

The role of environmental issues in European elections.
Assessing whether European elections establish an electoral
connection based on these issues

Thesis submitted in fulfilment of the requirements for the degree of PhD in
Political Science

Candidate: Clara Faulí Molas

Supervisor: Dr. Emanuel Coman

Presented to the Trinity College Dublin, The University of Dublin.

Department of Political Science.

2024

Declaration of the author

I declare that this thesis has not been submitted as an exercise for a degree at this or any other university and it is entirely my own work.

I agree to deposit this thesis in the University's open access institutional repository or allow the Library to do so on my behalf, subject to Irish Copyright Legislation and Trinity College Library conditions of use and acknowledgement.

I consent to the examiner retaining a copy of the thesis beyond the examining period, should they so wish (EU GDPR May 2018).

Acknowledgements

First of all, I would like to thank my supervisor Emanuel Coman for his feedback and support during these last 4 years. I appreciate his time reading my work and making suggestions on how to improve it, as well as his guidance about the academic world. I would also like to thank the rest of the department of Political Science at Trinity College Dublin for the training offered and the feedback and help received along the process. I would especially like to thank Gizem Arikan, Constantine Boussalis, Thomas Chadeaux, Alex Held, Samuel Johnston, and Tom Pashkalis for their feedback, support, and methods' training.

Belonging to a great group of PhD students, and being able to share our doubts and worries related to the PhD, has also been extremely beneficial. Sometimes, very short and informal talks can really make a difference, reducing stress and raising one's mood. Unfortunately, I could not benefit from this during the whole PhD period, but this made me understand how important these are.

I also benefited from the company of great housemates and cats, who made me feel happy outside work and made the unexpected long periods of telework more bearable. I would like to give a special mention to my colleague and housemate Hannah Frank who has provided invaluable support during this last year.

I would also like to thank Michelle D'Arcy for the fantastic introduction to teaching that she gave us during the first month of the PhD. I believe that teaching during these four years has also helped me improve my research skills and ultimately improve the quality of this project. I also want to thank Sarah Smullen for her very efficient administrative work.

I would like to extend my gratitude to all the Trinity College Dublin staff because I have felt very comfortable there during these years, with a special mention to the Trinity Sport staff who provided great classes, even during the online period.

Contents

Declaration of the author	2
Acknowledgements.....	3
Summary	6
Literature Review	8
European elections as second order elections.....	8
Implications of the second-order nature for the EU system	8
Empirical evidence on the importance of EU factors	12
A specific EU issue: environment	23
Environmental Issue salience during the campaign	24
The role of environmental issues on voting behaviour in European elections	26
Methodology: Computing parties' environmental salience	29
Paper 1. Tweeting about the environment in a European campaign. Are candidates to the European Parliament responsive to citizens' environmental concerns?.....	36
Introduction.....	37
Parties' responsiveness in electoral campaigns	39
Responding to environmental concerns in the European context.....	43
Methodology.....	45
Results	49
Descriptive	49
Impact of citizens' environmental concern on parties' environmental salience	50
Discussion and conclusions	56
Paper 2. Winning votes with greener tweets? Assessing the impact of parties' environmental salience on citizens' vote in the 2019 European election	59
Introduction.....	60
Background.....	61
Voting behaviour in European elections.....	61
The role of environmental issues	63
Methodology	67
Vote choice	67
Switching.....	68
Data.....	69

Results	69
Impact of parties' environmental salience on citizens' vote choice.....	69
Switching.....	74
Discussion and conclusions	76
Paper 3. Representation of environmental issues in the European Parliament. From the campaign to the plenary	79
Introduction.....	80
Can European elections provide MEPs with a mandate to act on environmental issues?	81
Voting in the European Parliament	83
The European Parliament and environmental issues.....	85
The EU Climate Law	85
Representation of environmental issues in policy making.....	87
Methodology	89
MEPs vote	89
MEPs' environmental salience.....	91
Models	93
Results	95
Descriptive	95
Impact of MEPs environmental salience on MEPs vote	95
Discussion and conclusions	100
Appendix	103
Tables for paper 1	103
Tables for paper 3	107
Dictionary of environmental words (English).....	108
Dictionary of environmental words (Hashtags and general words to be used in all languages subsamples)	110
Dictionary of false positives (English).....	111
Dictionary of negative words (English).....	111
References.....	112

Summary

This thesis investigates whether European elections establish an electoral connection based on the environment. Part of the literature on European elections indicates that these elections are second-order elections and are dominated by national issues. This thesis assesses whether EU-policy issues can play a role in European elections by focussing on the environment, a relevant EU-policy issue that is highly salient nowadays. The thesis assesses this at three different stages: the electoral campaign, election day, MEPs' vote in the European Parliament plenary. It is composed of three papers, each focussing on one of these stages. It applies different regression models, and the main variables are computed using candidates' and parties' tweets, data from citizens' surveys, and MEPs' roll-call votes.

The first paper assesses whether citizens' environmental concern leads candidates to MEPs to incorporate environmental issues in their campaign. The analysis is performed at party level, and it uses data from the 2014 and 2019 elections and from the surrounding national elections. Findings indicate that parties are responsive to citizens' environmental concerns.

The second paper analyses whether parties' environmental salience influences citizens' vote choice. It focuses on the 2019 European election, but the analyses are also performed on the 2014 election, as comparison. It finds that larger parties' environmental salience increased the likelihood of selecting the party among citizens who trust the European Parliament. In addition, citizens for whom the environment is one of the most important issues tended to switch to parties that had focussed more on the environment, compared to the party they preferred in national elections.

The third paper investigates whether MEPs who had focussed more on the environment during the 2019 European campaign cast more pro-environmental votes in the European Parliament, using the vote on the emissions' reduction target mentioned in the European Climate Law. Results show a positive relationship between MEPs environmental salience during the campaign and the ambition of the target they supported.

