

European Parties Explorer - Visual Analytics project

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Abstract

In this ever changing world, the European Union and, more generally, the European continent have been facing several challenges during the last twenty-five years: some of the most important ones are the 2008 economic crisis and Russian invasion of Georgia, the migrant crisis, episodes of Islamic terrorism, Euroscepticism and Brexit, climate change, the Covid pandemic, the rise of authoritarian governments, the Russian invasion of Ukraine and European defense. All of this inevitably affects European citizens and countries, and politics is becoming increasingly more present in everyday life; it is probably safe to assume that basically all European political parties have evolved in one way or another, and many more were born during the last years. For these reasons, this paper will present a visual analytics application aimed at showing the evolution of European parties and their beliefs.

1 Introduction

European Parties Explorer is a visual analytics system, developed with the D3.js library, suited for tasks like exploring how parties from most EU countries and the UK have evolved in the last years, how their views over the most important topics have changed, comparing parties in one or many countries, viewing how polarized nations or political factions are on certain topics, and possibly discovering further similar insights. The political parties are represented in different charts and can be filtered according to the year, the country they come from and their faction (left, right, etc.), but it is also possible to make selections directly on the available charts.

European Parties Explorer is based on the datasets provided by the [Chapel Hill Expert Surveys](#), a set of surveys conducted in 1999, 2002, 2006, 2010, 2014, 2019 and 2024, which were compiled by many political scientists so that they could evaluate the most important parties in many European countries during the years. To fully understand this visual analytics application, we first need to analyze and understand the provided data.

2 Dataset

2.1 Dataset description

The data used by this project was built from two files available on the CHES website:

- the 1999-2019 Chapel Hill Expert Survey trend file,¹ a single file containing the data from all surveys conducted between 1999 and 2019;
- the 2024 Chapel Hill expert survey.²

¹ Jolly, Seth, Ryan Bakker, Liesbet Hooghe, Gary Marks, Jonathan Polk, Jan Rovny, Marco Steenbergen, and Milada Anna Vachudova. 2022. "Chapel Hill Expert Survey Trend File, 1999-2019." *Electoral Studies*. <https://doi.org/10.1016/j.electstud.2021.102420>

² Rovny, Jan, Ryan Bakker, Liesbet Hooghe, Seth Jolly, Gary Marks, Jonathan Polk, Marco Steenbergen, and Milada Vachudova. "25 Years of Political Party Positions in Europe: The Chapel Hill Expert Survey, 1999-2024," working paper.

The two csv files have a similar structure, with the former having a total of 1196 entries from 1999 to 2019, the latter 279 entries for the year 2024. Each row represents a single European party analyzed during one of the years in which the surveys were conducted; the columns contain either data about the party (e.g. its country, unique identifier, name abbreviation, political family) or a value, contained in a certain range (in most cases 0-10), assigned by the political scientists expressing in general how much the party agrees or disagrees with a certain topic or policy in the given year.

Considering that we have two distinct csv files and that the many surveys were often conducted in different ways during the years (in fact most questions were asked only in some of the various years; this means that the topics they are bound to were not evaluated during the remaining years, which implies there are a lot of missing values in the dataset), some form of data preprocessing is needed in order to handle the missing data and create a single coherent data file.

2.2 Data preprocessing

As we saw, the many surveys were brought out in distinct ways during the years, and they were always composed by different questions from one another. Since the 1999-2019 trend file gathers all the surveys up to 2019, it contains a lot of columns (around eighty) with most of them storing data only for some years; the first step in data preprocessing is therefore deciding only what columns (basically the topics on which the parties were evaluated) we want to keep and analyze. Considering that the project wants to visualize the evolution and comparison of political parties, the columns we need are:

- the ones storing parameters essential for the application's functioning (like a party's unique identifier and country);
- columns regarding important and non-redundant topics (e.g. economy, environment, immigration);
- columns about topics evaluated during at least a good amount of consecutive years.

