

Visualising ideologies on the world map

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Abstract

This project introduces Ideology Atlas, an interactive visualization designed to enable intuitive exploration of the political ideology of national governments worldwide across time. The tool allows users to examine the economic ideological orientation of political leaders by country and year, while offering additional contextual information on demand. The visualization is based on the Identifying Ideologues: A Global Dataset on Political Leaders by Bastian Herre, which covers 182 countries from 1945, or from their year of independence, to 2020. The dataset's broad coverage, transparent sourcing, and low level of missing data make it particularly suitable for visual analysis of global ideological trends.

The project focuses on macro-level research questions rather than individual national trajectories. It explores whether identifiable periods of ideological dominance exist, whether regional or global ideological blocs can be observed, and how ideology intersects with geography and regime type over time.

The visualization emphasizes accessibility and exploratory interaction for non-expert users. A world map forms the central view, supported by filters for region, ideology, regime type, and year. A slider-based year selector highlights the temporal dimension, while an accompanying bar chart provides context for broader historical patterns. By prioritizing simplicity, established color conventions, and interactive discovery, the Ideology Atlas offers an accessible tool for understanding global political ideology in a comparative and longitudinal perspective.

1. Introduction

In this project our goal is to provide an interactive tool where people can intuitively discover political leaning of governments on a given year around the globe, and we provide the option to discover more information about each country upon users' request. We use the "Identifying Ideologues: A Global Dataset on Political Leaders" dataset collected by Bastian Herre. (Maxwell, 2023)

This dataset records the economic ideology of national political leaders (chief executives) in roughly 180 countries from 1945 – or from their year of independence – up to 2020. (Herre, 2023)

2. Related Work and Data source

Data source Relevance and quality: Broad coverage: 182 countries, up to 75 years. Low missingness: Only a small fraction of country-year observations are "no information" or "non-ideological" (7% for heads of government). (Herre, 2021)

Because of its scope, quality, and transparency, this dataset is well-suited for a visualization project on global political ideology trends. The dataset is well structured and clearly labelled, the only needed preprocessing task was dropping unnecessary columns. We retained the ones that represent the countries respective leaders and ideology grouped by region, country, and year.

In essence, our research questions aim to uncover the macro-patterns of political ideology worldwide; across time, across countries, and across global networks, rather than focusing on isolated national histories. In our research questions, we want to know if there are observable periods of ideological dominance (e.g., leftist waves, rightist eras) over the past 75 years. Also if there are identifiable "ideological blocs" in the world, or in regions, and how do these blocs correspond to geographical, historical, or shared regional influences? Lastly, to see how geography, regime type, and ideology intersect across modern leadership history.

Our project is based upon Bastian Herre's outstanding work on the study of political leadership. Herre self-claims in his 2023 paper to make the first dataset as such, addressing a critical gap in comparative political research. As he notes, "the study of political leaders' ideologies and their effects has been held back by the limited coverage of cross-country ideology datasets." (Herre, 2023) The publication of this dataset represents an important contribution to Comparative Politics and International Relations research, enabling a more comprehensive and grounded analysis of global ideological trends.

3. Design

With this project, we aim to provide the end user with a simple yet intuitive interface to explore ideologies throughout the world. Our goal is to develop a visualisation design that is intuitive for

non-experts audiences allowing users to understand the interface and its functions through exploratory interaction. To achieve this, we prioritise simplicity wherever it is possible, ensuring that the visualisation remains informative without being overwhelming.

There is a living convention around colors of political ideologies representation. We researched established colour palettes to identify one that is both accessible and aligned with these conventions. We used the Political Spectrum Color Palette provided by Color-Hex.com. (Color Hex, n.d). We decided to stick with these colors because we believe that moderate purple represents the centrist position between the conventional blue (left-leaning) and red (right leaning). Since the palette uses distinct hues it makes it natural for the user to tell apart distinct categories.

It is essential to provide users with filtering options to refine the visual information based on region, ideological orientation and regime types (e.g.: democratic and non democratic systems), as well as the selection of year of interest. The year selector is a slider, because in this way, it also represents the linearity of history, and signals the amount of time we can represent in our visualisation.

In addition, a barchart is included to display the number of instances by year for the user's selected filter. Although there are countries that do not have data before a certain time in history, the barchart representation still provides an approximately accurate representation of broader temporal patterns. The complementary barchart enriches the information displayed. It represents the distribution of political leanings by the selected filters, while also placing it into a broader trend.

When users first enter the visualisation platform, our aim is to encourage exploratory interaction by prompting them to actively engage with the interface. For this reason, the landing page presents a blank world map accompanied by an empty filter checkbox on the left-side, and an intuitive year selector slider. If someone would feel lost, there's an information tooltip in the upper right corner.. This minimalist entry point is intended to stimulate curiosity, inviting users to click, experiment, and gradually discover the available functionalities..

4. Results

Overall, we consider the final Ideology Atlas to be a valuable tool for people interested in global politics and international relations. Its interactive design enables users to contextualise historical developments within a broader ideological pattern, thereby supporting a more comprehensive understanding of global political dynamics. We particularly recommend the platform to people who seek a “big-picture” perspective, or those who simply want to explore more about the ideological standings around the world.

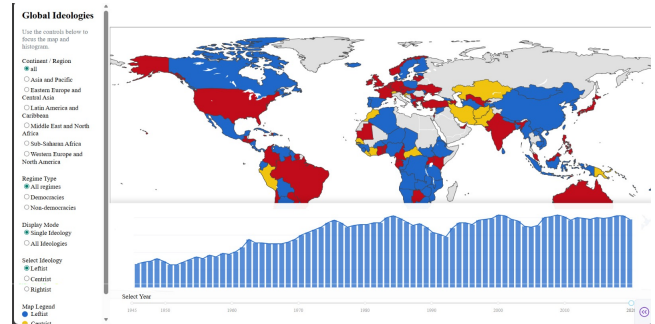


Figure 1: We can see the Ideology Atlas, combining a world map colored by the dominant political ideology of national leaders in a selected year with interactive filters and a timeline barchart that reveal global and regional ideological trends over time.

Although it is possible to incorporate additional metrics, such as: percentages of certain leaning on the political spectrum by country, the barchart already provides an effective sense of distribution without complicating the interface. Introducing further numerical detail would increase visual density and undermine the clarity and usability of the design. For this reason, we priorities simplicity over the maximizing amount of information.

5. Conclusion

In conclusion, we believe that the final product is intuitive and consistent, guided by our philosophy of prioritising simplicity and educational value. We are satisfied with the outcome, as it provides an accessible and engaging tool for users to explore and better understand global ideological patterns.

References

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