These results show that European elections can establish an electoral connection based on the environment, because parties respond to citizens' environmental concerns during the campaign, parties' environmental salience influences citizens' vote choice in these elections, and MEPs are consistent with their campaign's environmental focus when they

cast votes in the plenary, facilitating the representation of citizens' concerns at the policy stage. This suggests that European elections are not simply second-order elections, as EU policy issues can play an important role in them, at least when citizens consider these issues important and are aware of EU's role in the given domain.

Parties' and candidates' environmental salience are based on tweets posted during the electoral campaigns. A dictionary of environmental words has been prepared to identify whether these tweets discussed environmental issues or not. Before presenting each of the three papers, the methodology section describes the elaboration of this dictionary and how this has been used to compute candidates' and parties' environmental salience. Prior to this, the main literature related to European elections is reviewed.

Literature Review

European elections as second order elections

Reif and Schmitt (1980) labelled European elections as ‘second-order elections’, implying that their relevance is lower¹ than in national elections. Lower relevance makes strategic voting less prevalent, which benefits small parties (Reif and Schmitt, 1980), as well as extremist and protests parties (Schmitt et al 2020). Perceived low relevance also leads to lower turnout (Reif and Schmitt, 1980, Wessels and Franklin 2009).

Lower relevance is also related to another common feature of second-order elections, this is the importance of issues belonging to another arena (mainly the national one) in guiding actions of citizens and politicians (Reif and Schmitt, 1980, Weber, 2007). This puts governing parties in disadvantage because some voters use these elections to show their disappointment with the national government or to exert pressure on it, even when their sincere preference is the governing party (Marsh, 1998; Reif and Schmitt, 1980; Schmitt, 2005). In this sense, European elections have been described as barometers that indicate the strength of national parties and provide hints about the next national election (Oppenhuis, Van Der Eijk, and Franklin 1996; Marsh, 1998). Even if this mid-term evaluation is difficult to interpret, it can trigger certain actions by national political actors and have consequences on the national system (Franklin, Van der Eijk, and Marsh, 1996).

Lastly, it is important to note that the concept of second-order expresses more a degree than a binary category (Marsh and Mikhaylov, 2010; Van der Eijk, Franklin, and Marsh 1996). The relative importance of national or European factors in a specific election and country depends, among others, on the relevance of these issues for actors such as citizens and parties (Reif, 1997).

Implications of the second-order nature for the EU system

Some of the second-order traits² may undermine the legitimacy of the European Parliament and raise claims that the EU suffers from a democratic deficit.

¹ ‘Second-order’ does not mean that EU issues are completely irrelevant. Reif & Schmitt (1980) already said that “there is less at stake to be sure, but there is still something at stake” (Reif & Schmitt, 1980, p10).

² There is not much discussion on the positive/negative implications of citizens voting less strategically.

Firstly, turnout is often seen as a measure of support and trust towards institutions (Norris, 1997). Therefore, low turnout could be perceived as a sign that European citizens do not have a favourable image of the European Parliament. However, Schmitt (2005) stated that high levels of abstention could not be interpreted as a “a crisis of legitimacy of the European Union” (Schmitt, 2005, pp. 651), as negative EU attitudes were not the main cause of abstention. Instead, citizens participate less because the stakes are lower and parties make fewer efforts to mobilise them (van der Eijk and Schmitt, 2009). Nonetheless, as explained below, several studies find a relationship between EU attitudes and abstention.

Moreover, even if abstention is not an expression of discontent with the EU system, it can have negative consequences such as inequalities in representation (as participation is often influenced by the socio-economic background) (Bhatti 2019, Delwitt, 2002, van der Eijk and Schmitt, 2009) and may lead to a situation in which policy decisions reflect the preferences of the elites or of only a share of EU citizens (Norris, 1997; Walczak and Van der Brug 2012). Walczak and Van der Brug (2012) find that the European Parliament represents better citizens with higher education and knowledge and suggests that one of the reasons could be that candidates for MEP are less responsive to citizens with lower educations and income because these are less likely to participate in these elections. Likewise, a study in Denmark finds that European elections display a larger participation gap in terms of education and ethnicity than national and local elections (Bhatti et al 2019). The education gap makes authors state “the image of the EU being a project that appeals primarily to the highly educated citizens is a somewhat fair picture” (Bhatti et al 2019, p. 357). Similarly, low turnout can affect parties’ vote share and, thus, the extent to which they are present in the European Parliament. Remer-Bollow, Bernhagen and Rose (2019) estimate that higher turnout in the 2009 and 2014 elections would have increased the vote share of leftist and moderate parties. Nonetheless, they find that turnout does not differently affect parties with different positions on the EU integration dimension. Moreover, Delwitt (2002) claims that this lack of interest, and the low turnout deriving from it, are unhealthy for democracy, as suffrage is typically associated with legitimacy.

Some authors expressed concerns regarding the consensus among the main European parties on EU integration (Franklin, Van der Eijk, and Marsh, 1996; Mattila and Raunio 2012; Marsh and Norris, 1997), which did not match citizens’ preferences (Rose and Borz 2013).

This lack of alternatives meant that voters could not voice their disapproval of EU integration, making accountability difficult and indicating a “lack of linkage between public preferences and constitutional decisions by the Parliament” (Marsh and Norris, 1997, p.155). Franklin, Van der Eijk, and Marsh (1996) alerted that the absence of debate on EU issues could lead to a decrease in EU citizens’ support for the EU, to some countries leaving the EU or, ultimately, to the end of the European project.

By contrast, Thomassen and Schmitt (1999b) argued that the consensus on EU constitutional issues was necessary for the advancement of the European project. They stressed that in stable democratic systems debates are not on constitutional matters but on “substantive policy issues”. According to them, a European party system structured around the left-right dimension, with citizens using it to make their vote choices, would be a sign of this and a proof that representation is working. De Vries and Hobolt (2016) also agree that using the European elections to express opinions linked to the left-right dimension or to other policies is also relevant and can provide a European mandate, and Bressanelli (2013) stresses that the European Parliament has more competences on issues related to the left-right than the EU integration dimension.