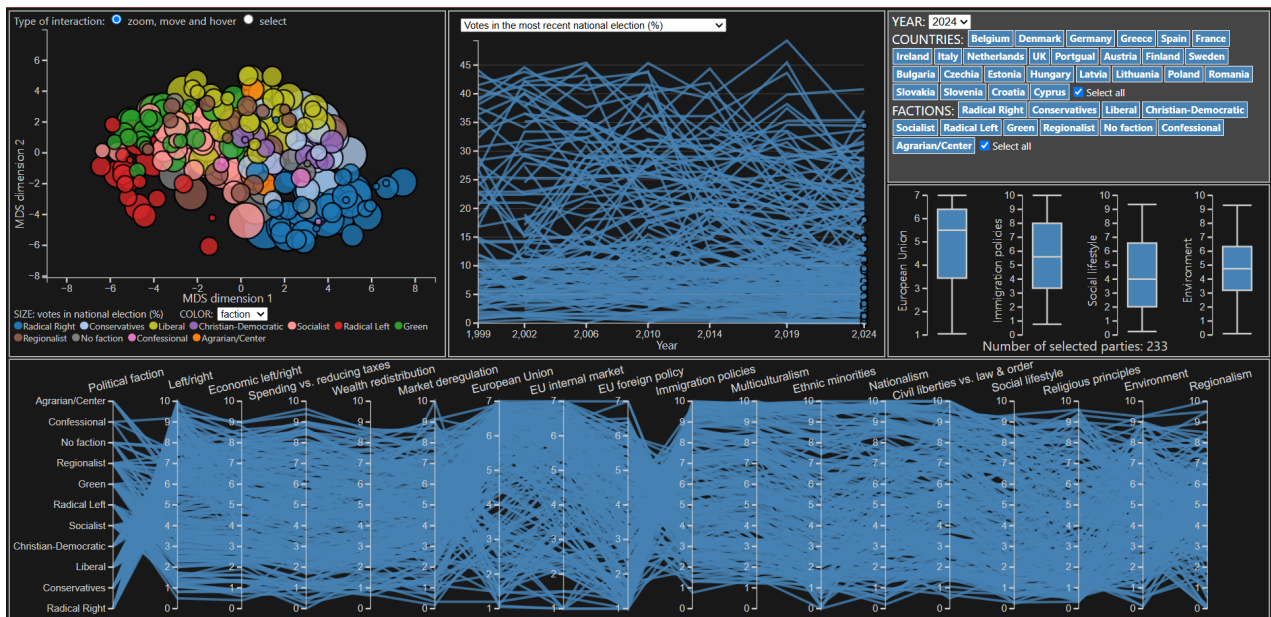


Figure 1: Preview of the system

Here you can find the list of attributes that in the end were kept from the 1999-2019 file and used for this project and how they are mostly described on the CHES site (check their codebook for more details).

- **country**: unique (numerical) identifier for each country (where the party comes from);
- **year**: year for which party experts were asked to evaluate (1999, 2002, 2006, 2010, 2014, 2019);
- **party_id**: unique identifier for each party;
- **party**: party abbreviation;
- **vote**: vote percentage received by the party in the national election most prior to the given year;
- **seat**: seat share of the party in the national election most prior to the given year;
- **epvote**: vote percentage received by the party in the European Parliament election most prior to the given year;
- **family**: the party's political faction (1 = Radical Right, 2 = Conservatives, 3 = Liberal, 4 = Christian-Democratic, 5 = Socialist, 6 = Radical Left, 7 = Green, 8 = Regionalist, 9 = No family, 10 = Confessional, 11 = Agrarian/Center);
- **eu_position**: overall orientation of the party leadership towards European integration in the given year (1 = strongly opposed, 2 = opposed, 3 = somewhat opposed, 4 = neutral, 5 = somewhat in favor, 6 = in favor, 7 = strongly in favor);
- **eu_intmark**: position of the party leadership in the given year on the internal market (i.e. free movement of goods, services, capital and labor; 1 = strongly opposed, ... 7 = strongly in favor);
- **eu_foreign**: position of the party leadership in the given year on EU foreign and security policy (1 = strongly opposed, ... 7 = strongly in favor);
- **lrigen**: position of the party in the given year in terms of its overall ideological stance (0 = extreme left, 5 = center, 10 = extreme right);
- **lricon**: position of the party in the given year in terms of its ideological stance on economic issues; parties on the economic left want government to play an active role in the economy, parties on the economic right want a reduced role for government (0 = extreme left, 5 = center, 10 = extreme right);
- **spendvtax**: position on improving public services vs. reducing taxes (0 = strongly favors improving public services, 10 = strongly favors reducing taxes);
- **deregulation**: position on deregulation of markets (0 = strongly opposes deregulation of markets, 10 = strongly supports deregulation of markets);
- **redistribution**: position on redistribution of wealth from the rich to the poor (0 = strongly favors redistribution, 10 = strongly opposes redistribution);
- **civlib_laworder**: position on civil liberties vs. law and order (0 = strongly promotes civil liberties, 10 = strongly supports tough measures to fight crime);
- **sociallifestyle**: position on social lifestyle (e.g. rights for homosexuals, gender equality; 0 = strongly supports liberal policies, 10 = strongly opposes liberal policies);
- **religious_principles**: position on role of religious principles in politics (0 = strongly opposes religious principles in politics, 10 = strongly supports religious principles in politics);
- **immigrate_policy**: position on immigration policy (0 = strongly favors a liberal policy on immigration, 10 = strongly favors a restrictive policy on immigration);
- **multiculturalism**: position on integration of immigrants and asylum seekers (0 = strongly favors multiculturalism, 10 = strongly favors assimilation);
- **environment**: position towards environmental sustainability (0 = strongly supports environmental protection even at the cost of economic growth, 10 =

