. It seems that governments are most important overall.

4. Visualization

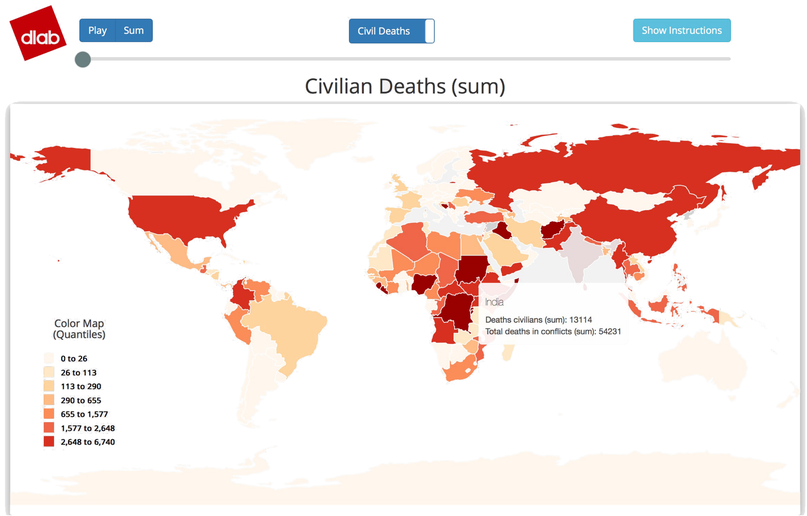
The website allows exploring and understanding the conflictcs since the cold war in an interactive way.

Following visualizations have been produced:

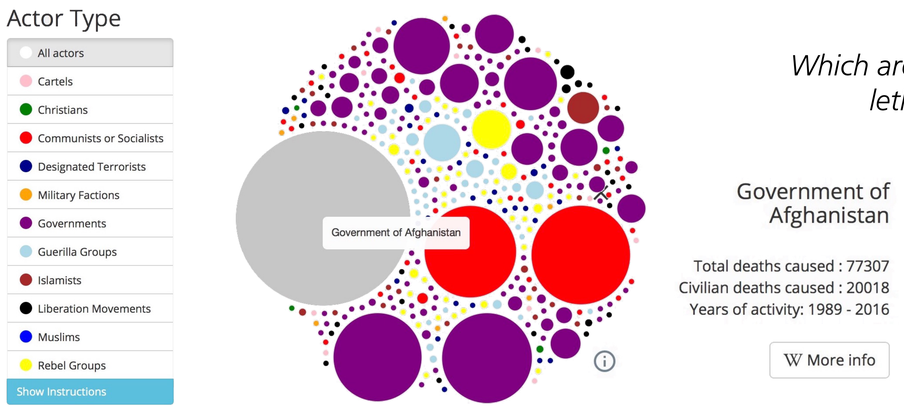
Detailed death time series by region: Interactive bar charts for visualization of yearly death time series related to the conflicts in each continent. For each major event, a short historical description is provided.

Map of world conflicts: The user can interact with a chloropleth map to explore civil or total deaths having taken place each year, and click on countries to see more details on national deaths and economic data.

Actors bubbles: This visualization allows separating actors by their derived types and visualize the total sum of casualties an actor caused using the bubble size.



Where did the most violent conflicts take place?



Which are the most lethal actors?

5. Key Findings

- Most lethal conflict in Rwanda, 1994: need to remove outliers in visualization
- Most casualties in Africa, Middle East, Asia
- Most important actor group: governments
- Slight decrease of casualties since beginning of dataset
- Lack of data for Syria, most recent years might be non-representative due to IS

the-face-of-geopolitics.github.io