It must be noted that low turnout and lack of debate on EU issues are not the only sources of EU democratic deficit mentioned in the literature. Citizens’ preferences could also be represented through the Council (De Vries and Hobolt, 2016). However, several authors have highlighted that this representation route does not work either, as it is difficult to hold the Council accountable (Thomassen and Schmitt, 1999b), and information about its meetings and how decisions are taken is not transparent (Follesdal and Hix, 2006; Franklin, Van der Eijk, and Marsh, 1996; Norris, 1997). Follesdal and Hix (2006) adds that the national Parliament does not exert a clear control on the national ministers participating in the Council meetings. Moreover, these ministers may also lack a European mandate to guide their actions in the Council, as parties do not offer alternatives on the EU issues in national elections or these are not especially salient (Follesdal and Hix, 2006, Marsh and Norris, 1997). Nonetheless, a more recent study has found evidence that voters express their EU views also through this channel (De Vries and Hobolt, 2016).

Another common criticism, is the fact that elections do not directly lead to government formation or to the choice of a head of government³ (Franklin and van der Eijk, 1996, Marsh and Norris, 1997; Schmitt, 2005; Thomassen and Schmitt, 1999b, Thomassen, 2009). This makes it difficult to punish the incumbent and reduces accountability (Gattermann and De Vreese 2017, Thomassen 2016).

Another accountability issue is that voters may have difficulties to attribute responsibilities correctly between the EU and the national institutions, and this may depend more on their EU attitudes than on the distribution of competences (i.e. tendency to blame the EU for worsening conditions and to reward the national government when these improve among those with negative EU attitudes, and the opposite in case of pro-EU citizens) (Hobolt and Tilley 2014).

Another pitfall for representation is the limited power of the institution directly elected by citizens, the European Parliament (Follesdal and Hix, 2006, Thomassen and Schmitt, 1999b). Its competences have been largely expanded (Schmitt, 2005, Schmitt and Toygür, 2016). Older studies highlighted that citizens perceive that European elections, the European Parliament or the EU in general have low relevance (Franklin, 2001; Schmitt, 2005; Wessels and Franklin 2009) or they lack sufficient knowledge about it (Follesdal and Hix, 2006; Schmitt, 2005). If this is still the case, doubts about the quality of representation may still be raised (apart from the fact that these issues may motivate abstention).

Other elements that have led to claims that there is a democratic deficit are the disproportionate influence of interests' groups representing businesses (Follesdal and Hix, 2006), and the media coverage. Specifically, the limited coverage of the EU and EP news, the important presence of national level politicians when discussing European elections news, and the fact that there is no "European public sphere" (De Vreese et al., 2006, Strömbäck et al. 2013).

³ Some efforts have been done in this direction, especially in 2014, as the *Spitzenkandidat* of the most voted party was elected President of the Commission. However, this still differs from the process of government formation in national elections. Moreover, this procedure was not repeated in 2019.

Empirical evidence on the importance of EU factors

Issue salience during the campaign

Scholars writing about the campaigns for the 1979-1994 elections emphasised the predominance of national issues (Franklin, Van der Eijk, and Marsh, 1996; Marsh and Norris, 1997; Reif, 1984). Nonetheless, later studies provided more nuanced results. For instance, in 2009 parties used European frames in their TV commercials, although national frames predominated (Adam and Maier, 2016), and in some countries economic issues (one of the main issues of the campaign together with unemployment) were discussed from a European perspective (e.g. in Germany and Greece) (Seoane Perez and Lodge, 2010). Davidson-Schmich and Vladescu (2012) even report a predominance of European issues, as a bit more than half of printed campaign materials (e.g. posters) had European content, while the percentage with national content was only 26%.

In the 2014 election, parties (both established and challenger parties) discussed EU issues (including both constitutive and policy issues) in their press releases preceding the election, but these were not predominant (Eugster et al 2020). About 20% of parties' posters mentioned Europe, 25% referred to the national dimension, and 25% to both (Novelli, 2017). Despite showing that 'Europe' is present in the material, Novelli (2017) stated that this presence was not impressive as this material was aimed at the European elections. Candidates and their Twitter followers often used hashtags mentioning Europe or the elections, but these hashtags were generally tailored to the specific country and not in English, implying that trans-national debates were scarce (Nulty et al., 2016). Among their tweets that focussed on political issues, only half (48.1%) had European content⁴ in Germany, and this was much lower in the UK (25.5%), Spain (18.3%) and Greece (10.6%) (Fazekas et al. 2020). In the two months preceding these EP elections, one third of parties' messages on their Facebook accounts referred to them (Braun and Schwarzbözl 2019).

Thomassen (2016) indicates that, different than in previous election, the 2014 election public debate was structured along the EU integration dimension (with parties expressing their preferences for more or less integration) and served to elect representative that matched part of the electorate positions in EU integration issues (e.g. with the rise of

⁴ This includes topics that belong to the EU level of governance.

Eurosceptic parties). Nonetheless, he stresses that this does not provide a link between voters and representatives regarding the issues for which the Parliament is competent, as national actors are those with the power to decide on EU integration issues (i.e. through the intergovernmental channel) while MEPs decisions are mainly related to the left-right dimension.

In 2019, national issues were slightly more dominant in campaign material (Novelli and Johansson, 2019). Maier et al (2021) indicate that during the 2019 campaign, parties focussed equally on European and national/regional issues, which makes them state that the 'second-order model no longer seems to hold' (p.15). Nonetheless, it could be argued that the fact that European issues do not predominate over the others still shows that these elections have a second-order component.