strongly supports economic growth even at the cost of environmental protection);

- **regions:** position on political decentralization to regions/localities (0 = strongly favors political decentralization, 10 = strongly opposes political decentralization);
- **ethnic_minorities:** position towards ethnic minorities (0 = strongly supports more rights for ethnic minorities, 10 = strongly opposes more rights for ethnic minorities);
- **nationalism:** position towards cosmopolitanism vs. nationalism (0 = strongly promotes cosmopolitan conceptions of society, 10 = strongly promotes nationalist conceptions of society).

At this point, processing of the first file is done, since I only needed to decide which data to use. The 2024 expert survey file has some differences with respect to the 1999-2019 file, therefore a little more work on the former was necessary to make it coherent to the latter:

- the 2024 has no *year* column (since all the data refers to the same year), thus it was added storing of course "2024" as value;
- the 2024 file has no *social_lifestyle* column, but it has two new attributes called **womens_rights** (position on policies supporting women's rights, e.g. equal pay, family leave, reproductive health) and **lgbtq_rights** (position on policies supporting LGBTQ+ rights, e.g. marriage equality, adoption rights, transgender rights); given that they are important topics but that the first dataset only has the *social_lifestyle* column, I decided to join them into a new single column called again **sociallifestyle** by computing the average between the two values;
- of all the columns in the dataset, I again kept only the ones we already saw for the first file.

Having now decided which data is needed for the project, the next step is merging the two csv files in one single coherent dataset; then I made the following operations on this new file.

- Deleting the data regarding Türkiye, Norway, Switzerland and Iceland (because they are present only in 2024 and have no evaluation for the European Union questions), Malta (since there is too much missing data for 2024 and Malta only has two parties with, at least from 2014 to 2024, basically always the same electoral results), and Luxembourg (it has too many empty values and no data for 2024): removing whole countries is not ideal, but since these ones have a good amount of missing data and that the choice was between adding them but removing the evaluations for the EU from everyone, or not including them and having a more accurate analysis of the other relevant nations, I preferred removing them;
- handling the missing data: even in the remaining countries, it happens that some parties have missing

values for some columns; for simplicity and for not distorting the data, I decided to just delete the rows of parties who have no data for one or more topics which should have been evaluated in the given year (luckily, we're talking mostly about parties with a small vote share, between 0 and 2%). The computed coordinates were then added in the dataset as two new columns.

2.3 Dimensionality reduction

The last data preprocessing operation is dimensionality reduction, so that in the application it will be possible to visualize on a scatter plot how similar or not the many parties are. The algorithm that was used is MDS, which was applied by building a dissimilarity matrix for each year based on Euclidean distance between parties on the columns regarding the topics on which they were classified (*eu_position*, *eu_intmark*, *eu_foreign*, *lrgen*, *lrecon*, *spendv-tax*, *deregulation*, *redistribution*, *civilib_laworder*, *sociallifestyle*, *religious_principles*, *immigrate_policy*, *multiculturalism*, *environment*, *regions*, *ethnic_minorities*, *nationalism*). The computed coordinates were added in the dataset as two new columns.

3 Views

We can now start analyzing the project itself and its various components.

3.1 Filters

Figure 2: Filters view with 2024 as selected year, Germany, France and Italy as selected countries, and all political factions

The filters section allows us to choose for what year we want to conduct the analysis, what countries, and what political groups; remember that the available years are the ones in which the expert surveys were conducted (1999, 2002, 2006, 2010, 2014, 2019 and 2024). Of course these filters affect all the other views we are about to see, which will display data only for the selected year, countries and political families.

