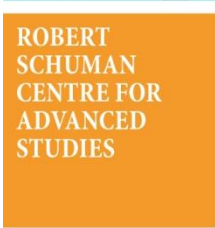




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EUDO - European Union Democracy Observatory

euandi

Project description and datasets documentation

Diego Garzia, Alexander H. Trechsel, Lorenzo De Sio
and Andrea De Angelis

European University Institute
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Abstract

In occasion of the European Parliament elections of 2014, EUDO launched **euandi** (reads: EU and I). The academic relevance of the euandi endeavour lies primarily in its choice to stick to the party positioning methodology already employed by the EU Profiler in 2009 as well as in the choice to keep as many policy items as possible in the 2014 questionnaire in order to allow cross-national, longitudinal research on party competition and voting behaviour in the EU across a five-year period. In this paper, we present the **euandi** project in a nutshell, the making of the questionnaire and the way in which political parties have been coded. Then, we illustrate the functioning of the application and the specifics of the resulting user dataset, comprising the opinions of 400.000 unique users that completed the euandi questionnaire during the six weeks preceding the EP elections of 2014.

Keywords

European elections, party placement, Voting Advice Applications

Introduction¹

Voting Advice Applications (hereafter: **VAA**s) are web-based tools that help users casting a vote in elections by comparing their policy preferences on major issues with the programmatic stances of political parties on such issues (for a comprehensive overview of the VAA phenomenon in a comparative perspective, see: Cedroni and Garzia, 2010; Garzia and Marschall, 2012; 2014). Respondents fill in a questionnaire marking their degree of (dis)agreement with a wide range of concrete policy statements. After comparing the user's profile with that of the parties included in the tool, the VAA provides an illustration of the degree of issue proximity between the user and the parties. VAAs attract users because they simplify the complex, multi-dimensional pre-electoral stances of political parties. Indeed, the tailor-made information on users' positions in the political landscape is enormously appreciated. Today, in countries such as Belgium, Finland, Germany, the Netherlands, and Switzerland the availability of one or more VAA during an electoral campaign can be taken for granted (for an overview of the spread of VAAs across Europe, see: Marschall, 2014). And they are rather extensively used by citizens. To give a few examples, in the run-up to the 2012 parliamentary election in the Netherlands, 4.9 million users resorted to the pioneering VAA *StemWijzer*. In absolute numbers, the German *Wahl-O-Mat* launched before the Federal elections of 2013 was consulted by the largest number of users ever, i.e., 12.3 million.

VAAs have not only been deployed on the national level. In the six weeks preceding the European elections of 2009, the transnational VAA *EU Profiler*, developed under the auspices of the European Union Democracy Observatory (EUDO) based at the European University Institute (EUI) in Florence, attracted over 2.5 million users and 900.000 completed user profiles. In 2009, the *EU Profiler* was awarded the World e-Democracy Forum Award for its "commitment to carry out meaningful political change through use of the Internet and new technologies". Apart from the aim to offer a tool that allows voters to inform themselves on the elections and the European political landscape, the *EU Profiler* team had a strong academic interest in gaining research data related to the European elections. The coding of over 270 European parties has in fact resulted in an immense database on the positions of European parties on current political issues (see: Trechsel and Mair, 2011). The opinions of almost one million users complemented one of the biggest datasets on European voters' attitudes and behaviour ever assembled. Research conducted by EUI members on *EU Profiler* generated data has led to numerous book chapters and articles published in highly-ranked journals such as *European Union Politics*, *Journal of Information Technology & Politics*, *Electoral Studies* and *Party Politics* (Alvarez *et al.*, 2014a; 2014b; Bressanelli, 2013; Bright *et al.*, 2014; Dinas *et al.*, 2014; Garzia *et al.*, 2014; Katsanidou and Lefkofridi, 2014; Rose and Borz, 2013; Sudulich *et al.*, 2014; Trechsel and Mair, 2011).

In occasion of the European Parliament elections of 2014, EUDO launched a new VAA: **euandi** (reads: EU and I). The academic relevance of the **euandi** endeavour lies primarily in its choice to stick to the party positioning methodology already employed by the *EU Profiler* in 2009 as well as in the choice to keep as many policy items as possible in the 2014 questionnaire in order to allow cross-national, longitudinal research on party competition and voting behaviour in the EU across a five-year period.

In the following sections of the paper, we present the **euandi** project in a nutshell, the making of the questionnaire and the way in which political parties have been coded. Then, we illustrate the functioning of the application and the specifics of the resulting user dataset, comprising the opinions of 400.000 *unique* users that completed the **euandi** questionnaire during the six weeks preceding the EP elections of 2014.

¹ Note that the **euandi** party dataset is already available at: <http://dx.doi.org/10.4232/1.12138>
The user dataset is expected to be made available to the research community in June 2015.

The euandi project in a nutshell

euandi is the first “Social VAA” ever developed. Available in 24 languages, it invites users to react to 28 policy statements covering a wide range of contemporary policy issues and political values in European politics, as well as to two policy statements specific to the user’s national political context. **euandi** provides voters with a clear view of the European electoral campaign and their individual positions within it. Not only does the tool help people identify which political parties represent their views, but it also provides an innovative platform for community building, where people from all over Europe can connect with each other based on their political views.

Figure 1. The euandi homepage



The **euandi** project was led by Professor Alexander H. Trechsel at the European University Institute (EUI) in Florence, Italy, in close collaboration with the Berkman Center for Internet and Society at Harvard University, directed by Professor Urs Gasser, and in cooperation with LUISS University, Rome. The technical partner involved in the development was RnD Lab, based in Milan, Italy. The project was overseen by an Executive Committee based at the EUI.² An International Advisory Board consisting of more than 40 of the world’s leading political scientists in Europe and the United States was actively linked to the project.³ The backbone of the project was represented by its twenty-eight country teams, including 121 highly trained and knowledgeable social scientists at the doctoral or post-doctoral level researching and coding the political parties featured in the tool. The majority of country teams’ members are currently affiliated with the EUI, but several collaborators

² The **euandi** Executive Committee consisted of: Alexander H. Trechsel (project leader), Stephan Albrechtskirchinger (media and outreach coordinator), Valentina Bettin (administrative coordinator), Lorenzo De Sio (technological and scientific coordinator), Diego Garzia (country-teams and scientific coordinator), Urs Gasser (legal and policy coordinator), and Ingo Linsemann (financial manager).

³ The full list is available online at: <http://www.eui.eu/Projects/EUDO/EUandI/InternationalAdvisoryBoard.aspx>

were based in other parts of Europe.⁴ More than a quarter of the coding personnel could be considered expert coders insofar as they had already worked for the EU Profiler project back in 2009.

During the six weeks preceding the EP elections, the **euandi.eu** website attracted over a million users across the EU. Its i-frame has been featured in the homepage of numerous national newspapers' websites including German *Frankfurter Allgemeine Zeitung*, Italian *La Repubblica* and *La Stampa*, Austrian *Der Standard*, Polish *Gazeta Wyborcza*, French *Le Nouvel Observateur*, and Swedish *Expressen* amongst others.

The **euandi** questionnaire

It goes almost without saying that the quality of **euandi** – as in any other VAA endeavour, for that matters – depends first and foremost on the content and formulation of its statements (Walgrave *et al.*, 2009; Lefevere and Walgrave, 2014; Van Camp *et al.*, 2014). This task was undertaken in close collaboration with the International Advisory Board of **euandi**. The first criterion was to look for statements that are politically relevant. Whether one likes Wagner more than Verdi cannot become a statement. However, whether same-sex marriage is a good idea or not is an excellent candidate for the tool (and it eventually became part of the 30 statements). It is a good statement as parties running in the campaign take up very different positions *vis-à-vis* the issue of same-sex marriage. And this is what we were looking for: statements on which there is disagreement between the parties. Furthermore, we wanted to cover the issues at stake in the European election campaign as broadly as possible. For this, we used the results of opinion polls, earlier party manifesto coding, experts, academics and journalists – we consulted many of these sources to find out what topics were important in these elections, what issues were hot, what areas of politics were going to become crucial in these elections. We tried nonetheless to maximize the amount of longitudinal data by choosing to keep 17 out of the 28 common questions of the *EU Profiler* (basically, we only excluded statements when it became clear that they lost relevance in the course of the last EP legislature).⁵ For the remaining 11 spots, we included highly salient topics (e.g., research on embryonic stem cells, personal privacy on the internet, Eurobonds). The resulting list of 28 common statements (see Table 1) encompasses a highly balanced set of political issues, grouped into nine areas covering a large proportion of contemporary democratic policy making and attitudes toward politics in the 28 EU member states. The detailed list of country-specific statements is provided in Appendix A.

⁴ The full list is available online at: <http://www.eui.eu/Projects/EUDO/EUandI/CountryTeams/Index.aspx>

⁵ When compiling the final list of statements, we tried for as much as possible to take into account the findings from the emerging literature on content and formulation of VAA statements. On these grounds, we excluded two statements from the 2009 set (no. 4 and 18) in the light of the useful criticisms outlined by Gemenis (2013b). In spite of Van Camp *et al.*'s (2014) suggestion regarding double-barrelled statements, we decided to keep quite a few such items based on two major reasons – the most obvious one being longitudinal comparability. The second reason departs from Gemenis' idea that presenting policy alternatives in terms of trade-offs is “a legitimate concern when asking about spending preferences” (Gemenis, 2013b: p. 272). We extended this logic to other domains such as environmental policies that – in absence of a clear trade-off (e.g., support of renewable energies can only come with increased energy costs, at least in the short-term) – would turn a given issue statement into a *valence* (and thus unsuitable) issue statement. Finally, the lack of concreteness on behalf of some of the statements represented the only way in which a common questionnaire of 28 statements could be fruitfully applied to as many as 28 different national political contexts. The loss in concreteness is widely compensated by the high generalizability that makes some of the statements (e.g., “Immigrants from outside Europe should be required to accept our culture and values”, “European integration is a good thing”) especially useful for comparative party research.

Table 1. The euandi questionnaire (common statements)

Welfare, family and health

1. **Social programmes should be maintained even at the cost of higher taxes**
2. It should be harder for EU immigrants working or staying in [your country] to get access to social assistance benefits than it is for [your country's] citizens
3. Pension benefits should be reduced to limit the state debt in [your country]

Migration and immigration

4. To fight the problem of illegal immigration, the European Union should take responsibility for patrolling its borders
5. **Immigration [into your country] should be made more restrictive**
6. **Immigrants from outside Europe should be required to accept our culture and values**

Society, religion and culture

7. **The legalisation of same sex marriages is a good thing**
8. Embryonic stem cell research should be stopped
9. **The legalisation of the personal use of soft drugs is to be welcomed**
10. **Euthanasia should be legalised**

Finances and taxes

11. **Government spending should be reduced in order to lower taxes**
12. **The EU should acquire its own tax raising powers**
13. Bank and stock market gains should be taxed more heavily

Economy and work

14. **Governments should reduce workers' protection regulations in order to fight unemployment**
15. The state should provide stronger financial support to unemployed workers
16. The EU should relax its austerity policy in order to foster economic growth

Environment, transport and energy

17. **The promotion of public transport should be fostered through green taxes (e.g. road taxing)**
18. **Renewable sources of energy (e.g. solar or wind energy) should be supported even if this means higher energy costs**

Law and order

19. Restrictions of personal privacy on the Internet should be accepted for public security reasons
20. **Criminals should be punished more severely**
21. Access to abortion should become more restricted

Foreign policy

22. **The European Union should strengthen its security and defence policy**
23. **On foreign policy issues the EU should speak with one voice**

European integration

24. **European integration is a good thing**
25. To tackle the sovereign debt crisis, the member states of the Eurozone should be allowed to issue common bonds (Eurobonds)
26. The single European currency (Euro) is a bad thing
27. **Individual member states of the EU should have less veto power**
28. **Any new European Treaty should be subject to approval in a referendum in [your country]**

Note: Items taken from the *EU Profiler* questionnaire are presented in **bold**.

In terms of dimensionality, the results of the factor analysis of parties' positions presented in Table 2 highlight that the large majority of items load onto three major factors corresponding to the economic left-right (Factor 1), the pro-anti EU continuum (Factor 2), and a progressive-conservative dimension (Factor 3). Interestingly, the items on immigration from outside the EU (no. 4 and 5) do not seem to group with any other factor, and so do environmental issues (no. 17 and 18). Only one item (no. 3 on limitation of pension benefits) does not appear to group with any of the other issues.