Studies on manifestos also provide mixed evidence. Parties' manifestos differ between European and national elections, at least regarding salience of issues related to EU integration issues, which are more present in European elections (average value in EP manifestos: 18.3% vs 3.2% in national ones) (Braun and Schmitt 2018). Manifestos for the 1999 and 2004 elections generally adopted European frames and "EU in general/ deepening of the EU" was one of the two most prevalent topics, but together with "political authority" (i.e. references to the national government) (in the West the former was ranked first and the latter second, and the reversed applied to Eastern countries) (Wüst and Schmitt, 2007; Wüst, 2009). EU integration and related issues were present in 1979-2004 manifestos from Western countries, but these issues did not clearly predominate, as the average of all party families per year ranged from 19 to 25% (the highest salience being in 1999 and the lowest in 2004) (Spoon, 2012). Braun, Hutter, and Kerscher (2016) take a different approach that also includes issues relevant for EU policies. Their results show that European issues predominate over the national ones (approximately 75% vs 24%), which they see as a proof that European elections are not second-order. Europarties' 2014 manifestos focussed importantly on EU constitutive or policy-related issues (Jadot and Kelbel, 2017), but this is not very revealing, as these parties are not linked to any specific country.

Salience of European topics may depend on the country context (Adam et al., 2017; Seoane Perez and Lodge, 2010). European topics dominated in 2019 campaign material in Western

Europe, but their presence was clearly lower in Southern and Eastern Europe (Novelli and Johansson, 2019). Similarly, parties' EU salience is positively influenced by salience among the other parties in the same country (Adam and Maier, 2016). Spoon (2012) found that higher polarisation on EU issues between parties increased EU salience in the next election. Nonetheless, Braun, Hutter, and Kerscher (2016) identified the opposite effect for polarisation.

Ideology could be another important factor. Spoon (2012) show larger salience for the 'national' family, followed by the Conservatives, Christian Democrats and Liberals, while the Green family shows the lowest value. She only focuses on EU constitutive issues, which are more salient among Eurosceptic parties (Braun, Hutter, and Kerscher 2016). By contrast, EU-policy issues are more prevalent among pro-European parties (Braun, Hutter, and Kerscher 2016). Roginsky and De Cock (2015) explain that Eurosceptic parties mention 'Europe' less often in their tweets. However, Adam et al. (2017) find no differences between pro-European and Eurosceptics parties regarding how their press releases focus on the EU (except in Germany), but indicate that pro-European catch-all parties with internal dissent about EU integration tend to silence EU topics. Eugster et al (2020) also find a negative relationship between internal dissent and EU salience (including in this case both integration and policy issues). Recent studies indicate that both government and opposition parties focus on EU issues (Maier et al 2021).

Other authors find differences by topic or aim. For instance, European frames are used by parties to discuss territorial or immigration issues, and national ones for economic and social matters (Adam and Maier, 2016). Fazekas et al. (2015) found that candidates referred to the EU in social media to encourage citizens' participation, but to national issues to influence their vote choice. This may imply that candidates use hashtags related to the European elections only to remind citizens that an election takes place soon.

It is important to acknowledge that political actors do not determine alone the salience of issues during an electoral campaign. The media plays a key role. In 1999 media coverage of EU elections was low in most countries and even practically inexistent in some (Peter et al., 2004), but some improvements were identified in the two subsequent elections (De Vreese et al., 2006; Schuck et al., 2011). Nonetheless, even if the media includes news about the EU elections, the presence of EU actors (e.g. European Commission representatives,

candidates for MEPs) in them is somewhat limited, especially in some countries (De Vreese et al., 2006; Schuck et al. 2011; Strömbäck et al., 2013). Higher presence of news about the elections or the EU in the media seems to be positively impacted by polarisation on EU issues among parties/elites (Boomgaarden et al., 2013; Peter et al., 2004, Schuck et al., 2011). While less polarisation among parties, no concurrent elections, proximity to Brussels, larger GDP, less population, and having a EU net benefit have a positive effect on the visibility of EU actors in these news (Boomgaarden et al., 2013; Schuck and de Vreese, 2011).

The effect of public opinion on salience levels is still unclear. Adam and Maier (2016) report that public opinion on EU integration had no significant impact on the extent to which parties adopt European focuses in their TV ads for the EP campaign. Braun, Hutter, and Kerscher (2016) found that the public's position on EU integration increases salience of EU-policy issues, but not constitutive issues. Eugster et al (2020) find that parties' EU salience (combining both issues) in press releases, is greater when a larger proportion of citizens have a favourable image of the EU, but only in the case of established parties (either in government or in opposition), not challenger parties. Lastly, Schuck and de Vreese (2011) report that citizens' favourable attitudes towards the EU lead to more presence of EU actors in the news about European elections.

On another note, the 2006 MEPs survey indicates that MEPs had participated in several activities during the 2004 campaign (Bowler and Farrell 2011). This suggests that they considered the campaign relevant, but this may have been different for national and MEP candidates who were not elected (or those who did not participate in the survey).

Voters' actions

Participation

As mentioned above, perceived low relevance of second-order elections discourages participation. In fact, several studies have stressed that turnout in European elections is generally lower compared to national elections (Reif and Schmitt, 1980, Reif, 1984, Blondel et al., 1997, Schmitt and Toygür 2016).

Nonetheless, turnout levels are not constant across European countries, individuals, and time. Many scholars have found that attitudes towards the EU are key to explain these

differences, with favourable attitudes positively related to participation (Belot and Van Ingelgom, 2015; Fiorino et al., 2019; Jesuit 2003; Mattila, 2003; Marsh, 2009; Rose and Borz 2013; Studlar et al., 2003; Stockemer, 2012; Wessels and Franklin 2009); or ambivalent attitudes linked to abstention (Schäfer and Debus 2018). Although Kentment-Cin (2017) finds that in 2009 ambivalent individuals (those that had a positive or negative image of the EU depending on the issue) were more likely to participate than those showing only negative attitudes. Braun and Tausendpfund (2020) find a positive effect of approving EU actions in the preceding year. Other studies find higher likelihood of participating if citizens' perceive that EP elections are effective and that the EU in general or the EP in particular are responsive/representative/influential (Clark 2014; Kentment-Cin 2017; Wessels and Franklin 2009). Similarly, Clark 2014 finds higher likelihood to participate when citizens consider the EU is in charge of what they consider the most important issue. Fauvelle-Aymar and Stegmaier (2008) measure EU support as the percentage of positive votes in the referendum to join the EU in post-communist countries that joined the union in 2004 and find that it had a positive effect on turnout in their first EP election.