3.2 Parallel coordinates

The parallel coordinates visualize many attributes all at the same time, with a single piece of data being repre-

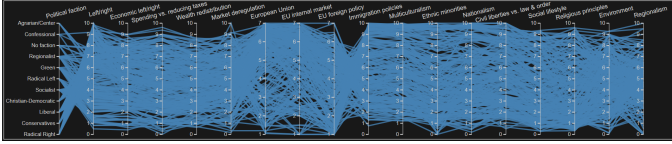


Figure 3: Parallel coordinates plot (year 2024, all countries and factions)

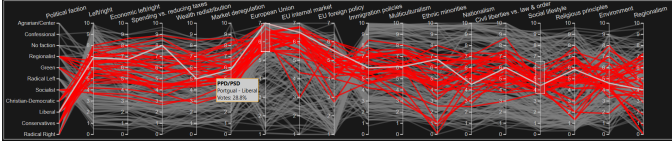


Figure 4: Parallel coordinates plot with brushing and hovering

sented by one line connecting its associated values for all attributes. In this case, each line encodes a single party, and the represented attributes are the same used in the dimensionality reduction plus the political family. It is possible to do brushing with your mouse on the axes (that is, selecting subsets of parties representing some user-defined constraints) with the selected parties being highlighted, and when hovering a single line you get information about that party's abbreviation, country, family and share of votes all in the year selected in the filters view.

Notice that the attributes were reordered so that axes bound to one general topic are close together, which makes it easier to do comparisons and notice trends inside that topic. In particular, we have in order: three axes about political families (with the last one regarding the economy too), then three axes strictly about economic issues, three axes regarding the EU, four axes roughly about immigration and foreign cultures, then five axes on other topics. Also, since as we saw in the preprocessing section, many topics were evaluated by the experts only in more recent years, the parallel coordinates chart is updated depending on the year chosen in the filters view, visualizing only the axes about topics of that year.

Finally, it is possible to hover over the axes' legends in order to obtain a brief description of the attribute they encode and what the minimum and maximum values mean.

3.3 Scatter plot

In the scatter plot, parties are encoded as circles positioned according to the coordinates computed with MDS so that it is possible to have an idea of which parties are similar, and their size depends on the votes received (parties with a higher vote share are bigger). The points are colored according to either the parties' political family or the nation they come from, at the user's choice. The colors were taken from D3's `d3.schemeCategory20` categorical color scheme, and in the case of coloring by political group, colors typically associated with each family were mostly respected (red for left-wing parties, green for greens, yellow for liberals, blue for right-wing parties). Below the

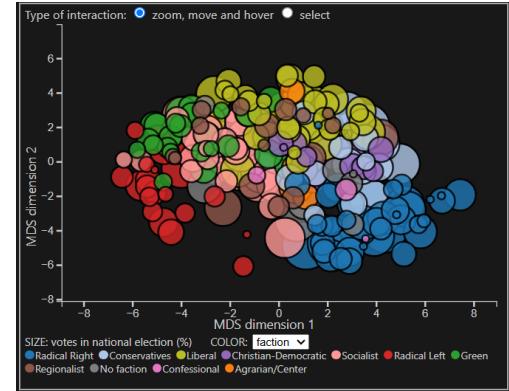


Figure 5: Scatter plot (year 2024, all countries and factions, color by factions)

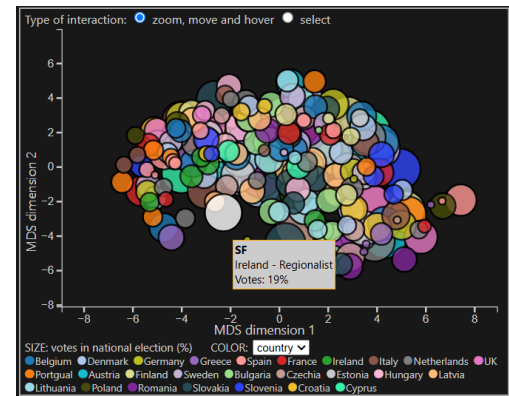


Figure 6: Scatter plot with hovering (color by countries)

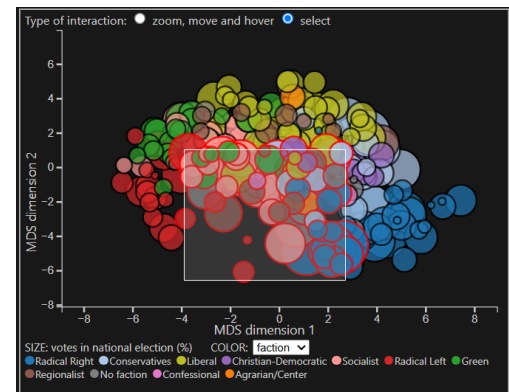


Figure 7: Scatter plot with brushing

chart there is a color legend that updates according to the selected coloring mode.