Table 2. Factor analysis of euandi policy statements (party dataset)

#	Item (short description)	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1	Maintain social programmes	0.75	0.06	0.32	-0.18	0.21
2	Limit welfare for immigrants	-0.33	-0.39	-0.39	0.39	-0.22
3	Reduce pension benefits	-0.16	0.11	0.07	-0.10	0.10
4	EU should patrol borders	-0.08	0.47	-0.07	0.66	0.02
5	Restrictions to immigration	-0.15	-0.35	-0.28	0.72	-0.22
6	Acceptance of our values	-0.39	0.03	-0.60	0.31	-0.24
7	Same-sex marriages good	0.14	0.20	0.82	-0.19	0.16
8	Stop stem cell research	0.06	-0.11	-0.88	0.00	-0.14
9	Legalise soft drugs	0.56	-0.09	0.47	-0.10	0.07
10	Legalise euthanasia	0.30	0.25	0.64	0.22	0.06
11	Reduce gov't spending	-0.68	0.20	-0.20	0.23	-0.20
12	EU tax-raising powers	0.52	0.54	0.34	0.08	0.07
13	Tax stock market gains	0.81	0.02	-0.15	0.01	0.20
14	Reduce workers' protection	-0.75	0.02	-0.12	0.11	-0.05
15	Increase support for unemployed	0.57	-0.03	0.25	-0.36	0.24
16	Relax austerity policies	0.84	0.00	0.03	-0.05	0.12
17	Promote public transport	0.22	0.11	0.25	-0.12	0.81
18	Support renewable energies	0.28	-0.03	0.21	-0.13	0.81
19	Accept privacy restrictions	-0.37	0.17	-0.03	0.49	-0.27
20	Punish criminals more severely	-0.41	-0.20	-0.36	0.34	-0.18
21	Restrict access to abortion	-0.13	-0.37	-0.73	0.31	-0.13
22	Strengthen EU defence policy	-0.20	0.90	0.03	0.14	0.07
23	One voice for EU foreign policy	-0.12	0.90	0.08	0.07	0.05
24	European integration is good	0.07	0.85	0.25	-0.18	0.06
25	Introduce Eurobonds	0.65	0.39	0.41	-0.01	-0.11
26	Euro is a bad thing	-0.08	-0.88	-0.16	0.01	0.15
27	Less veto power for member states	0.41	0.74	0.23	0.05	0.01
28	Referendum for any new EU treaty	0.37	-0.54	-0.02	0.27	-0.16
variance explained (%)		33.7	17.9	8.0	7.2	4.9

Note: Principal Component Analysis with *Varimax* rotation.
 Entries in **bold** represent the largest coefficient in the respective row.

The iterative method of party positioning: When parties (also) position themselves

Throughout the years, political scientists have devised a multitude of techniques to position political parties on various ideological and policy/issue dimensions. (for a comprehensive overview, see: Marks, 2007). So far, however, none of these techniques has been able to impose itself as the *gold standard* in party positioning endeavours (Pennings, 2011). Particularly troublesome, in this respect, is the still unsuccessful quest for a sound methodology to place political parties across countries and time (Mair, 2001).

A frequently used methodology in the earliest works in the field takes as point of reference the perceptions of party positions that are held by party supporters. Both Klingemann and Inglehart (1976) and Sani and Sartori's (1983) attempts to compare party systems in left-right terms were based on the self-placement of voters of the various parties under analysis. Evidently, what matters here is not the "real" position of the parties, but rather the way in which this position is perceived – and presumably acted upon – by their voters.

A relatively more objective assessment would seem to be provided by elite surveys. Starting with Daalder and van der Geer's (1973) analysis of Dutch parliamentary parties, the discipline has widely resorted to the expertise of political parties themselves. This methodology bears clear advantages *vis-à-vis* voters' self-placement, but it comes with problems too. For one thing, the very nature of political parties as non-unitary actors is likely to result in diverging estimates depending on whom is involved in the process of calibration (e.g., party leadership, campaign management, individual MPs). Strategic considerations might also hinder the validity and transparency of the estimates. For instance, large and established parties may have strong incentives to blur their position rather than clarifying it, particularly if currently in office (Krouwel and van Elfrinkhof, 2013). Results are also very much likely to be affected by the timing within the electoral cycle of the study. Especially during election campaigns, parties have strong incentives to alter their real positions by portraying them in the most appealing way for voters. As we shall see, the international literature on VAAs pullulates of many such examples (for a review, see: Garzia *et al.*, 2014).

For all these reasons, the discipline has moved away from the idea that party positions should be measured on the basis of internal party expertise, and moved towards academically-driven techniques, most notably expert surveys (Castles and Mair, 1984; Ray, 1999; Benoit and Laver 2006; Steenbergen and Marks, 2007; Hooghe *et al.*, 2010; Bakker *et al.*, 2015) and manifesto coding (Budge *et al.*, 2001; Klingemann *et al.*, 2006). In both cases, party positions are established by professionals outside the parties: qualified researchers in the case of expert surveys, expert coders in the case of manifesto studies. Both techniques bear advantages as well as drawbacks (Benoit and Laver, 2007). With respect to the former, the experts that are assigned the task of positioning parties are asked to do so in light of their demonstrable knowledge in the field, but they are *not* asked to justify their placings nor to cite evidence in support of their analytical choices. Consensus among experts is more easily achieved in the case of established, large and moderate parties *vis-à-vis* relatively newer, smaller or more extreme parties (Marks *et al.*, 2007). A number of reasons make longitudinal analysis of party placements especially complicated, and in particular when researchers are asked at once to place parties in the present as well as in given point(s) in the past (Krouwel and van Elfrinkhof, 2013). This issue has been successfully addressed by the Chapel Hill Expert Survey (CHES) series, where different sets of experts are asked to place political parties on a number of policy dimensions at intervals of four years. However, "[w]hile it is an advantage that expert surveys can be administered at any time, this does not impede the comparability of the results if the time points within election cycles across and within countries differ" (Krouwel and van Elfrinkhof, 2013: p. 1458) but it certainly decreases the cross-national reliability of the estimates.

Manifesto coding is apparently more transparent: the codes used are in fact attributed to publicly available party documents. Even in this case, however, it is not always straightforward (and at times

not possible) to trace the coder's decision to employ a specific coding category to a concrete piece of text. The best-known cross-national endeavour in party positioning that makes use of this technique is the Comparative Manifesto Project (CMP). This, however, has not gone without critiques. To begin with, the whole CMP project is based on the doubtful assumption that position can be inferred through saliency – two parties placing the same amount of emphasis on a given issue will be automatically assigned the same position (Gemenis, 2013a). Moreover, inter-coder reliability has been shown to be very low (Benoit *et al.*, 2009). The longitudinal character of this study (an asset, in itself) forces coders to use issue categories developed in the early waves of the study dating back to the 1970s that have become progressively irrelevant in the political competition. In other words, higher levels of miscoding are likely to be plaguing the *most recent* waves of the study (Krouwel and van Elfrinkhof, 2013). Automated content analysis techniques such as Wordscores performs no better overall. According to Lowe (2008), it is unclear what assumptions the method makes about political text and how to tell whether they fit particular text analysis applications. More simply put, these analyses, albeit fully replicable and thus reliable, lose in validity insofar as words are just taken out of context.

Most recently, a novel method of placing political parties has appeared, in connection with the spread of VAAs. As in the case of academic party placement, early VAAs have primarily resorted to elite surveys (e.g., *Stemwijzer*, *Wahl-O-Mat*) and to a lesser extent to large-*n* surveys of social and political scientists (e.g., *Irish Pick Your Party*, *Italian Itanes VoteMatch*) to gauge parties' position on the various policy statements. Until recently, however, these techniques have been used in isolation with one to another, with the unfortunate consequence that parties have been able to “manipulate” their position in absence of an impartial check by expert observers (for the often quoted case of CDA in the Dutch election of 2006, see: van Praag, 2007; see also: Walgrave *et al.*, 2008 for the case of Belgium, and Raimonaite, 2010 for the case of Lithuania). To avoid these drawbacks, an *iterative* method, consisting in a combination of expert judgement and party self-placement has been pioneered by the Dutch VAA *Kieskompas* (Krouwel *et al.*, 2012), it has been exported in numerous countries in Europe and beyond in later years (for a review, see: Krouwel *et al.*, 2014), and it has been then applied to a supranational (European) election with the *EU Profiler* in 2009 (Sudulich *et al.*, 2014). The iterative method attempts to maximize the strengths of a combination of consolidated methodologies while at the same time trying to counterbalance the respective weaknesses. Expert coding and party self-placement take place independently, but the respective results are then compared in order to introduce a control mechanism. In the case of the *EU Profiler*, teams of experts and parties agreed on over 70 percent of the placements already at the first round. The further possibility to interact with the parties in the so-called “calibration” stage led the percentage of agreement between the parties and the team of coders to about 95% (Trechsel and Mair, 2011). The coding process itself goes beyond the exclusive reliance on the current election manifesto by encompassing a hierarchy of sources (e.g., statements by leading figures, party's internet website, previous party manifestos, and so on) in order to reduce the likelihood that a party cannot be placed on a given policy statement. Moreover, all texts that are taken into account by the expert coders are made publicly available so that each coding choice can remain always verifiable.⁶ At the very same time, the inclusion of parties in the process reduces the bias inherent to expert-placing small and new parties, which are likely to know more about themselves than expert coders usually do (see above). As VAAs are *always* developed in proximity to elections, concerns about the bias induced by the timing within the electoral cycle (as it is the case with CHES and similar cross-national endeavours) are virtually set to zero.

With more than 270 parties from across the entire EU coded *simultaneously* on as many as 30 different policy statements in view of the 2009 EP elections, the *EU Profiler* project represented a breakthrough in cross-national party research (Trechsel and Mair, 2011). As a matter of fact none of the available expert and manifesto coding exercises carried out until then were checked with the many

⁶ In this respect, the *EU Profiler* is considered "a best practice example as it allows users to see the exact statements (and their source) that have been used to code each party position" (Gemenis 2013b: p. 288).

parties involved in the development of the VAA. Indeed, a crucial – if not *the* crucial – issue involved in this methodology lies in the willingness of the parties to participate to the coding process. 103 parties used the opportunity to position themselves in the *EU Profiler*, “a remarkably high 37.6 percent response rate” (Trechsel and Mair, 2011: p. 13). As Gemenis and van Ham (2014) note correctly, “[w]ithout the full and unfettered cooperation of political parties, the...method cannot work as originally intended” (p. 36). Considering that the *EU Profiler* project represented “the first time that parties themselves have been involved in a cross-national effort to identify their policy positions”, Trechsel and Mair (2011) suggest that “more use might be made of their input in similar exercises in the future” (p. 13).

In 2014, the task of making more use of parties’ input has been taken up by the **euandi** project, which was able to substantially increasing the proportion of political parties involved to levels so far never achieved by any cross-national party positioning endeavour. A number of reasons help explaining why more than a half of the 242 parties included in the VAA took part in the coding process: the increased relevance of VAAs in the electoral process in a growing number of European democracies (and therefore the familiarity with the method among parties), an increasing expertise among the research teams, the massive spread of (relatively cheap) internet-based technologies necessary to share large amounts of information (e.g., SurveyMonkey) and to undertake multiple rounds of communication on a transnational scale (e.g., Skype). Several transnational VAAs have been offered to European voters during the 2014 campaign. However, only **euandi** offered voters the possibility to compare their political preferences with the positions estimated *in collaboration* with the political parties.⁷ Not only did **euandi** use the very same methodology for party placing successfully deployed in *EU Profiler*. In fact, the academic team of the project decided to replicate as many policy items as possible from the 2009 questionnaire in the 2014 edition of the VAA. In this way, we are now able to provide the political science community with an unique dataset featuring the policy positions of hundreds of political parties in two consecutive EP elections estimated *in collaboration with the parties themselves*.

The **euandi** team tried to be as inclusive as possible and the exclusion of a party was only considered if a range of opinion polls strongly suggested that the party would not win a single seat in the election. Almost every party that currently had a seat in the European Parliament or national parliaments and that was polling to win at least one seat in the EP has been included.⁸ In the end, the parties included in the tool amounted to 242 ($M=8.6$ per country) which, multiplied by 30 statements, makes the number of individual codings available in the **euandi** dataset equal to 7260 ($M=60$ per coder). The full list of political parties included in the tool is presented in Appendix B.

⁷ Among the major transnational VAAs for the 2014 EP elections, we note that *MyVote2014.eu* placed national parties based on the roll-call behavior of their respective MEPs, while the *VoteMatch Europe* consortium did not uniform the different methodologies employed by the single national partners, thus rendering their party placements virtually useless for comparative research. *EU Vox* pioneered the use of the Delphi method in a transnational VAA. The method has been proven to bear advantages *vis-à-vis* conventional expert surveys but no evidence would seem to point towards the idea that it is in anyway superior to the iterative method (see: Gemenis and van Ham, 2014). While increasing the level of consensus among the experts, it must be also noted that the Delphi method excludes from the process one of the key contributors to the quality of the data – the parties themselves.