Other studies find that negative attitudes towards the EU are linked with abstention (Bakker et al., 2018; Blondel et al., 1997; Hernández and Kriesi 2016; Schmitt et al 2020). Hernández and Kriesi (2016) assess this relationship more in-depth and find that it is weaker in contexts where Eurosceptic citizens can find a party that clearly opposes the EU, especially if it is aligned with their left-right position.

In a similar note, having diverging opinions on EU integration with the party voted in national elections seems to discourage participation (Bakker et al., 2018; Hobolt and Spoon 2012), and also diverging on the EU issue 'immigration' (Bakker et al 2018). Hobolt and Spoon (2012) indicate that left-right distance is also important, but Bakker et al 2018 find that this distance is more related with switching rather than with abstention. Schäfer and Debus (2018) find that diverging opinions on EU integration is related with abstention only in Eurozone countries in 2014, but not before the Euro crisis (2009 election).

Other studies find no effect of EU attitudes or highlight that their impact is limited (Blais and Kostelka, 2015; Franklin, Van der Eijk, and Oppenhuis 1996; Schmitt, 2005; Schmitt and Van der Eijk 2007; Steibrecher and Rattinger, 2012). Similarly, Lefevere and Van Aelst (2014) found no effect of considering the EU level relevant on participating, which make them

suggest that it is national factors that bring voters to the polls during European elections. In a similar vein, some of these studies underline the impact of individual factors generally linked to higher participation such as political interest and party identification and socio-demographic characteristics (Blais and Kostelka, 2015; Schmitt, 2005; Schmitt and Van der Eijk 2007; Steibrecher and Rattinger, 2012). Regarding the latter, Bhatti and Hansen (2012) link generational replacement with lower turnout in European elections and predict future drops, but it is unclear whether this will affect differently European elections compared to elections in other levels. Lefevre and Van Aelst (2014) identify a very strong effect of habitual voting (measured as having participated in the previous national election).

Others indicate that the evaluation of the national government is also a relevant factor to explain participation, as disapproving the national government is linked with abstention among citizens who had voted this government (Hobolt, Spoon, Tilley 2009; Schmitt et al 2020), while trust in the national parliament triggers participation (Nardis 2015). Lastly, several authors identify a positive impact of systemic factors at country-level such as concurrent elections, voting on the weekend and compulsory voting (e.g. Karp, 2003; Mattila, 2003; Schmitt, 2005) and having the next national election closer (Fauvelle-Aymar and Stegmaier 2008). Clark (2015) finds that decentralisation decreases the chances to abstaining in European elections.

The effect of contributing or benefiting from the EU budget is unclear. Mattila (2003) found that being a net contributor decreased turnout and Jesuit (2003) that citizens in regions that received structural funds were more likely to participate. However, Steibrecher and Rattinger (2012) reported that being a net beneficiary from the EU budget was associated with lower participation, while Studlar et al. (2003) and Flickinger and Studlar (2007) found no effect. Nonetheless, the latter studies found a positive effect on turnout of the percentage of workers in agriculture, a sector for which EU policy is highly-relevant (Studlar et al., 2003). The latter finding is very important as it suggests, that when citizens perceive that the EU action is relevant, they are motivated to participate in the elections to the European Parliament. In addition, some studies report a positive effect of hosting an EU institution in the country (Flickinger and Studlar 2007), which may also increase the perception among citizens that EU matters.

Reif and Schmitt (1980) stressed that candidates' campaign may be particularly relevant for participation in European elections as citizens are more inclined to abstain. A panel data study in the Netherlands confirm this, as it finds a much stronger effect of campaign exposure in the 2009 European elections compared to the national ones (and even in comparison to the local contest)⁵ (Lefevere and Van Aelst 2014). Thus, politicians may be need to work harder to convince citizens to turn out (Wessels and Franklin 2009). The campaign may be even more important for those citizens with low political interest and who are not particularly close to any party, who may need additional stimulus to turn out (Schmitt et al 2020).

Several other studies find a link between individuals' campaign mobilization (e.g. having been canvassed, having received a leaflet of having seen ads) and their likelihood to participate (Franklin, Van der Eijk, and Oppenhuis 1996; Franklin and Wessels (2010); Karp 2003; Wessels and Franklin (2009); Schmitt et al 2020). For instance, having seen news about the Elections (TV, newspapers) increased the likelihood to turn out in 2004 (Nardis 2015). In addition, being exposed to positive news about the European Parliament led to higher willingness to participate in the elections by increasing trust in this institution (Nardis, 2015). Similarly, Hogh and Larsen (2016) find that Danish high school students who had participated in a workshop about the EU reported higher likelihood to vote in the approaching 2014 election than those who had not taken part. By contrast, Schmitt (2005) found that individuals' participation in campaign activities was not that relevant to explain participation, but he explains that the 2004 campaign was not highly prominent.

It is important to note that Wessels and Franklin (2009) show that the most important factor that explained low turnout was the perception that European elections have low relevance, and stress that addressing this issue was more important than simply increasing campaign efforts.

On another note, Maier et al (2011) found that participants' willingness to participate in the upcoming EP election did not differ between those that had been exposed to a campaign featuring national topics and actors and those that had visualised one with

⁵ The difference in the predicted probability to vote between those that followed the European campaign very intensively and those that did not follow it is 55pp in European elections but 18pp in the national ones (local: 38pp)

European elements. The campaign may also increase citizens' knowledge on European politics. This positive effect was found a study in Denmark during the 2014 campaign (Beach, Hansen and Larsen 2018).