The scatter plot can be interacted with in two different ways: the user can either freely zoom in and out, move the points and hover over them (with a tooltip showing information about the hovered party, just like in the parallel coordinates), or they can make brushing, thus highlighting the chosen circles.

3.4 Line chart

While the charts we have seen allow the user to witness the "state" of European political parties inside one single year (they are basically a "picture" of what parties look

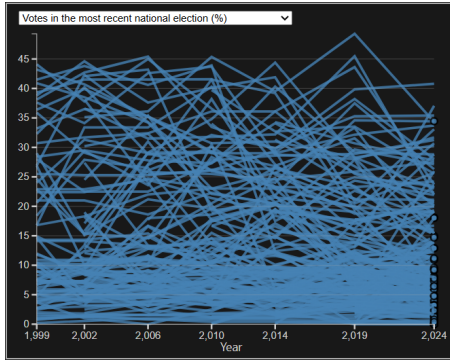


Figure 8: Line chart (year 2024, all countries and factions)

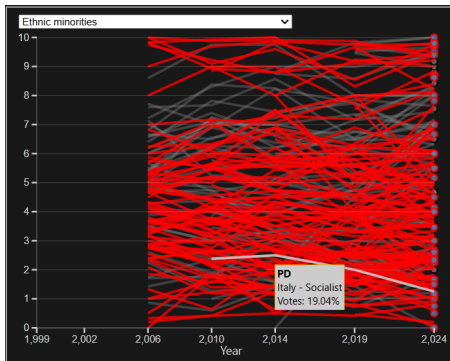


Figure 9: Line chart on a topic evaluated only from 2006 onwards, with brushing and hovering

like in the selected year), the line chart allows to have a quick overview of the parties' opinion over the years regarding one chosen topic, or their electoral results. As usual, the displayed parties are the ones existing in the year selected in the filters section and respecting the other filters. The political parties are encoded as lines spanning over the years in which they existed and in which the selected attribute was computed, unless we have a party that existed only in the filtered year; in this case, it is represented with a point.

Thanks to a drop-down menu, it is possible to choose what attribute we are interested in. These attributes are the same found in the parallel coordinates plot except the political family, and with the addition of:

- votes share in the national election most prior to the given year;
- seat share in the national election most prior to the given year;
- votes share in the European Parliament election most prior to the given year.

As for all the above plots, the user can hover over a line or point to observe a tooltip giving information about the hovered party in the filtered year. There is a difference with brushing which can not be carried out on the line chart itself, but the lines are highlighted according to the brushing made on the parallel coordinates and the scatter plot.

3.5 Box plots

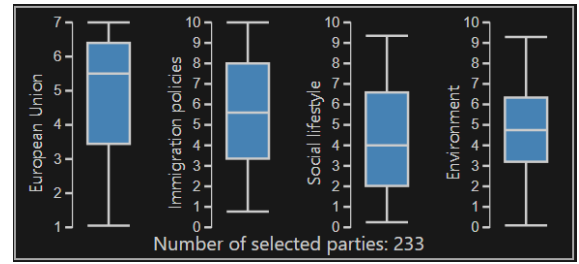


Figure 10: Boxplots (year 2024, all countries and factions)

The last element remaining in this project is the box plots area. It is an additional analytics part constituted of four box plots, each one showing how parties are distributed over the values associated to four attributes (*eu_position*, *immigrate_policy*, *sociallifestyle*, *environment*). I chose these attributes as I feel like they represent well enough "macro-topics" we mentioned in the parallel coordinates section (European Union, immigration, and two important topics in the remaining ones).

The box plots allow for a quick overview of how parties are distributed about the four attributes, simplifying the study of how much they agree or are polarized for instance among specific political factions or countries (thanks to the filters). The four box plots update according to the global filters and the brushing made on the scatter plot and the parallel coordinates, and in order to know how "valuable" they are, there is also a counter displaying how many parties the box plots are taking into account (that is, the number of brushed parties or all parties if instead there are no selections).

3.6 Interactions between views

To sum up, we have filters (year, countries and factions), scatter plot, line chart, parallel coordinates plot, and four box plots. The parties considered when drawing the various charts are only the ones existing in the selected year and belonging to the filtered countries and factions. It is possible to hover the data on the scatter plot, line chart and parallel coordinates, displaying information about that party in the given year; when you hover a party in one of these charts, the same party is highlighted in the other two. Brushing is possible on the scatter plot and parallel coordinates, highlighting the selected parties in the other view and in the line chart. The box plots visualize the distribution of all parties in the chosen year, countries and political groups if no brushing was made, otherwise they do the same thing but only for the brushed parties.