⁸ After the launch of the VAA on April 16, 2014, a number of parties manifested their discontent with the project leadership’s choice to exclude them. The Estonian Whistleblowersparty (in Estonian: *Euroopa Vilepuhujate Partei*) led by the Dutch citizen Joeri Wiersman did “blow the Whistle...in the interest of democracy and an independent and objective Vote advisory” (email communication with the **euandi** project leadership). In the light of their exclusion, Slovenian ZARES reported to the country team leadership their unhappiness with the “unsubstantial” replies received and informed of their intention to forward them to the Institute for Electronic Participation (INePA) for evaluation. Incidentally, the head of INePA happened to be also member of the Slovenian country team. It is worth noting that neither of these parties reached the minimum threshold of 1 percent that we considered the minimal requirement for targeting inclusion in the VAA. Indeed, only fourteen parties (six of which from Spain) that eventually gained a seat in the 8th EP Legislature have not been featured in **euandi**.

All these parties were given the opportunity to react to the 30 statements and provide their self-placement. The **euandi** team prepared a message in the corresponding country’s language and contacted by email all the parties targeted for inclusion. The invitation email went off simultaneously on February 10, 2014. In the email, parties were invited to fill in an online SurveyMonkey questionnaire, motivating their choices by supplying supporting material. Information on the name of the person filling out the survey, the person’s position in the party and his/her contact details were also sought. The initial deadline given to the parties to complete the survey was March 10. In many cases, however, an extension was sought by those parties whose EP election programme had not yet been released. Eventually, the deadline was extended to April 1. Whenever a party carried out its own self-placement and documented its positions thoroughly and convincingly, its coding became final. In parallel, the country teams proceeded to code parties’ positions. Our experts were asked to specify what documentation they had used in order to place parties. They were invited to use eight types of sources hierarchically ordered – the top being the party’s own EP election manifesto. In instances where the party has not printed any opinion, the researchers referred to other party manifestos, party websites, statements in the media and other secondary sources. As coding reliability depends to a substantial extent on the type of documents used (Gemenis, 2013a) we note that the majority of party positions coded in **euandi** are based on the “best” sources: the EU election manifesto 2014 of the national party, the party election platform, the current/latest national election manifesto, and other programmatic and official party documentation (see Table 3). When such sources were not available, a major source of information was represented by recent interviews and media coverage (17 percent of the total). Only upon necessity, our coders resorted to actions and statements of members of parliament and government (10 percent) and to various other sources from before 2013 (4 percent).

Table 3. Hierarchy of data sources

		%	N
<i>i.</i>	EU Election Manifesto 2014 of national party	14	(1051)
<i>ii.</i>	Party Election Platform	10.8	(815)
<i>iii.</i>	Current/latest national election manifesto	16.6	(1244)
<i>iv.</i>	EU Election Manifesto 2014 of Europarties	3.2	(238)
<i>v.</i>	Other programmatic and official party documentation	16.9	(1272)
<i>vi.</i>	Actions/statements of party representatives in government and parliament	9.5	(715)
<i>vii.</i>	Interviews and other coverage in media outlets in 2013-2014	13.0	(979)
<i>viii.</i>	Older Election Manifestos, party documentation, statements and interviews	4.4	(334)
<i>ix.</i>	Other	11.5	(868)
	Total	100	(7516)

Note: Total N exceeds 7260 because coders could use multiple sources when coding a party on a given statement. In case of parties coded “no opinion” on a given statement ($N=1137$) no source was provided.

When the party self-placement and the expert coding were completed, the two results were compared during the so-called *calibration* stage. Where there were discrepancies, the party was asked to provide more support for its declared position, and a final answer was identified. Where parties declined the invitation, country teams took care of positioning the parties based on the available documentation. The results of the expert coding were then submitted to all parties, independently of them having previously cooperated with **euandi** or not. Parties were offered the choice to engage once more with the country team in case of disagreements. One third of the parties who already took part in the self-

placement exercise took advantage of this further possibility. A number of parties (i.e., 5 percent of the total) not previously involved in the self-placement engaged with the country team only at the calibration stage (see Table 4).

Table 4. Degrees of cooperation

	%	N
Parties who took part in <i>self-placement</i> and <i>calibration</i> stages	17	(41)
Parties who took part only in the <i>self-placement</i> stage	33	(80)
Parties who took part only in the <i>calibration</i> stage	5	(12)
Parties who did not cooperate at all	45	(109)
Total	100	(242)

More than a hundred parties simply ignored our repeated attempts to get in contact with them. In a very few instances, parties actively self-excluded themselves on different grounds.⁹ Nevertheless, the *majority* of political parties targeted for inclusion in the tool accepted to take part in either the self-placement and/or the calibration stages, thanks also to the sustained efforts brought about by the **euandi** country teams. Overall, 55 percent of all the parties contacted by the **euandi** team engaged in this cooperative endeavour.

Admittedly, the road has been long and, at times, winding. Several parties asked (without success) for changes in the question wording, while a number of others insisted on the request to be coded *separately* from other partners in their respective electoral alliances.¹⁰ Some parties openly disagreed with our coding methodology and argued that, if any, they are the ones to know their position best. Our country teams tried to persuade the parties of our willingness to accept their opinions only as long as these opinions could be documented on the basis of publicly available information. While in most cases our country team leaders could settle down the issue, some parties threatened (again, without success) to “withdraw” from **euandi**, as it was the case with Danish liberal party *Venstre*. The Greek party *Dimiourgia Xana!* even threatened the project leadership with taking up legal actions in case **euandi** did not comply with their self-placement straight away. Except for these few examples, however, the largest part of the endeavour took place in a collaborative way. Some parties even came to change their position after interaction with the country teams, who argued convincingly (based on the party’s documents) in favour of their original coding choices (e.g., Czech *Piráti*). In other instances, our coders found themselves in the position of igniting a process of deliberation within the parties that led them to turn a non-attitude into an actual policy position. Finland’s *Pirate Party*, for instance, launched a web-survey among its EP candidates to identify a unitary party position in response to our self-placement questionnaire. In Slovenia, *Solidarnost* even admitted they had not taken a position on certain questions yet, and asked its self-positioning to be taken as indicative of their positions. The country team agreed to the party drawing up a list of newly taken positions and to the party sending in an official document that could be quoted. The Croatian *Nacionalni Forum* – a new party formed only in early 2014 – stated that our expert coding, based on the few public documents the team could find, would misrepresent them since they had opinions about all the

⁹ It is worth noting the explanation provided by the electoral alliance of the two Christian Dutch parties, *Christen Unie* and *Staatkundig Gereformeerde Partij*, who declined our invitation to the self-placement as they did not see the point of another VAA being offered to Dutch voters.

¹⁰ For instance, Croatia’s *Nacionalni Forum*, part of an electoral cartel with the social-liberal party *HSL*, forcefully asked not to be coded as a coalition. As they argued, their electoral alliance was to be considered a one-time coalition among partners that have few common ideas and prospects of working together in the future.

statements, but simply did not have the chance to express them so far. Also in this case, the country team accepted that the party could answer all the statements, together with a relatively elaborate explanation of their stances. The party also agreed that their complete answers to the **euandi** survey would have been made available on the party's website.

Table 5 presents a longitudinal analysis of response rates by country and year (data relative to 2009 is referred to the *EU Profiler* project). If one looks separately at the top and the bottom panel of the table, relative to Western Europe and Central and Eastern Europe (CEE) respectively, it can be observed that already in 2009 half of the Western parties took part in the process. In the East, this figure was not even half as high (23 percent). In 2014, both sides of the Union have increased their figures. Yet, while the percentage increase is “only” 11 percent in the case of Western countries, the figure gets more than doubled in CEE countries. Among individual countries, we single out Austria as the only country in which all parties took part in the 2014 coding, a tribute in particular to the efforts of the Austrian team leader, Zoe Lefkofridi. Very high cooperation rates are also reported in Sweden and the Benelux countries – the Netherlands, Belgium, and Luxembourg. The latter also scores among those countries with the highest proportional growth in terms of participation (+50 percent) together with Ireland and Italy. In CEE, the most cooperating country is Estonia, where 6 out of 7 parties (85.7 percent) cooperated. Hungarian and Slovenian teams have also been able to involve over two thirds of the targeted parties in the process. The best proportional increase, however, comes from Lithuania, where not a single party cooperated in 2009. In 2014, more than half of Lithuanian parties took part in the coding. Romania remains the only country featuring the participation of no party whatsoever in either project.

Overall, **euandi** increased the figures of *EU Profiler* up to 55 percent. Never before a transnational party positioning exercise coded so many parties (242, and on as many as 30 issue statements) in collaboration with the *majority* of the parties involved.

Table 5. Cooperation rates across EU countries, 2009-2014

	2009		2014		%
	%	N	%	N	DIFF.
Austria	66.7%	(6)	100.0%	(6)	+33.3%
Belgium	76.9%	(13)	91.7%	(12)	+14.8%
Cyprus	100.0%	(6)	62.5%	(8)	-37.5%
Denmark	66.7%	(9)	50.0%	(8)	-16.7%
Finland	83.3%	(12)	70.0%	(10)	-13.3%
France	12.5%	(16)	30.0%	(10)	+17.5%
Germany	50.0%	(10)	61.5%	(13)	+11.5%
Greece	42.9%	(7)	33.3%	(12)	-9.6%
Ireland	14.3%	(7)	66.7%	(6)	+52.4%
Italy	12.5%	(8)	63.6%	(11)	+51.1%
Luxemburg	37.5%	(8)	87.5%	(8)	+50.0%
Malta	50.0%	(4)	33.3%	(3)	-16.7%
Netherlands	81.8%	(11)	91.7%	(12)	+9.9%
Portugal	8.3%	(12)	12.5%	(8)	+4.2%
Spain	63.6%	(11)	75.0%	(4)	+11.4%
Sweden	72.7%	(11)	90.0%	(10)	+17.3%
United Kingdom	8.3%	(24)	23.1%	(13)	+14.8%
Total West	49.9%	(175)	61.3%	(154)	+11.4%
Bulgaria	37.5%	(8)	25.0%	(8)	-12.5%
Croatia	14.3%	(7)	57.1%	(7)	+42.8%
Czech Republic	22.2%	(9)	50.0%	(10)	+27.8%
Estonia	50.0%	(8)	85.7%	(7)	+35.7%
Hungary	66.7%	(6)	83.3%	(6)	+16.6%
Latvia	0%	(9)	14.3%	(7)	+14.3%
Lithuania	0%	(9)	57.1%	(7)	+57.1%
Poland	22.2%	(9)	37.5%	(8)	+15.3%
Romania	0%	(5)	0%	(9)	-
Slovakia	0%	(6)	30.0%	(10)	+30.0%
Slovenia	44.4%	(9)	66.7%	(9)	+22.3%
Total CEE	23.4%	(85)	46.1%	(88)	+22.7%
TOTAL EU28	39.5%	(260)	55.0%	(242)	+15.5%

Note: Data for 2009 comes from: Trechsel and Mair, 2011.

In 2014, not even the EP family of the party could discriminate substantially in terms of participation (see Table 6). Whereas in 2009 only the parties belonging to the Greens/EFA group reported participation figures above 50 percent, this time virtually all major groups (i.e., ALDE, EPP, Greens/EFA, GUE/NGL, S&D) scored above that threshold.

Table 6. Cooperation rates across EP party groups, 2009-2014

	2009		2014		% DIFF.
	%	N	%	N	
ALDE	39.4%	(33)	68.8%	(32)	+29.4%
ECR	-	-	35.0%	(20)	-
EFDD	-	-	18.2%	(11)	-
EPP	24.1%	(58)	48.9%	(45)	+24.8%
Greens/EFA	65.5%	(29)	66.7%	(33)	+1.2%
GUE/NGL	22.2%	(27)	65.2%	(23)	+43.0%
S&D (PES in 2009)	34.2%	(38)	58.8%	(34)	+24.6%
All Others	46.7%	(75)	52.3%	(44)	+9.6%

Note: Data for 2009 comes from: Trechsel and Mair, 2011.

The complete irrelevance of the East/West divide as well as the belonging to a specific party family is more rigorously shown by the results of a logistic regression where the dependent variable measures whether a party agreed to participate in the coding (see Table 7). The inclusion of further party-level variables such as their electoral size or their government/opposition status does not increase in a statistically significant way our ability to predict if a party decided to take part in the coding. Indeed, the key finding comes from VAA-related variables. Clearly, parties operating in political systems where VAAs have nowadays turned into a major campaign player are more likely to take part in the coding effort.¹¹ This finding generates further encouragement for future coding efforts in this direction, in the light of the ongoing spread of VAAs across Europe. We find that also coders' skills do make a difference. Country teams involving *expert coders* were statistically more likely to involve a higher number of parties in the coding process.¹² Note that no statistically significant correlation [$r=-.03$, $p=.68$] exists between the number of experienced coders in a team and the familiarity with VAAs in the respective country. Good coders do not need to come necessarily from VAA countries.