Vote choice

Many studies on vote choice in European elections have as a dependent variable vote switch between national and European elections. However, data on the switch per se does not provide information on the degree of second-orderness (Carrubba and Timpono, 2005). For this, it would be important to uncover the reasons of vote switches and also the reasons for not switching, as this could mean that citizens just vote their preferred party at national level, or that they vote according to their preferences at EU level, but conclude that the party that will defend them better is the one they voted in national elections. This would probably be the case if they prioritise socioeconomic issues in both elections (Hix and Marsh, 2007).

At aggregate level, several studies have confirmed the second-order trait of losses for governing parties, often moderated by the national cycle⁶ (Ferrara and Weishaupt, 2004; Schmitt, 2005; Marsh, 2009; Hix and Marsh, 2011, Schmitt and Toygür 2016) and of better performance of small parties (Ferrara and Weishaupt, 2004; Hix and Marsh, 2007, 2011, Schmitt and Toygür, 2016, Ehin and Talving 2020). It must be noted that Ehin and Talving (2020) did not find that governing parties performed worse in the 2019 election.

Hix and Marsh (2011) examine if there are common switches across Europe using aggregate data, which according to them would signal a "European effect". However, they found little evidence of important swings affecting parties within the same family, except for a generally bad performance of socialist parties in several countries (regardless of whether they were governing or not).

Reif and Schmitt (1980) indicated that parties who had a clear stance on EU membership (either positive or negative) seemed to have performed better than those with an ambiguous position. However, Ferrara and Weishaupt (2004) found no effect of parties'

⁶ Popularity of governing parties usually increases just after the national election ("post-electoral euphoria"), then starts decreasing (as citizens start feeling disappointed) reaching the lowest point around mid-term, and it raises as the next general election becomes closer (Reif, 1984).

salience and position regarding EU integration on their performance (they found a negative effect of internal dissent). Likewise, Schmitt and Toygür (2016) find that parties' EU integration position within the Eurozone was not important to their results in 2014. By contrast, Hix and Marsh (2007) report that the strength of the EU position, (i.e. extreme positions) or being classed as an Anti-EU or Green party has a positive effect on parties' performance in European elections compared to the national ones. Nonetheless, they consider European elections mainly second order because these effects are small and do not change the impact of factors associated with the second-order model (namely, that big parties in government tend to lose support). Similarly, Van Egmond (2007) finds that in 1999 parties obtained some gains due to their negative EU position, but that the most important variable to explain vote switch is party size (with smaller parties benefiting more).

In more recent elections, parties' performance was influenced by their position on EU integration and other EU issues, although factors associated with the second-order theory were still relevant (Trechsel et al., 2017; Maggini et al., 2019). A favourable position on EU integration was found to negatively affect parties' performance in 2014 but it was linked to electoral benefits in 2019; assimilation showed a negative effect both in 2009 and 2019; a free-market position seems to have brought electoral benefits in 2014; advocating for increasing taxes on banks negatively affected performance in 2019, while "tougher criminal sanctions" was associated to a positive effect (Trechsel et al., 2017; Maggini et al., 2019). Lastly, Belluci et al. (2012) report that appearing on the news about the EU during the campaign brings electoral gains to parties.

Several studies that use survey data stress that citizens and parties' positions and attitudes related to the EU exert some influence on vote choice (Clark and Rohrschneider, 2009; De Vries et al., 2011; Hobolt et al, 2009; Hobolt and De Vries, 2016; Hobolt and Spoon, 2012; Hobolt and Wittrock 2011; Hong, 2015). Furthermore, views on immigration and EU redistribution explain vote for a right-wing or a left-wing Eurosceptic party (Hobolt and De Vries 2016; Van Elsas 2017), although mainly within Western countries (Hobolt, 2015). This shows the importance of the opinion on policies that are relevant at EU level (although not necessarily exclusive of this level). Moreover, Structural and Investment Funds have been found to be related to voting for the national government in European elections, showing the relevance of EU policy for these elections (Henceroth and Oganessian, 2019).

Moreover, some authors have stressed the limited congruency between voters and their chosen party regarding EU integration issues, with voters generally being less pro-European than parties (Costello, Thomassen and Rosema, 2012; Mattila and Raunio 2012; Rosema and de Vries 2011; Thomassen and Schmitt 1999a). One of the obstacles for congruence was the above-mentioned consensus in EU issues among the main parties, while citizens opinions were more diverse (Irwin, 1995; van der Eijk and Franklin 2007). Nonetheless, in the 2009 and 2014 elections different policy options were offered in both left-right and EU integration dimensions at the EU level (i.e. comparing positions of parties constituting each European Party Group) (Bressanelli 2013; Lefkofridi and Katsanidou 2018), implying that this may allow the citizens to be represented at the European level (Lefkofridi and Katsanidou 2018). However, these studies do not indicate if voters within each country are offered enough alternatives in both dimensions, as even if Eurosceptic parties may exist, they may not be represented along the left-right dimension, forcing voters to decide what dimension to prioritise (Rosema and de Vries 2011; van der Eijk and Franklin 2007). In fact, Bressanelli (2013) find more differences regarding the left-right dimension than the EU integration one, especially among core parties.

Salience of issues may also differ between voters and parties. For example, in 1999 EU topics were not the most important issues among voters, while some of them had a relevant presence in parties' manifestos, especially the EU integration topic (Wüst and Schmitt, 2007). Carrubba (2001) found that there was an electoral connection between citizens and parties regarding EU integration (focusing on the 1979-1992 period). He indicated that parties tended to defend pro-integration positions, but while staying within positions acceptable by the electorate. He goes one step further and indicates that evidence suggests that parties are responsive to citizens' preferences (not the other way round). A more recent study on four countries finds a relationship between polarisation on EU integration and on some EU policy issues (budget, economic authority, asylum policy) among citizens and among parties (Goldberg, van Elsas, de Vreese 2020b).