4 Related work

Now that we fully know the many parts of this project and how they work, we can analyze similar systems and compare them to European Parties Explorer, finding similarities and differences.

When looking for systems similar to this project I realized I wasn't having much success, in my opinion because the CHES dataset can be considered pretty niche. When talking about political parties, the only visualizations that can easily be found are the ones regarding electoral results and similar, therefore there isn't really something around about the evolution of parties (rather than their results at the elections or polls). Still, I managed to find a couple of systems using the CHES data itself.

4.1 CHES Interactive

The CHES website provides an [interactive section](#) with three visualizations using their own data:

- a **bar chart**, where you can choose a nation, a year and one topic, and see how that country's parties are evaluated on the chosen topic thanks to vertical bars; hovering a party gives its ranking on the selected attribute;

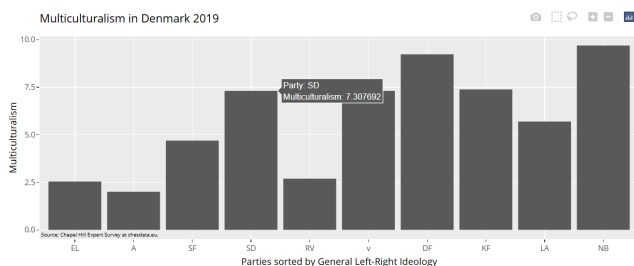


Figure 11: CHES Interactive's bar chart

- a **scatter plot on one country**, where the user can choose again country and year but also two attributes for the chart's axes, and the parties are placed accordingly; their size reflects the vote share, and hovering gives some information;

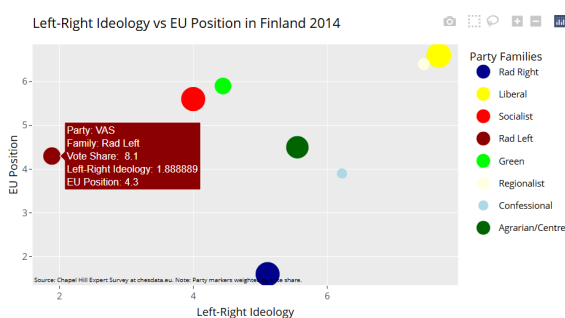


Figure 12: CHES Interactive's one country scatter plot

- a **scatter plot on all countries** that works exactly like the above scatter plot, except that of course it displays all nations.

CHES Interactive is an excellent tool for quickly comparing political parties, especially within a single country, but it's missing many features that this project is trying to implement:

- the only filters on the parties are year and country (one at a time), and the year 2024 is missing for now;

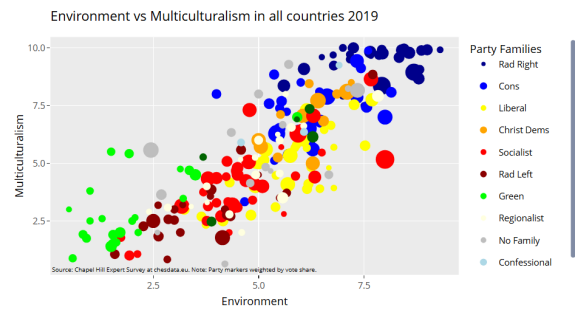


Figure 13: CHES Interactive's all countries scatter plot

- the comparison between parties is very effective, but it happens only regarding one or two topics at a time; with European Parties Explorer, you can quickly compare all available attributes thanks to the parallel co-ordinates, and instead of having a "picture" of one year at a time, you can also see how parties evolved on one topic with the line chart;
- CHES Interactive is very good at showing trends and correlations among attributes, and this is true also in European Parties Explorer (for instance there is a clear correlation in figure 13, but it's easy to notice it also in the parallel coordinates by comparing the appropriate axes);
- parties are placed on the scatter plots using two attributes, but using dimensionality reduction you can observe a more "universal" positioning discovering what parties are similar on a general basis;
- there are no explanations about the many topics and their minimum and maximum values, but this is understandable since we are using this system on the CHES website itself.