¹¹ For illustrative purposes, a given country's familiarity with VAAs is rather crudely measured by a dummy that codes "1" all parties in those countries where Masrshall (2014) witnessed the existence of a VAA capable of reaching at least 10 percent of the eligible voting population in the country, and "0" all other parties. The countries thus considered familiar with VAAs are: Austria, Belgium, Estonia, Finland, Germany and the Netherlands.

¹² Expertise of the team is measured through a numeric value shared by each party in a given country and equal to the number of coders in the respective country team who also worked for the *EU Profiler* in 2009 (31 coders in total, an average of 1.29 per team with standard deviation of 1).

Table 7. The determinants of cooperation. Logistic regression analysis

West/East	-.21	(.32)
Party Size (EP 2014)	-.01	(.02)
In Government	-.23	(.37)
<i>EP Party Family (Ref. Category: Non-Inscrits)</i>		
ALDE	.56	(.54)
ECR	-.83	(.62)
EFDD	-1.71	(.93)
EPP	-.02	(.50)
Greens/EFA	.54	(.52)
GUE/NGL	.46	(.57)
S&D	.43	(.54)
# of Expert Coders in the Team	.51	(.15)**
Country's familiarity with VAAs	1.64	(.40)***
Constant	-.74	(.42)
Nagelkerke's Pseudo R-squared		.25
N		242

Note: Table entries are binary logistic regression *b* coefficient estimates (standard error in parentheses)
 *** $p < .001$, ** $p < .01$

The user experience

After selecting in which country they wanted the comparison to take place and the app's language (in every instance, English was available next to the country's official language/languages) users could react to the 30 issue statements included in the tool by stating their level of agreement on a standard five-point scale ranging from 'completely agree' to 'completely disagree' plus a 'no opinion' option (see Figure 2).

Figure 2. Example of a euandi statement

The screenshot shows a survey interface. At the top, a dark blue progress bar contains numbers 1 through 30, with the number 1 highlighted in orange. Below the progress bar, the text "Welfare, family and health" is displayed. The main content area features the statement: "Social programmes should be maintained even at the cost of higher taxes". At the bottom right of the statement area, there is a blue link labeled "no opinion". Below the statement, there are five response buttons: "completely agree", "tend to agree" (which is highlighted in a darker blue), "neutral", "tend to disagree", and "completely disagree".

After reacting to the thirty statements, users were also allowed to mark in turn the issues they deemed "most important" and "least important" to them (see Figure 3). This information is then taken into account by the calculation algorithm (see below) in order to give greater emphasis to the positions weighted by the user as being "most important", and less emphasis to those weighted as "least important". Before being presented with the results, users were also asked about the probability that they will *ever* vote for each of the national parties included in the tool (i.e., standard PTV question on a 0-10 scale, ranging from "not at all probable" to "very probable") as well as their basic socio-demographic characteristics (i.e., age category, gender, and level of education). Note that none of these information were taken into account during the calculation of the result, and users could skip these questions at any time (see Figure 4).

Figure 3. Assigning saliency to the issue statements

You can indicate which are the **most important issues**

<input type="checkbox"/> Social programmes	<input type="checkbox"/> Immigration into welfare	<input type="checkbox"/> Pension benefits
<input type="checkbox"/> Illegal immigration	<input type="checkbox"/> Restrictions to immigration	<input type="checkbox"/> Acceptance of our values
<input type="checkbox"/> Same-sex marriages	<input type="checkbox"/> Stem cell research	<input checked="" type="checkbox"/> Soft drugs
<input type="checkbox"/> Euthanasia	<input type="checkbox"/> Taxes Vs. Spending	<input type="checkbox"/> EU tax-raising powers
<input type="checkbox"/> Stock market gains	<input type="checkbox"/> Workers' protection regulations	<input type="checkbox"/> Support for unemployed
<input type="checkbox"/> Austerity policies	<input type="checkbox"/> Public transport	<input type="checkbox"/> Renewable energies
<input type="checkbox"/> Privacy restrictions	<input type="checkbox"/> Criminality	<input type="checkbox"/> Abortion
<input type="checkbox"/> EU defence policy	<input type="checkbox"/> EU foreign policy	<input type="checkbox"/> European integration
<input type="checkbox"/> Eurobonds	<input type="checkbox"/> Single European currency	<input type="checkbox"/> Member states' veto power
<input type="checkbox"/> Approval of EU treaties	<input type="checkbox"/> immigration crime	<input type="checkbox"/> no financing parties

Reset **Continue**

Figure 4. Users' propensity to vote for (national) parties

How probable is it that you will ever vote for the following parties?
 Note that your answers will not affect your final results. You can skip at any time

[Skip](#)

		NOT AT ALL PROBABLE VERY PROBABLE										
		0	1	2	3	4	5	6	7	8	9	10
M5S		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NCD		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LN		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UDC		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FdI-AN		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PD		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FI		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tsipras		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SE-ALDE		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IdV		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GrI		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

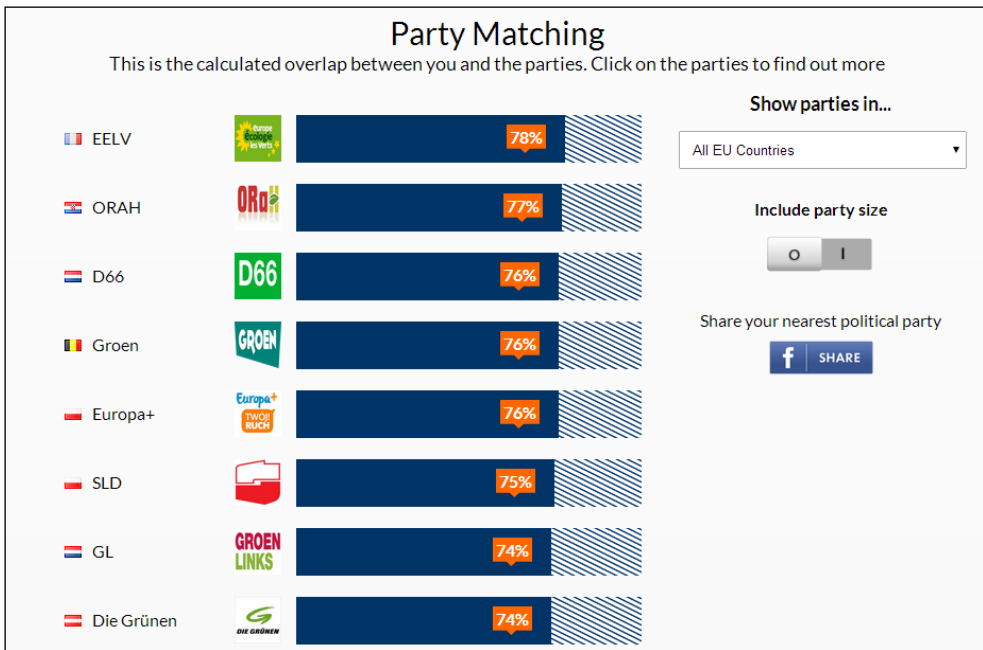
Continue

The **euandi** algorithm then calculates the degree of proximity or *match* (in percentage points) between the answers provided by the user and the position of all parties included in the application. The full calculation procedure is presented in Appendix C. The user's political profile can be examined in relation to the political parties of a given nation as well as with parties from the entire European Union (see Figure 5).

Figure 5a. "Party Matching" visualization: National parties



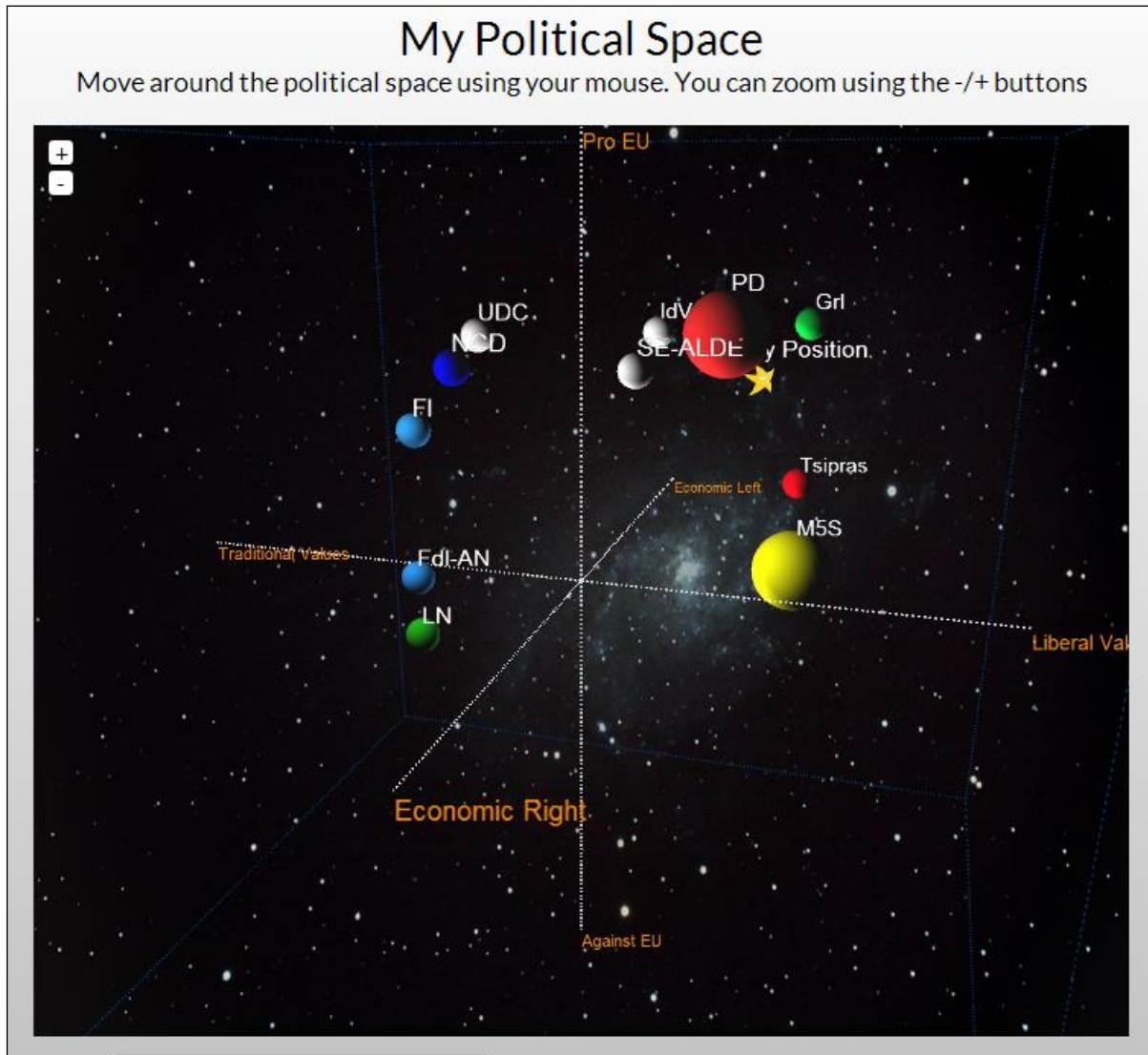
Figure 5b. "Party Matching" visualization: Parties in the EU



One of the most technologically innovative features of **euandi** is the possibility for users to explore in interactive fashion the "political space" of each EU member state as well as their positioning within it (see Figure 6). This three-dimensional space is structured around the major dimensions of political

competition in Europe: economic left-right continuum, pro-anti EU integration continuum, and traditional-liberal continuum.¹³