Apart from the fact that there could be a limited offer on EU positions from parties' point of view, another issue that has been highlighted is that voters may fail to select the party that is closer to them on the EU dimension (Rosema and de Vries 2011). Rosema and de Vries (2011) find that only half of voters do this and stress that this shows that a "failing

linkage exists between political elites and their voters regarding EU matters” (p. 217) and that this indicates a representation deficit. Insufficient knowledge about parties positions could be a reason for this (Van der Brug and Van der Eijk 1999).

However, several authors underlined that left-right positions influence vote choice and that there is congruence between voters and representatives based on them (Bakker et al., 2018; Hobolt and Spoon, 2012, Rosema and de Vries, 2011; Thomassen 2009; Van der Eijk, Franklin, and Van der Brug 1999; Vasilopoulou and Gattermann 2013). The fact that this is a shared feature across EU countries has been interpreted as a sign that there is one European electorate (Thomassen 2009, Van der Eijk, Franklin, and Oppenhuis 1996). For instance, Van der Eijk et al. (Van der Eijk, Franklin, and Oppenhuis 1996) concluded that there is one European electorate, not many, as citizens from different EU countries “use the same kind of decision-making process when choosing a party” (p. 365). Focussing on parties, Lefkofridi and Katsanidou (2018) find coherence (with some exceptions) within European Party Groups regarding both left-right and EU integration issues, but this is larger for the later.

On the other hand, if the left-right decision is not the only relevant dimension, it may complicate representation. Costello, Thomassen and Rosema (2012) identify that positions of voters and parties participating in European elections are influenced by three distinct dimensions (left-right, cultural, EU integration), which makes it difficult for citizens to find parties in the European party system that can represent them in all of them.

Walczak and Van der Brug (2012) pinpoint inequalities in congruency depending on the voter individual characteristics. For instance, they find that working class voters show lower congruence with the party they voted regarding immigration and EU integration issues. Similarly, congruence on the EU integration dimension is larger when voters have higher political knowledge (McEvoy 2012). There are also differences by type of party, with congruence party-voter in EU integration issues being stronger for specific parties (although there is no consensus in the literature). It has been reported that congruence in these issues is higher with regards to radical right parties (Walczak and Van der Brug 2012), small anti-European parties (Thomassen and Schmitt 1999a), smaller parties and left-wing parties (Mattila and Raunio 2012), far left-wing parties (McEvoy 2012).

Regarding what could explain the importance of EU factors on voters' decision, some studies find a positive effect of citizens' EU position and salience. Considering parties' EU position when voting seems more likely among voters with a positive attitude towards EU integration (Rosema and de Vries, 2011) or with an extreme EU position (Wilson, 2012).

The importance of party and voters' distance on the EU dimension for vote choice is higher when parties are polarised on EU integration (De Vries et al., 2011; Wilson, 2012), when voters are provided with information about parties' positions on this dimension (Hobolt and Wittrock 2011), when the media adopts a more negative tone during the campaign (Hobolt and Spoon, 2012), and when European Parliament elections occur at midterm of the national cycle (Weber 2009). Moreover, De Vries et al. (2011) find that EU salience in the media increases the likelihood that voters select a party with a similar position on EU integration (i.e. 'EU issue voting'). On the media role, van Spanje and de Vreese (2014) found that when the media portrays the EU more positively, the probability of voting for a Eurosceptic party declines.

By contrast, other studies indicate that the impact of EU attitudes/positions did not have a strong impact on vote choice in the European elections in 1994 (Van der Eijk, Franklin, and Van der Brug 1999) and 1999 (Van der Brug, Van der Eijk, Franklin 2007). On a different note, Schakel (2018) found that European elections seem more second-order where regional power is stronger, as they may be relegated to 'third-order elections'.

A specific EU issue: environment

While many of the above studies exclusively focus on EU integration and similar issues, other scholars differentiate between constitutional issues (e.g. enlargements, EU membership, treaties, legitimacy of EU institutions...) and issues that are covered by EU policies (Braun, Hutter, and Kersch 2016, 2016; Schmitt, 2007) or as Schmitt and Thomassen (1999) label them "issues of common concern". This section focuses on one issue that belongs to this second category, the environment (Braun, Hutter, and Kersch 2016; Schmitt, 2007).

Environmental issues have some characteristics that make their regulation more suitable at supra-national level. Protection of the environment generally fits the definition of 'public good', as once it is provided, all members of a community benefit from it and those that do

not pay/contribute to it cannot be excluded from its consumption (Olson, 1965). This implies that individuals will be unlikely to provide the good themselves, except if there exist some coordination mechanism or organisation (Olson, 1965).

In the case of the environment, the community refers to inhabitants of the Earth as a whole, as actions that harm the environment are often felt outside a country's jurisdiction (De Winter, Swyngedouw, 1999) and may affect the whole planet. As states benefit from actions that protect the planet even if they do not contribute to it, they have few incentives to act in this domain. Furthermore, even if they undertake pro-environment policies, they will not be shielded from other states' irresponsible practices. For example, EU Member States may be unable to provide goods such 'cleaner environment' on their own, but the EU structure may allow them to do this (Hooghe and Marks 2001). Moreover, environmental rules may imply a burden for businesses, hindering their competitiveness; but harmonising environmental standards places EU companies in a level playing field (Börzel 2005; Carruba and Timpone 2005; Knill and Liefferink 2013).

Thus, individual states may be unwilling to legislate in the environmental domain, if they do not act in a coordinated way with other countries. A supranational organisation can facilitate this coordination, making environmental issues suitable to be addressed at European level (Hix and Marsh, 2007; Viola, 2015). This does not mean that EU institutions should be the only ones acting in this domain. In fact, some pro-environment actions (e.g. reducing emissions) performed at municipality level can deliver benefits at local level (Ostrom, 2010).