4.2 Foundations of European Politics

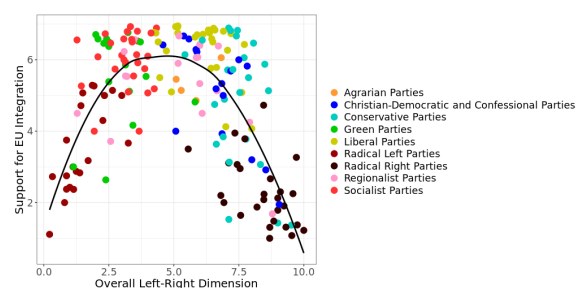


Figure 14: Foundations of European Politics' scatter plot

*Foundations of European Politics - A Comparative Approach*³ is a textbook for students about research on European Politics. The book's [website](#) describes many political datasets including the CHES one, and presents some related visualizations.

In the [section dedicated to the CHES data](#) we can find, similarly to CHES interactive, a scatter plot that positions parties according to two selected variables. The interaction

³ Catherine E. De Vries, Sara B. Hobolt, Sven-Oliver Proksch, Jonathan B. Slapin

with this chart is very limited, there are no filters and the user can choose among a small number of topics, but this is understandable since the plot was made as part of an exercise from the textbook. A very interesting feature is the addition of a line explicitly highlighting the potential correlation between the two variables.

4.3 Election results charts

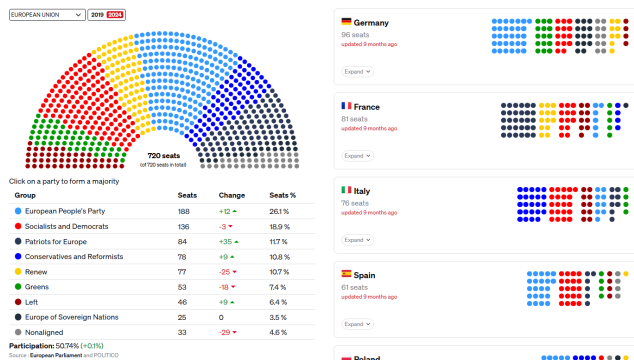


Figure 15: 2024 European elections results on politico.eu

When talking about political parties, the first thing that comes to mind is electoral results. For this reason, visualizations about elections are very important, and were among the first results when looking for reference material during the first stages of creating this project. Great inspiration came from [Politico's visualization of European election results](#), even though elections are not European Parties Explorer's main focus.

Not only does Politico's visualization display the distribution of seats in the European parliament, it is also very interactive. The user can compare the 2024 results with those from 2019 and can check which and how many seats belong to each single country; it is also possible to see exact election results in one nation. This system's functionalities are pretty far from the ones of this project, but it still was a good reference and source of inspiration.

5 Possible users

Let's see what kind of users this project is ideally suited for and how it can assist them.

- **Political science researchers, experts or students**, who are conducting studies on European politics: this application could help them in analyzing ideological evolutions of political parties or whole countries over time, comparing similar parties from different nations, observing how polarized a political faction, a country or group of countries is on a specific topic, finding trends or "outlier" parties, and possibly much more;
- **journalists** who may want to, for instance, write articles based on historical data, tell how parties have changed during the years, or report about the political situation in one or more countries;

- finally, even though this is probably a more niche and less likely case, **citizens who are about to vote** for national or European elections who want to better "study" the parties they can vote for, or check how "coherent" they have been on specific topics over the years.

6 Insights

Finally, we will now see some examples of insights confirmed or discovered using this application.

6.1 Differences between political factions

As a first test, let's see what trends we can find in each political family; of course these are general considerations and clearly there are outlier parties.

- **Radical Right:** by analyzing the parallel coordinates in each available year, we can observe that generally, Radical Right parties are (obviously) right-leaning regarding economic topics, mostly Eurosceptic (low scores), and highly against immigration, progressive policies and environmentalism (high scores). They have values ranging from low to high in religious principles and regionalism, so there isn't really a common policy or line of thought on these two topics. When looking at differences between years, it's possible to notice that Radical Right parties have become increasingly more right-leaning on economic topics, especially from 2014 on.
- **Conservatives:** Conservative parties are right-leaning in economy, similarly to Radical Right ones; in many cases they are even slightly more right-leaning, but still they do not reach the extreme values that some Radical Right parties have. They are generally Europeanist and have medium-high scores on all other topics (immigration, progressive policies, religious principles, environment, regionalism); they are after all "conservative", but they are not as against as the Radical Right which has extremely high values on these attributes.
- **Liberals:** Liberal parties are center/center-right economically, are extremely Europeanist (in fact they are the most Europeanist faction and have been since the first expert survey, as proven by the parallel coordinates and the boxplot), and have average to low values on all other attributes. This is not surprising, since it means they favor generally liberal policies.
- **Christian-Democratics:** Christian-Democratic parties are pretty similar to Liberal ones, being economically center/center-right and Europeanist; the differences are on the remaining topics, given that they are more conservative on immigration and the other attributes, as shown by the average-high values. Christian-Democratics' scores have been very stable throughout the years, with basically no outliers.