Figure 6. "My Political Space" visualization

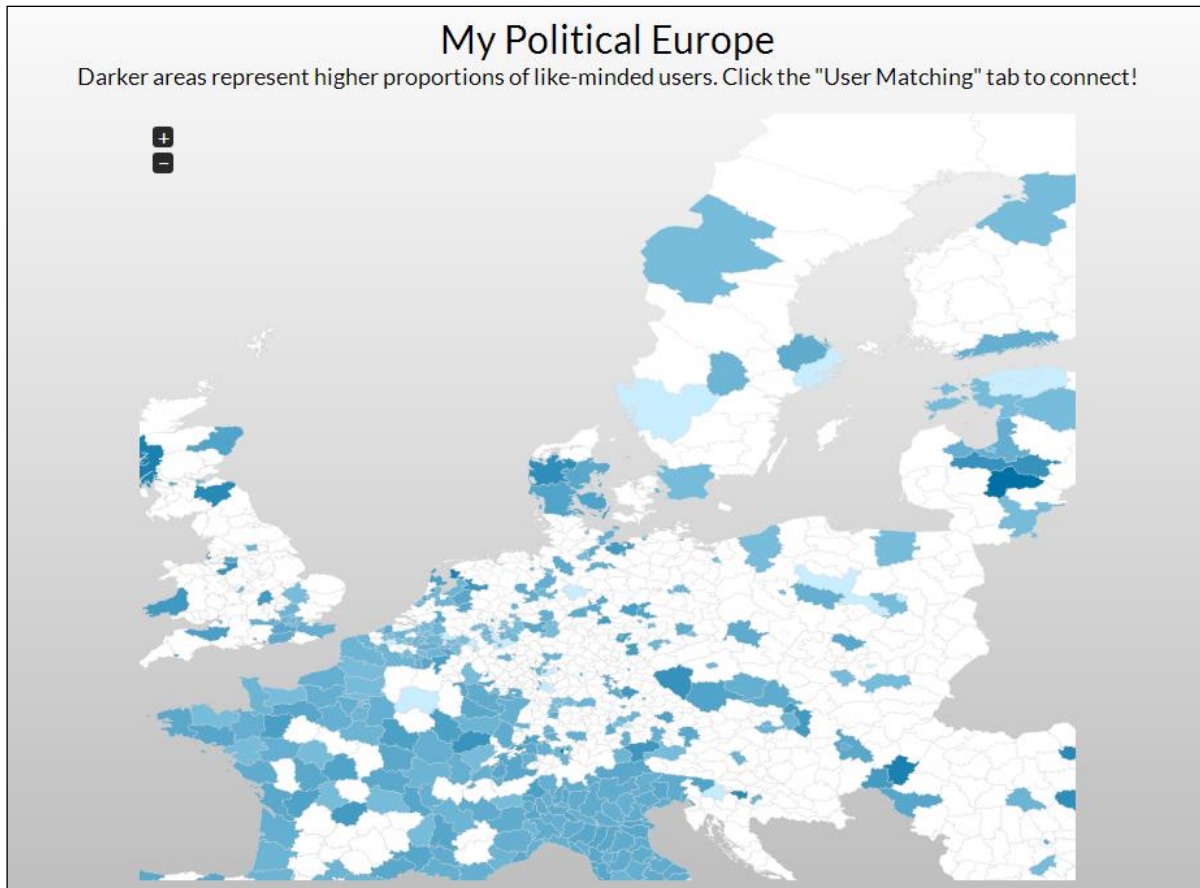


Next to the "vertical" matching functions, **euandi** also provided users with the possibility to engage in "horizontal" matching. Indeed, one of the most revolutionary features of **euandi** lies in the opportunity for people to match their views not only with those of the parties, but also with those of fellow users on a local, regional, national and even European level. In the "My Political Europe" interactive map, **euandi** compares the user's position with those of other users and displays a map showing where other like-minded **euandi** users are located (see Figure 7). Shades of color of each geographical area (Eurostat NUTS-3 areas are used) are based on an "accordance index" varying from 0% to 100%,

¹³ This visual representation is based on the assumption that, in most political systems, citizens' and political parties' opinions on individual issues can be aggregated to a limited number of issue dimensions. In the graphical representation offered to the user, the position of parties (and of the user) on each axis is the average of all positions across issues pertaining to each dimension. The computation of such averages, on each of the three axes, depends on *a priori* considerations, both in terms of which dimension an issue belongs to, and which side of the dimension a specific issue positions belongs to. More details on this procedure are available online at: <http://euandi.eu/abouteuandi.html>

which expresses the percentage of **euandi** users in that area that have political attitudes similar to the user.¹⁴

Figure 7. "My Political Europe" visualization



Respondents also may use Facebook to connect individually to other respondents with similar political preferences through the "User Matching" function. This visualization replicates the "Party Matching" visualization, allowing the user to see matching users, rather than parties. The calculation method is exactly the same applied for party matching.

¹⁴ The calculation of such an "accordance index" is strictly related to the "My Political Space" three-dimensional visualization, as it relies on the same three dimensions used for that visualization. More details on this procedure are available online at: <http://euandi.eu/abouteuandi.html>

Figure 8. "User Matching" visualization

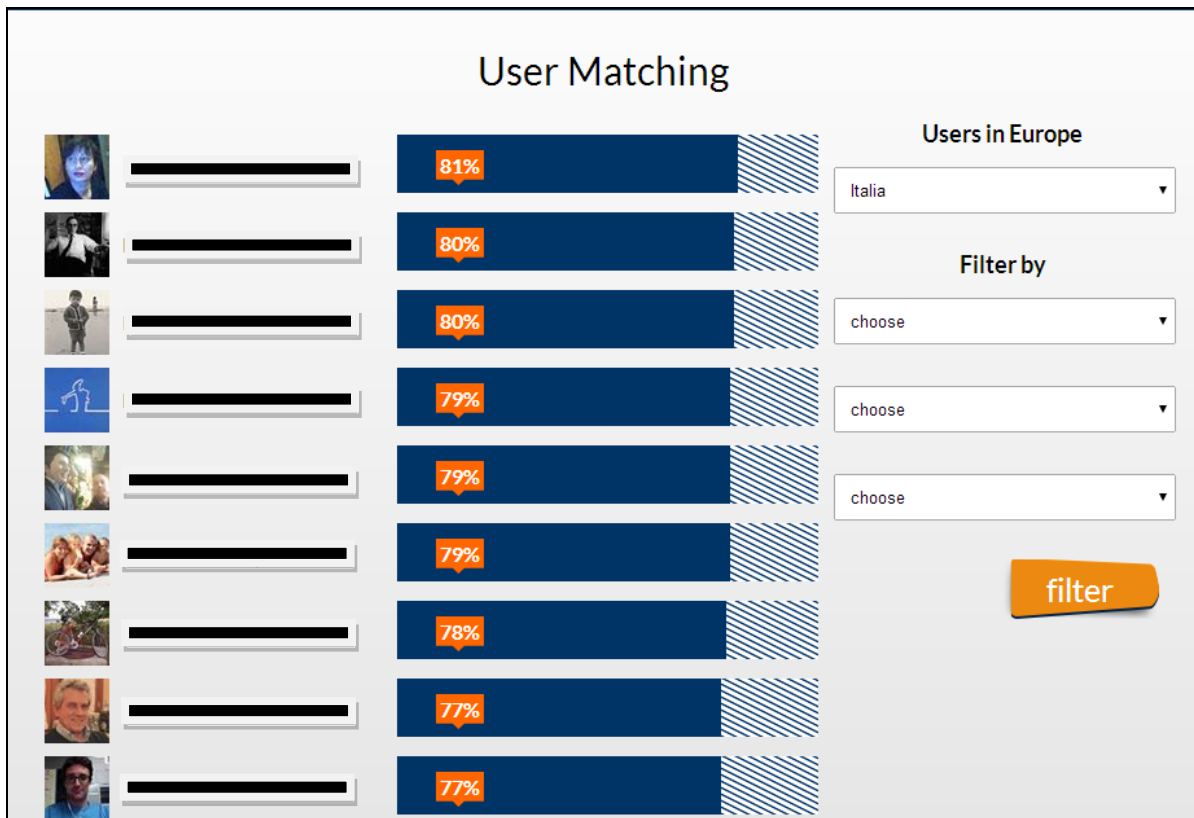


Figure 9. The "euandi Communities"

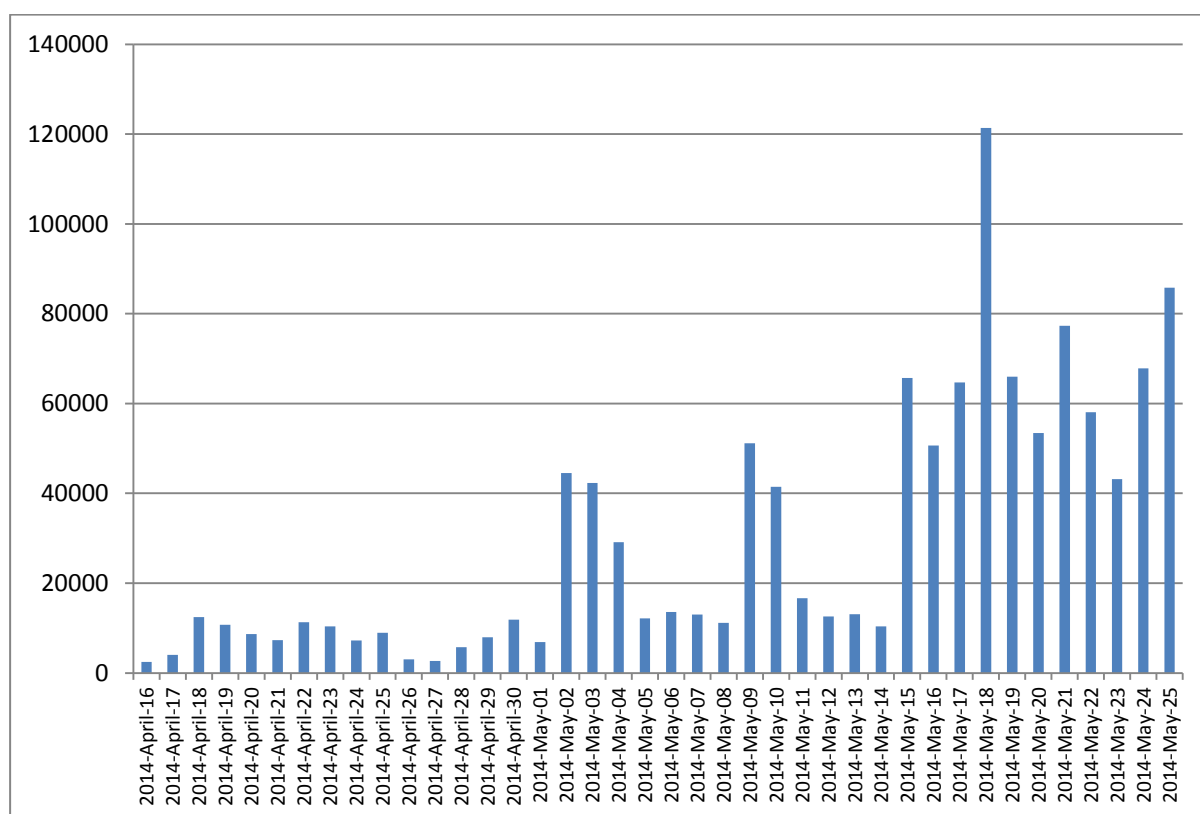


Through FB login, users are also able to create or join online "euandi Communities" of similar political contours based on the euandi statements (see Figure 9). The "euandi community" visualization replicates the "Party matching" and the "User matching" visualizations, allowing the user to see matching euandi communities, rather than parties or users. The calculation method is exactly the same applied for party as well as user matching.¹⁵

The user dataset

During the six weeks before the election – that is, between April 16, when the website was launched, and May 25, when polling stations in all EU countries closed down – the euandi website attracted 1.186.744 users (see Figure 10).

Figure 10. Number of website visits per day, 16 April-25 May 2014



We decided to include in the user dataset only those users who completed the entire questionnaire. In order to avoid duplicates (i.e., same users filling the questionnaire several times), the dataset only includes the answers provided to the first questionnaire by each user. The total amount of entries in the euandi user dataset corresponds to **399.882 unique user sessions**. The number of completed profiles (by country) is presented in Table 8. Note that all entries in the dataset are geo-located at the provincial (NUTS-3) level.

¹⁵ Note that the position of each community is always the position of its founder and not the average of its members.

Table 8. Number of completed profiles (by country)

Austria	5.186	Latvia	153
Belgium	25.579	Lithuania	213
Bulgaria	8.188	Luxembourg	2.097
Croatia	251	Malta	577
Cyprus	155	Netherlands	10.930
Czech Republic	4.530	Poland	18.302
Denmark	617	Portugal	8470
Estonia	9.641	Romania	667
Finland	671	Slovakia	335
France	44.433	Slovenia	1.464
Germany	39.744	Spain	6.536
Greece	9769	Sweden	19.515
Hungary	622	United Kingdom	7.247
Ireland	2.742		
Italy	159.242	Extra-EU	12.006

Note: Figures report the geographical location of users, not the country they chose to examine.

In terms of socio-demographic characteristics, young, male and highly educated users are over-represented in the **euandi** user dataset (see Figures 11 and 12). Male users are especially over-represented in the sample, as they outnumber female users by an almost 2.5:1 factor (male users: 69.7 percent; female users: 30.3 percent).

Figure 11. Users' socio-demographic characteristics: Age category

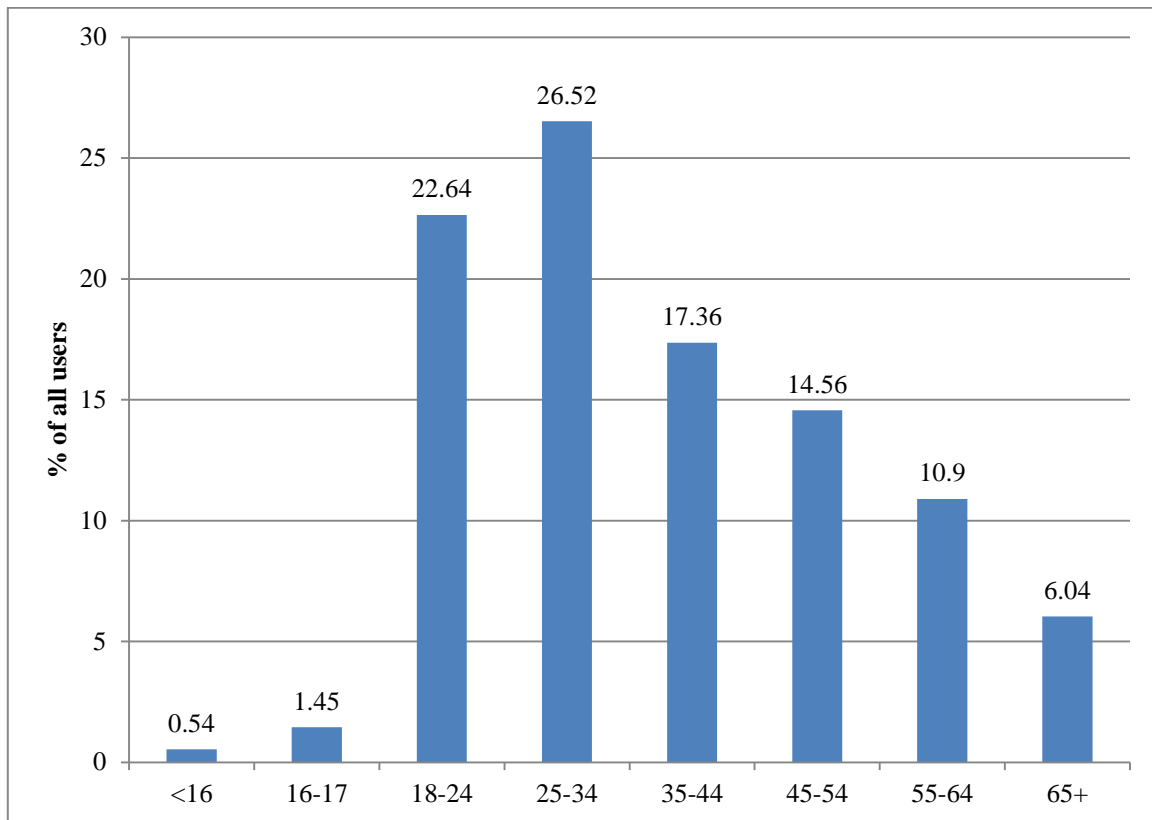
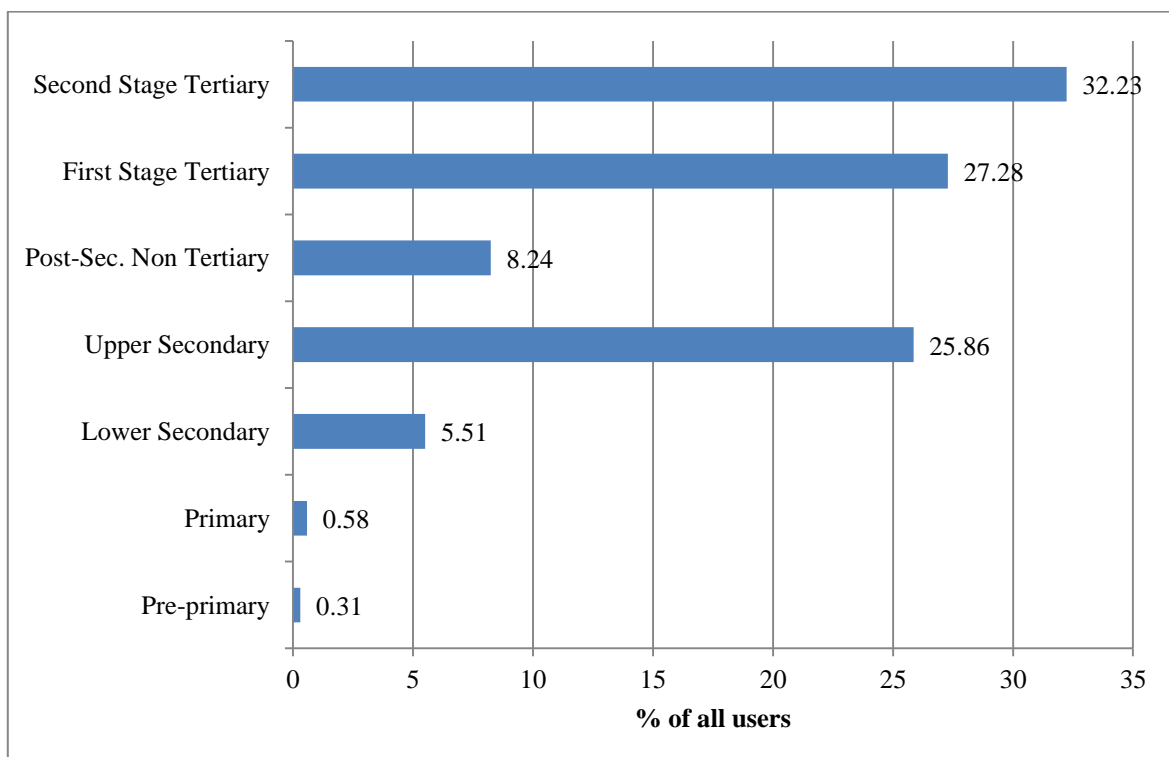


Figure 12. Users' socio-demographic characteristics: Level of education



The dataset includes the opinions of all users on the 30 issue statements (on a 5-point scale ranging from *completely disagree* to *completely agree*, plus a *no opinion* option) as well as the degree of importance they attributed to each of the statements individually (i.e., least important, equally important, most important). Tables 9 and 10 presents the descriptive statistics for issue positions and saliency respectively.

Table 9. Users' position on the issue statements: Descriptive analysis

#	Item (short description)	Completely Disagree	Tend to Disagree	Neutral	Tend to Agree	Completely Agree	No Opinion
1	Maintain social programmes	11.2%	19.9%	11.2%	37.6%	19.1%	1.15%
2	Limit welfare for immigrants	32.2	25.7	9.2	18.0	14.1	0.8
3	Reduce pension benefits	46.6	32.5	8.2	8.4	3.2	1.0
4	EU should patrol borders	7.1	9.0	8.6	32.1	41.7	1.4
5	Restrictions to immigration	15.4	22.7	14.6	22.3	23.9	1.1
6	Acceptance of our values	13.1	16.6	12.6	26.9	30.2	0.7
7	Same-sex marriages good	13.7	7.8	14.2	18.7	45.0	0.7
8	Stop stem cell research	40.7	26.6	17.8	6.4	5.6	2.9
9	Legalise soft drugs	18.4	15.2	13.6	25.5	26.5	0.8
10	Legalise euthanasia	8.7	7.7	13.2	33.9	35.2	1.3
11	Reduce gov't spending	6.6	14.5	11.0	32.1	34.8	1.0
12	EU tax-raising powers	22.3	18.9	18.3	24.1	12.5	3.9
13	Tax stock market gains	6.1	9.6	10.5	30.7	41.4	1.8
14	Reduce workers' protection	29.3	31.9	11.8	17.7	7.6	1.6
15	Increase support for unemployed	9.8	23.6	18.1	28.8	19.0	0.8
16	Relax austerity policies	5.3	12.2	14.6	34.6	30.2	3.0
17	Promote public transport	13.7	20.3	14.4	31.6	18.4	1.6
18	Support renewable energies	9.3	15.1	12.4	37.9	24.4	0.8
19	Accept privacy restrictions	29.7	25.4	12.6	20.8	10.1	1.5
20	Punish criminals more severely	4.4	10.8	16.9	27.5	39.1	1.3
21	Restrict access to abortion	47.2	24.9	12.0	8.2	6.84	1.0
22	Strengthen EU defence policy	9.2	15.6	21.0	30.2	22.1	1.9
23	One voice for EU foreign policy	6.2	10.0	12.0	34.9	35.0	2.0
24	European integration is good	6.0	7.4	14.1	33.1	37.4	1.9
25	Introduce Eurobonds	8.7	8.5	24.2	29.5	19.3	9.9
26	Euro is a bad thing	36.7	27.0	12.8	11.6	10.6	1.3
27	Less veto power for member states	10.2	17.8	20.1	31.3	16.3	4.3
28	Referendum for any new EU treaty	11.1	23.0	14.1	26.3	23.3	2.2

Table 10. Users' stated importance of issue statements: Descriptive analysis

#	Item (short description)	Most Important Issue	Default Importance	Least Important Issue
1	Maintain social programmes	43.4 %	54.8 %	1.8 %
2	Limit welfare for immigrants	15.0	80.1	4.9
3	Reduce pension benefits	23.8	73.8	2.4
4	EU should patrol borders	17.1	76.0	6.9
5	Restrictions to immigration	23.8	71.9	4.3
6	Acceptance of our values	15.7	70.4	13.8
7	Same-sex marriages good	16.3	63.3	20.4
8	Stop stem cell research	11.3	78.9	9.8
9	Legalise soft drugs	12.6	65.8	21.6
10	Legalise euthanasia	13.7	76.2	10.1
11	Reduce gov't spending	29.9	68.6	1.5
12	EU tax-raising powers	8.9	86.2	4.9
13	Tax stock market gains	23.0	72.9	4.2
14	Reduce workers' protection	26.8	71.4	1.8
15	Increase support for unemployed	20.7	76.5	2.8
16	Relax austerity policies	18.0	79.2	2.8
17	Promote public transport	16.2	75.0	8.8
18	Support renewable energies	31.5	64.1	4.4
19	Accept privacy restrictions	12.8	77.3	9.9
20	Punish criminals more severely	23.7	71.2	5.1
21	Restrict access to abortion	11.9	75.5	12.6
22	Strengthen EU defence policy	13.1	78.0	8.8
23	One voice for EU foreign policy	20.5	76.0	3.5
24	European integration is good	23.3	73.2	3.5
25	Introduce Eurobonds	12.5	78.8	8.7
26	Euro is a bad thing	21.4	74.4	4.3
27	Less veto power for member states	8.4	84.0	7.5
28	Referendum for any new EU treaty	12.6	78.7	8.7

Finally, the dataset also includes users' stated propensity to vote for each of the parties contesting the election in the country of choice (on a 0 to 10 scale) as well as the percentage of match between the user and *all* the 242 parties included in **euandi**. Variable coding for the entire dataset is presented in Appendix D.

Concluding remarks

As repeatedly argued, the scientific relevance of the **euandi** project lies above all in the choice to stick to the iterative method of party positioning already employed in the *EU Profiler* project as well as in the choice to keep as many as seventeen policy items in the 2014 questionnaire in order to allow for cross-national, longitudinal research on party competition and electoral behaviour in the European Union member states.

We have reasons to believe that the use of the iterative method in connection with the recent VAA development represents a promising way for studying party positions across time and space. As said, degrees of cooperation on behalf of parties are increasingly high in the light of the growing relevance of VAAs in the electoral process. Users' electoral behaviour was affected by VAAs, as shown by several studies (see Alvarez *et al.*, 2014; Walgrave *et al.*, 2008) and parties appear to be progressively more aware of it. More systematic interactions between parties and increasingly skilled teams of VAA developers – whose interest is to produce the best application possible in an ever more crowded VAA market – permits to envisage ever more accurate datasets on party positions. The possibilities of the iterative method for party positioning will unfold at their maximum in conjunction with the making of further transnational VAAs willing to value the replication of issue statements across time.

In terms of potential applications, VAA-generated data represents a fantastic source to conduct research on party competition and political representation. Traditional analyses of mass-elite congruence commonly resorted to traditional survey designs. In this respect, VAAs would seem to feature a number of advantages. As a matter of fact, VAAs able to attract millions of respondents during an election campaign and, even more importantly, they allow comparisons of the issue positions of voters and parties using the *same* data source. As a result, measurement of the extent to which parties and voters are mutually congruent will be strongly facilitated. The rise of supranational VAAs will also allow researchers to develop and test empirically-driven theories of party competition across levels of governance, as well as to dig deeper into the dynamics of multi-level representation and, ultimately, to empirically assess the opportunities and pitfalls stemming from the construction of a truly *transnational voting space* (Bright *et al.*, 2014) in the EU and beyond.