- **Socialists:** when talking about the economy, Socialist parties seem to have convincingly shared policies; their scores on the economical axes show of course that they are left-leaning, but the interesting fact is that while other parties have slightly scattered scores on these axes, Socialists' evaluations in the surveys are instead way narrower.

About other attributes, Socialist parties are very similar to Liberal ones, being mostly Europeanist and favoring liberal policies.

- **Radical Left:** Radical Left parties share the same narrowness of Socialists on the economical axes, but obviously they are even more left-leaning. They aren't Europeanist, but they are not totally Eurosceptic: their scores go from low to medium-high. They agree on liberal policies, with scores fairly lower than Socialists.
- **Greens:** Green parties are very similar to Socialist parties regarding the economy, but when talking about liberal policies they have more in common with the Radical Left. The most interesting topic to analyze is Europeanism, because it's easy to see that Greens have become increasingly more Europeanist during the years: Green parties' scores on EU attributes have in general steadily increased, and while in 1999 there were both Eurosceptical and moderately Europeanist parties, nowadays almost all of them agree with the EU.
- **Regionalist, No faction, Confessional and Agrarian/Center parties:** these groups are discussed all together since they belong to factions that do not necessarily reflect the left/right split; for this reason, there isn't really a common line of thought among these families. The only notable things are that the few Confessional parties are basically conservative and neutral towards the EU, in general the whole four groups are fine with the EU or at least neutral, and unsurprisingly Regionalists favor political decentralization. The "most regionalist" parties are Spanish.

6.2 The rise of the radical right

A common belief, especially after the latest European Parliament election in 2024, is that the far right has been rising during the last years. Is this confirmed by the data? Indeed, this project proves that it is true. A quick proof is provided by observing the scatter plot during the years, with the dark blue points becoming more and bigger. In fact, by using the counter in the box plot area, we can see that the number of Radical Right parties was pretty stable between 1999 and 2014, then it increased from 20 parties in 2014 to 31 in 2019 and 43 in 2024 (the most numerous family). This is because of new far right parties being born and Conservative parties turning more radical, in fact the number of Conservative parties has decreased from 38 in 2014 to 22 in 2024. The line chart proves too that the Radical Right is nowadays more voted than ever.

6.3 Short study on Europeanism

The EU has faced in the past many challenges about its cohesion, with Euroscepticism even leading to Brexit. We saw that actually most political families are in favor of the European Union, with the Greens increasingly more Europeanist, and the general level of Europeanism seems stable enough; I would argue that, if there really is more Euroscepticism, that's because the Radical Right parties have had their share of votes increased.

Speaking of Brexit (2016), let's see the level of Europeanism in the UK. In 2014, most parties were in favor of the EU, except for the Conservatives. In 2019, the two main parties (Conservatives and Labourists) were more Eurosceptic, and both had increased their share of votes (especially the former). In 2024, their opinion about the EU remained stable, and the elections were won by the Labour party thanks to the Conservatives having their votes halved in favor of *Reform UK*, a Radical Right, highly Eurosceptic party.

One last fact is the difference between West and East Europe (made of countries who entered the EU more recently), and we can observe that Eastern nations are generally more in favor of the Union.

6.4 Some outlier parties

Thanks to the scatter plot (or while doing brushing/using filters), it's possible to see parties belonging to a family but being "far" from it; here's some examples.

- **BSW (Germany)** and **KSCM (Czechia)** in 2024: both Radical Left parties somewhat close to the Radical Right too, because of their conservative policies; the same happens also for some Socialist parties, like **SMER-SD (Slovakia)**, even though they are not as far from their faction as the Radical Left ones.
- **SDS (Bulgaria):** a Radical Right party that is very close to Liberal and Conservative parties. This is due to a switch to the Radical Right family in its most recent election, since in the previous years SDS was actually Conservative. With respect to 2014, the party's policies have changed a little, but not so dramatically to resemble most Radical Right parties.

7 Conclusion

European politics is a complex topic, and creating an application that can fully present all its facets and the challenges that the EU is facing is not an easy task. European Parties Explorer is just a small attempt at representing the politics of this complex but wonderful continent, and hopefully it can give at least a little help in better understanding Europe's recent history and politics.