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Appendix A

Country-specific statements

Austria

- 29. Comprehensive schools (a common education for all youth aged 11-14 should be established across Austria.
- 30. Austria should introduce a property tax for millionaires

Belgium-Flanders

- 29. The income tax rate for high incomes should be increased
- 30. Belgium's state structure should be changed into a confederation

Belgium-Wallonia

- 29. European and national elections should not be held simultaneously anymore
- 30. In Belgium, financial solidarity between poorer and richer regions should remain guaranteed

Bulgaria

- 29. The current protests are purely partisan motivated and should stop immediately
- 30. Bulgaria should continue to support the South Stream project, even if this undermines its relations with Brussels

Croatia

- 29. Granting the concessions for highways is a good strategy for improving the state of public finances
- 30. The financing of the Catholic Church should be separated from the state budget

Cyprus

- 29. In order to tackle the economic crisis, Cyprus should fully implement all terms and conditions of the bailout agreement
- 30. To remain in the Eurozone, Cyprus should radically reform the size and structure of its banking sector

Czech Republic

- 29. The common EU currency Euro should be introduced in the Czech Republic
- 30. The European Union should be enlarged to include Turkey

Denmark

- 29. In order to maintain its level of welfare, Denmark should leave the European Union

30. Denmark should re-introduce border controls, even if this goes against the Schengen agreement

Estonia

29. Estonia should leave the European Stability Mechanism (ESM)

30. The European Union and Russia should agree on visa freedom

Finland

29. Finland should have an important role in the EU's civilian crisis management operations

30. Finland should support countries that have been most affected by the economic crisis

France

29. In order to fight unemployment and social inequality, economic globalisation should be limited

30. France should contribute to the economic rescue of other member states

Germany

29. Germany should introduce data retention

30. Germany should introduce a highway toll for foreigners

Greece

29. In order to tackle the economic crisis, Greece should fully implement all terms and conditions of the bailout agreement

30. The size of the public sector should be reduced through lay-offs

Hungary

29. It should become more difficult for foreigners to buy land in Hungary

30. Hungary's flat-rate personal income tax scheme should not be changed

Ireland

29. To improve the state of public finances, public sector employees should earn less

30. Corporate taxes should be more standardized across the European Union

Italy

29. Illegal immigration should be punished more severely

30. Italy should abolish all forms of public party financing

Latvia

29. It should become more difficult for foreigners to buy land in Latvia

30. The EU should recognize and condemn the role played by the communist regime in Central and Eastern Europe

Lithuania

29. The government should maintain and defend the use of Lithuanian in the public sphere

30. The common EU currency Euro should be introduced in Lithuania

Luxembourg

29. In tax matters, Luxembourg should adopt the automatic exchange of information with EU countries on all forms of income (interest, capital gains, dividends, etc.).

30. The separation of European and National elections should be maintained

Malta

29. Malta should be free to adopt a policy of sending migrants back to country of origin (pushback)

30. The sale of Maltese citizenship should be promoted

Netherlands

29. The Netherlands should reintroduce residence and working permit restrictions for Bulgarian and Romanian citizens

30. There should be a mandatory minimum wage for workers from other EU Member States that do temporary work in the Netherlands

Poland

29. The common EU currency Euro should be introduced in Poland

30. Poland is not spending its European funds the right way

Portugal

29. Portugal should renegotiate its public debt in order to overcome the present economic crisis

30. Portugal should leave the common EU currency Euro

Romania

29. Romania should be free to combat high-level corruption without monitoring from supranational political entities, such as the European Commission

30. The current Constitutional reform project should be pursued in order to improve the functioning of the Romanian institutions

Slovakia

29. Slovakia should spend less of its European funds on the Roma minority

30. Nuclear energy should remain in the sole competence of the member states of the EU

Slovenia

- 29. State-owned companies should be privatized as widely as possible
- 30. Elected politicians should step down when facing criminal investigations, until their name is cleared

Spain

- 29. When paying for a mortgage becomes impossible, the rendition of the house should cancel the debt with the bank
- 30. Autonomous Communities should be granted the right to become independent states

Sweden

- 29. Distribution of profit should not be allowed within tax-financed health care, education, and elderly care
- 30. Responsibility for Swedish elementary and secondary schools should be transferred from the municipalities to the state

United Kingdom

England

- 29. The UK should hold a referendum to decide whether to continue its membership of the European Union
- 30. The government should require energy companies to fix prices for the next two years

Northern Ireland

- 29. The UK should hold a referendum to decide whether to continue its membership of the European Union
- 30. Northern Ireland should become part of the Irish Republic

Scotland

- 29. The UK should hold a referendum to decide whether to continue its membership of the European Union
- 30. Scotland should leave the United Kingdom and become an independent state

Wales

- 29. The UK should hold a referendum to decide whether to continue its membership of the European Union
- 30. The Welsh Assembly should do more to promote the use of Welsh in everyday life

Appendix B

Full list of political parties included in euandi

Country (Acronym)	Party Acronym	Party Denomination
Austria (AT)	BZO	Bündnis Zukunft Österreichs
Austria (AT)	FPO	Freiheitliche Partei Österreichs
Austria (AT)	GRUNEN	Die Grünen
Austria (AT)	NEOS	das Neue Österreich
Austria (AT)	OVP	Österreichische Volkspartei
Austria (AT)	SPO	Sozialdemokratische Partei Österreichs
Bulgaria (BG)	ABV	Alternative for Bulgarian Renaissance
Bulgaria (BG)	BBC	Bulgaria without Censorship
Bulgaria (BG)	BSP	Bulgarian Socialist Party
Bulgaria (BG)	DPS	Movement for Rights and Freedom
Bulgaria (BG)	GERB	Citizens for European Development of Bulgaria
Bulgaria (BG)	NFSB	National Front for the salvation of Bulgaria
Bulgaria (BG)	RB	Reformatorski Blok
Bulgaria (BG)	ATAKA	Attack
Croatia (HR)	HDZ	Koalicija HDZ-HSS-HSPAS
Croatia (HR)	HL	Hrvatski laburisti - Stranka rada
Croatia (HR)	HSLs	Hrvatska socijalno liberalna stranka
Croatia (HR)	KUKURIKU	KUKURIKU
Croatia (HR)	NF	Nacionalni Forum
Croatia (HR)	ORAH	Odrzivi razvoj Hrvatske
Croatia (HR)	SZH	Savez za Hrvatsku
Cyprus (CY)	AKEL	Ανορθωτικό Κόμμα Εργαζόμενου Λαού
Cyprus (CY)	DIKO	Δημοκρατικό Κόμμα
Cyprus (CY)	DISY	Δημοκρατικός Συναγερμός
Cyprus (CY)	EDEK	Κίνημα Σοσιαλδημοκρατών ΕΔΕΚ
Cyprus (CY)	ELAM	Εθνικό Λαϊκό Μέτωπο
Cyprus (CY)	EVROKO	Ευρωπαϊκό Κόμμα
Cyprus (CY)	KOP	Κίνημα Οικολόγων Περιβαλλοντιστών
Cyprus (CY)	SYPO	Συμμαχία Πολιτών - Γιώργος Λιλλήκας
Czech Rep. (CZ)	ANO	ANO 2011
Czech Rep. (CZ)	CSSD	Česká strana sociálně demokratická
Czech Rep. (CZ)	KDUCSL	KDU-CSL
Czech Rep. (CZ)	KSCM	Komunistická strana Čech a Moravy
Czech Rep. (CZ)	LEV21	Národní socialisté – levice 21. století
Czech Rep. (CZ)	ODS	Občanská demokratická strana
Czech Rep. (CZ)	PIRATI	Česká pirátská strana
Czech Rep. (CZ)	SZH	Strana zelených
Czech Rep. (CZ)	TOP09	Tradice Odpovědnost Prosperita
Czech Rep. (CZ)	USVIT	Úsvit přímé demokracie Tomia Okamury
Denmark (DK)	B	Det Radikale Venstre
Denmark (DK)	C	Det Konservative Folkeparti
Denmark (DK)	I	Liberal Alliance
Denmark (DK)	N	Folkebevægelsen mod EU

Denmark (DK)	O	Dansk Folkeparti
Denmark (DK)	S	Socialdemokraterne
Denmark (DK)	SF	Socialistisk Folkeparti
Denmark (DK)	V	Venstre
Estonia (EE)	EER	Erakond Eestimaa Rohelised
Estonia (EE)	EKRE	Eesti Konservatiivne Rahvaerakond
Estonia (EE)	IRL	Isamaa ja Res Publica Liit
Estonia (EE)	KESK	Keskerakond
Estonia (EE)	REF	Reformierakond
Estonia (EE)	SDE	Sotsiaaldemokraatlik Erakond
Estonia (EE)	TARAND	Indrek Tarand
Finland (FI)	KD	Christian Democrats in Finland
Finland (FI)	KESK	Centre Party of Finland
Finland (FI)	KOK	National Coalition Party
Finland (FI)	MUUTOS2011	Change 2011
Finland (FI)	PIRAATTI	Pirate Party of Finland
Finland (FI)	PS	The Finns Party
Finland (FI)	SDP	The Finnish Social Democratic Party
Finland (FI)	SFP	Swedish People's Party in Finland
Finland (FI)	VAS	The Left Alliance
Finland (FI)	VIHR	Green League
Flanders (FL)	CDV	Christen-Democratisch & Vlaams
Flanders (FL)	GROEN	Groen
Flanders (FL)	NVA	Nieuw-Vlaamse Alliantie
Flanders (FL)	OVLD	Open Vlaamse Liberalen en Democraten
Flanders (FL)	PVDA	Partij van de Arbeid
Flanders (FL)	SPA	Socialistische Partij Anders
Flanders (FL)	VB	Vlaams Belang
France (FR)	DLR	Debout la République
France (FR)	EELV	Europe Ecologie - Les Verts
France (FR)	FG	Front de Gauche
France (FR)	FN	Front National
France (FR)	LO	Lutte Ouvrière
France (FR)	MRC	Mouvement Républicain et Citoyen
France (FR)	NPA	Nouveau Parti Anticapitaliste
France (FR)	PS	Parti Socialiste
France (FR)	UDIMODEM	Union des Démocrates et Indépendants Modem
France (FR)	UMP	Union pour un Mouvement Populaire
Germany (DE)	AFD	Alternative für Deutschland
Germany (DE)	CDU	Christlich Demokratische Union Deutschlands
Germany (DE)	CSU	Christlich-Soziale Union in Bayern
Germany (DE)	FAMILIE	Familien Partei Deutschlands
Germany (DE)	FDP	Freie Demokratische Partei
Germany (DE)	FW	Freie Wähler
Germany (DE)	GRUNEN	Bündnis 90/Die Grünen
Germany (DE)	LINKE	DIE LINKE
Germany (DE)	NPD	Nationaldemokratische Partei Deutschlands
Germany (DE)	PIRATEN	Piratenpartei Deutschland
Germany (DE)	REP	Die Republikaner

Germany (DE)	SPD	Sozialdemokratische Partei Deutschlands
Germany (DE)	TIERSCHUTZ	Partei Mensch Umwelt Tierschutz
Greece (EL)	ANEL	Ανεξάρτητοι Έλληνες
Greece (EL)	DIMAR	Δημοκρατική Αριστερά
Greece (EL)	DRASSI	Δράση
Greece (EL)	DX	Δημιουργία Ξανά!
Greece (EL)	KKE	Κομμουνιστικό Κόμμα Ελλάδας
Greece (EL)	LAOS	Λαϊκός Ορθόδοξος Συναγερμός
Greece (EL)	ND	Νέα Δημοκρατία
Greece (EL)	OP	Οικολογοί Πράσινοι
Greece (EL)	PASOK	ΠΑΣΟΚ - Ελιά - Δημοκρατική Παράταξη
Greece (EL)	SYRIZA	Συνασπισμός Ριζοσπαστικής Αριστεράς
Greece (EL)	TOPOTAMI	Το Ποτάμι
Greece (EL)	XA	Χρυσή Αυγή
Hungary (HU)	DK	Demokratikus Koalíció
Hungary (HU)	EGYUTT	Együtt - Párbeszéd Magyarorszáért
Hungary (HU)	FIDESZ	Fidesz
Hungary (HU)	JOBBIK	Jobbik Magyarorszáért Mozgalom
Hungary (HU)	LMP	Lehet Más a Politika
Hungary (HU)	MSZP	Magyar Szocialista Párt
Ireland (IE)	FF	Fianna Fail
Ireland (IE)	FG	Fine Gael
Ireland (IE)	GP	Green Party
Ireland (IE)	LP	Labour Party
Ireland (IE)	SF	Sinn Fein
Ireland (IE)	SP	Socialist Party
Italy (IT)	FDI	Fratelli d'Italia-Alleanza Nazionale
Italy (IT)	FI	Forza Italia
Italy (IT)	GRI	Green Italia
Italy (IT)	IDV	Italia dei Valori
Italy (IT)	LN	Lega Nord
Italy (IT)	M5S	Movimento Cinque Stelle
Italy (IT)	NCD	Nuovo Centro Destra
Italy (IT)	PD	Partito Democratico
Italy (IT)	SEALDE	Scelta Europea ALDE
Italy (IT)	TSIPRAS	L'Altra Europa con Tsipras
Italy (IT)	UDC	Unione di Centro
Latvia (LV)	ATTISTIBAI	Latvijas attīstībai
Latvia (LV)	LKS	Latvijas Krievu savienība
Latvia (LV)	LSP	Latvijas Sociālistiskā partija
Latvia (LV)	SASKANA	"Saskaņa" sociāldemokrātiskā partija
Latvia (LV)	TBLNNK	Nacionālā apvienība "Visu Latvijai" – "TB/LNNK"
Latvia (LV)	VIENOTIBA	Vienotība
Latvia (LV)	ZZS	Zaļo un zemnieku savienība
Lithuania (LT)	DP	Darbo partija
Lithuania (LT)	LLRA	Lietuvos lenkų rinkimų akcija
Lithuania (LT)	LRLS	Lietuvos Respublikos liberalų sąjūdis
Lithuania (LT)	LSDP	Lietuvos Socialdemokratų Partija

Lithuania (LT)	LZP	Lietuvos Žaliųjų partija
Lithuania (LT)	PTIT	Partija Tvarka ir teisingumas
Lithuania (LT)	TSLKD	Tėvynės sąjunga - Lietuvos krikščionys demokratai
Luxembourg (LU)	ADR	Alternativ Demokratesch Reformpartei
Luxembourg (LU)	CSV	CSV
Luxembourg (LU)	DP	Demokratesch Partei
Luxembourg (LU)	GRENG	déi gréng
Luxembourg (LU)	LENK	déi Lénk
Luxembourg (LU)	LSAP	LSAP
Luxembourg (LU)	PID	Partei fir INTEGRAL Demokratie
Luxembourg (LU)	PIRATEN	Parti Pirate Luxembourg
Malta (MT)	AD	Alternattiva Demokratika
Malta (MT)	PL	Partit Laburista
Malta (MT)	PN	Partit Nazzjonalista
Netherlands (NL)	50PLUS	50Plus Partij
Netherlands (NL)	CDA	Christen Democratisch Appèl
Netherlands (NL)	CUSGP	Christen Unie/Staatskundig Gereformeerde Partij
Netherlands (NL)	D66	Democraten 66
Netherlands (NL)	GL	GroenLinks
Netherlands (NL)	LIBDEM	Liberaal Democratische Partij
Netherlands (NL)	PP	Piratenpartij
Netherlands (NL)	PVDA	Partij van de Arbeid
Netherlands (NL)	PVDD	Partij voor de Dieren
Netherlands (NL)	PVV	Partij voor de Vrijheid
Netherlands (NL)	SP	Socialistische Partij
Netherlands (NL)	VVD	Volkspartij voor Vrijheid en Democratie
Poland (PL)	EUROPAPLUS	Europa Plus Twój Ruch
Poland (PL)	KNP	Kongres Nowej Prawicy
Poland (PL)	PIS	Prawo i Sprawiedliwość
Poland (PL)	PO	Platforma Obywatelska
Poland (PL)	PRJG	Polska Razem Jarosława Gowina
Poland (PL)	PSL	Polskie Stronnictwo Ludowe
Poland (PL)	SLD	Sojusz Lewicy Demokratycznej
Poland (PL)	SP	Solidarna Polska
Portugal (PT)	AP	Aliança Portugal
Portugal (PT)	BE	Bloco de Esquerda
Portugal (PT)	CDU	Coligação Democrática Unitária
Portugal (PT)	LIVRE	LIVRE - Liberdade, Esquerda, Europa, Ecologia (L)
Portugal (PT)	MAS	Movimento Alternativa Socialista
Portugal (PT)	PAN	Partido pelos Animais e pela Natureza
Portugal (PT)	PCTP	Partido Comunista dos Trabalhadores Portugueses
Portugal (PT)	PS	Partido Socialista
Romania (RO)	FC	Forța Civică
Romania (RO)	PDL	Partidul Democrat Liberal
Romania (RO)	PMP	Partidul Mișcarea Populară
Romania (RO)	PNL	Partidul Național Liberal
Romania (RO)	PNȚCD	Partidul Național Țărănesc Creștin Democrat
Romania (RO)	PPDD	Partidul Poporului-Dan Diaconescu

Romania (RO)	PRM	Partidul România Mare
Romania (RO)	PSD	Partidul Social Democrat
Romania (RO)	UDMR	Uniunea Democrată Maghiară din România
Slovakia (SK)	KDH	Kresťanskodemokratické hnutie
Slovakia (SK)	LSNS	Ľudová strana Naše Slovensko
Slovakia (SK)	MOSTHID	Most-Híd
Slovakia (SK)	NOVA	Nová väčšina
Slovakia (SK)	OLANO	Obyčajní ľudia a nezávislé osobnosti
Slovakia (SK)	SAS	Sloboda a solidarita
Slovakia (SK)	SDKUDS	Slovenská demokratická a kresťanská únia
Slovakia (SK)	SMERSD	Smer - sociálna demokracia
Slovakia (SK)	SMKMKP	Strana maďarskej komunity – Magyar Közösség Pártja
Slovakia (SK)	SNS	Slovenská národná strana
Slovenia (SI)	DEUS	Demokratična stranka upokojenecv Slovenije
Slovenia (SI)	DL	Državljska lista
Slovenia (SI)	NSI	Nova Slovenija – krščanski demokrati
Slovenia (SI)	PS	Pozitivna Slovenija
Slovenia (SI)	SD	Socialni demokrati
Slovenia (SI)	SDS	Slovenska demokratska stranka
Slovenia (SI)	SLS	Slovenska ljudska stranka
Slovenia (SI)	SOLIDARNOST	Solidarnost, za pravično družbo
Slovenia (SI)	ZL	Združena levica
Spain (ES)	IU	Izquierda Unida
Spain (ES)	PP	Partido Popular
Spain (ES)	PSOE	Partido Socialista Obrero Español
Spain (ES)	UPYD	Union Progreso y Democracia
Sweden (SE)	C	Centerpartiet
Sweden (SE)	FI	Feministiskt initiativ
Sweden (SE)	FP	Folkpartiet liberalerna
Sweden (SE)	KD	Kristdemokraterna
Sweden (SE)	M	Moderaterna
Sweden (SE)	MP	Miljöpartiet de gröna
Sweden (SE)	PP	Piratpartiet
Sweden (SE)	SAP	Arbetspartiet-Socialdemokraterna
Sweden (SE)	SD	Sverigedemokraterna
Sweden (SE)	V	Vänsterpartiet
United Kingdom (UK)	BNP	British National Party
United Kingdom (UK)	CON	Conservative Party
United Kingdom (UK)	DUP	Democratic Unionist Party
United Kingdom (UK)	GP	Green Party
United Kingdom (UK)	LAB	Labour Party
United Kingdom (UK)	LIB	Liberal Democrats
United Kingdom (UK)	PC	Plaid Cymru
United Kingdom (UK)	SDLP	Social Democratic and Labour Party
United Kingdom (UK)	SF	Sinn Féin
United Kingdom (UK)	SGP	Scottish Green Party
United Kingdom (UK)	SNP	Scottish National Party
United Kingdom (UK)	UKIP	United Kingdom Independence Party
United Kingdom (UK)	UUP	Ulster Unionist Party

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Walonia (WA)	CDH	Centre Démocrate Humaniste
Walonia (WA)	ECOLO	Ecolo
Walonia (WA)	FDF	Fédéralistes Démocrates Francophones
Walonia (WA)	MR	Mouvement Réformateur
Walonia (WA)	PS	Parti Socialiste

Appendix C

The matching algorithm

In order to calculate the actual degree of match between the user and the parties, we programmed an algorithm in which numerical values are first assigned to single answers of political parties and the user (see Table B1).

Table B1. Comparison of the answers

Completely agree	1
Tend to agree	2
Neutral	3
Tend to disagree	4
Completely disagree	5

On each statement, an accordance score between the user and each of the political parties is calculated according to two criteria: (1) whether the user and party are in accordance on the side (agreement vs. disagreement) taken on the statement (both on the same side – or both neutral, one neutral and one taking a side, opposite sides); and (2) considering the party-voter difference, calculated according to the above values. An accordance score is then assigned to each combination of the two criteria (see Table B2).

Table 6. Sides taken on the statement by user and party

		Same side (or both neutral)	One neutral, one taking a side	Opposite sides
	0	100%		
Party	1	75%	66%	
Users	2		50%	33%
Numerical	3			25%
Difference	4			0%

Note: Accordance scores correspond to ratios of integer numbers between 0 and 4

Accordance scores on single statements (as calculated above) are then averaged, in order to obtain the overall voter-party accordance score shown in the match list visualization. The average is calculated by first summing up the above mentioned accordance scores on all statements, and dividing the result

by the number of calculated accordance scores.¹⁶ Statements marked by the voter as more important or less important than others are assigned a different weight in the above calculation of the overall accordance score. In particular: statements marked as more important count as two (the accordance score is multiplied by 2); statements marked as less important count as half (the accordance score is multiplied by 0.5). The final average is calculated by dividing the overall sum by the weighted number of calculated accordance scores (counting each more important statement as two statements, and each less important statement as half a statement).

¹⁶ Note that statements where the user has “no opinion” are not included in the calculation. Statements where the party has “no opinion” are treated as if the party had a “neutral position”.

Appendix D

euandi user dataset – variable coding

[userid]

Unique user-ID

[startdate]

Day and time when user started answering the questionnaire
(format: YYYY-MM-DD hh:mm:ss)

[enddate]

Day and time when user finished answering the questionnaire
(format: YYYY-MM-DD hh:mm:ss)

[nutsnaz]

User's geo-localization based on IP address: Nation
(for detailed country codes see variable [country] below)

[nutsarea]

User's geo-localization based on IP address: Province (NUTS-3)

[country]

Version of the country questionnaire chosen by the user:

- 1 Belgium: Dutch electoral college
- 2 Belgium: French Electoral College
- 3 Czech Republic
- 4 Denmark
- 5 Germany
- 6 Estonia
- 7 Spain
- 8 France
- 9 Croatia
- 10 Ireland
- 11 Italy
- 12 Latvia
- 13 Luxemburg
- 14 Lithuania
- 17 Hungary
- 18 Malta
- 19 Netherlands
- 20 Austria
- 21 Poland
- 22 Portugal
- 23 Romania

25	Slovenia
26	Slovakia
28	Finland
29	Sweden
32	United Kingdom: England
33	United Kingdom: Northern Ireland
34	United Kingdom: Scotland
35	United Kingdom: Wales
36	Greece
37	Cyprus
38	Bulgaria

[fblogin]

0	No
1	Yes

[gender]

1	Male
2	Female
.	No Answer

[age]

1	<16
2	16-17
3	18-24
4	25-34
5	35-44
6	45-54
7	55-64
8	65+
.	No Answer

[educ]

1	Pre-primary
2	Primary
3	Lower secondary
4	Upper secondary
5	Post-secondary non-tertiary
6	First stage tertiary
7	Second stage tertiary
.	No Answer

[coordx]

User's position in the "My Political Space" visualization – Axis X
Values range from -1 (socio-economic left) to +1 (socio-economic right)

[coordy]

User's position in the "My Political Space" visualization – Axis Y
Values range from -1 (anti-EU integration) to +1 (pro-EU integration)

[coordz]

User's position in the "My Political Space" visualization – Axis Z
Values range from -1 (liberal values) to +1 (traditional values)

[answer_*]

- 0 No Opinion
- 1 Completely disagree
- 2 Tend to disagree
- 3 Neutral
- 4 Tend to agree
- 5 Completely agree

[imp_*]

- 1 Least important issue
- 0 Default importance
- 1 Most important issue

[pmatch_*]

Degree of match (%) between the user and a given party, theoretically ranging from 0 (no match) to 100 (perfect match). Variable name identifies the party as follows:

pmatch_countryacronym_partyacronym
example: German SPD corresponds to [pmatch_de_spd]

[ptv_*]

User's propensity to vote for a given party in his country of choice, ranging from 0 ('not probable at all') to 10 ('very probable'). Variable name identifies the party as follows:

ptv_countryacronym_partyacronym
example: German SPD corresponds to [ptv_de_spd]

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