The environment can also be considered an EU issue because the EU treaties provide that EU institutions can and must act in the environmental area (Title XX TFEU, Art. 3 TEU). It must be noted that it is a 'shared competence', implying that the EU can only legislate when the EU level is the most appropriate to tackle a particular environmental issue (TEU Art. 5, TFEU Art. 2.2).

Environmental Issue salience during the campaign

Environmental issues were somehow salient already in 1999, as 'environmental protection' was the third most present topic in parties' manifestos (5.5%). Unsurprisingly, it was the main topic for green parties but also among the liberal family (Wüst and Schmitt, 2007). It

ranked third for socialist parties. In 2004, it also ranked third with a share of 6% among old Member States, but it was only 14th (2.9%) among new ones, probably due to a lower prevalence of post-materialist values (Wüst, 2009).

In the 2009 election, 'climate change and energy' was the third most salient topic and this salience was deemed high in 16 out of 27 countries (Seoane Perez and Lodge, 2010). The environment was only the sixth most salient topic in the EU news (Schuck et al., 2011). In 2014, a topic labelled 'environment and energy' (which also includes words related to agriculture and food) was the third most salient in Europarties' manifestos (out of six topics identified). It covered 15.75% of the corpus and, unsurprisingly, it had a higher presence in the manifestos from the Green Party and EFA (Jadot and Kelbel, 2017).

In 2019, the salience of environmental issues across Europe was also moderate, as it was only the sixth topic by order of presence in the campaign material, after 'Europe', 'Values', 'economics', 'social', and 'labour'. It ranked, nonetheless, second in Western and Northern Europe and it was the most salient topic in France and Sweden (Novelli and Johansson, 2019). Some descriptive work explains that environmental issues were salient during the 2019 campaign in some countries such as Belgium, Denmark, Finland, Germany, Ireland, Portugal and Sweden (Close, 2019; Christensen and La Rosa 2019, Lisi 2019, Marsh 2019, Nielsen 2019; Giebler, 2019; Hoon, 2019; Partheymüller, Schlipphak and Treib, 2020; Raunio, 2019, Blomgren, 2019). They also featured importantly in national election campaigns close to the 2019 European contest in some countries such as Denmark (Nielsen 2019; Seeberg and Wilhelm, 2020) and Finland (Raunio, 2019).

During the 2009 campaign, countries were split regarding whether environmental issues were debated with a European or national frame (Seoane Perez and Lodge, 2010). Nonetheless, Wüst (2009) indicated that parties' manifestos generally frame environmental issues as European. Moreover, Green Parties' 2014 posters hardly included any national reference (Novelli, 2017), which would support the claim that environmental issues are more associated with the European (or global) level. In 1996, 69% of MEPs considered that the environment should be dealt with at European level, being the issue displaying the larger percentage out of eleven issues, above 'Europe' and 'international' (De Winter and Swyngedouw 1999). A majority of participants in the 2010 MEP survey (72.7%) considered

that there should be more EU regulation⁷ on this domain, the second most mentioned out of 7 domains (Scully, Hix and Farrell 2012).

The role of environmental issues on voting behaviour in European elections

Turnout

De Sio, Russo and Franklin (2019) observe that the 2019 turnout levels were higher than what would have been expected and, while stressing that the reasons for this are yet unknown, they suggest that Brexit could be the reason, as it may have raised the perceived relevance of these elections. Other authors also mention Brexit as a potential mobiliser, along with populism, threats to democracy, Trump and Putin actions, and polarisation in the cosmopolitan/communitarian dimension, represented by Macron and Salvini respectively (Christensen, 2019; De Wilde 2020; Raunio, 2019). Several authors also suggest that climate change may have been a mobiliser in some countries: Denmark (Nielsen 2019 and Christensen, 2019), Germany (Partheymüller, Schlipphak and Treib, 2020); and Finland (Raunio, 2019). Partheymüller, Schlipphak and Treib (2020) suggest another EU policy issue: immigration (Partheymüller, Schlipphak and Treib, 2020).

However, it must be noted that national factors have also been suggested as potential mobilisers, such as an approaching national election in Poland and Denmark (Christensen, 2019; Górecki, Plescia and Żerkowska-Balas 2020), salience/polarisation regarding national issues such as health care and social issues in Poland (Górecki, Plescia and Żerkowska-Balas 2020), the yellow vests in France (Chopin and Sandri 2019), the modification of the Criminal Code in Romania (Soare and Tufis 2019), the discussion about national government formation in Spain (Fernández-Albertos and Wilhelm 2020), and citizens views on the national government in Germany (Holtz-Bacha, 2019) Systemic factors may have also played a role such as concurrent local and regional elections in Spain (Fernández-Albertos and Wilhelm 2020; Fraile and Hernández 2019), a concurrent referendum in Romania (Soare and Tufis 2019) and changes in the electoral rules (e.g. threshold change in Germany) (Holtz-Bacha, 2019)

⁷ Percentage that replied 'a lot more' plus the one that selected 'a little more'

Vote choice

Not many studies focus on the importance of environmental issues for voters in the European elections. Maggini et al. (2019) analyse the impact of the parties' position on a specific environmental issue, renewable energies, and find that this benefited their performance in the 2019 elections in Centre-North countries, but not in the others. They stress that these are countries with higher levels of development and postmaterialist values. A similar study on the 2014 election had found no effect of the position on renewable energies (Trechsel et al., 2017), which seems to stress the particular relevance of environmental issues in the 2019 context.

Marsh (2020) indicates that environmental issues and other issues with "strong EU elements" (e.g. financial policy, immigration) could influence citizens' vote in European elections, as these are now present in national agendas. In this line, Partheymüller, Schlipphak and Treib (2020) suggest that salience of environment and immigration in Germany led to a better performance of the parties that focussed on them during the campaign (i.e. the Greens and AfD). Others suggest that environmental salience benefited Greens performance in these elections in Belgium, Finland, France, Germany, Ireland, and Portugal (Hoon 2019; Christensen and La Rosa 2019; Giebler 2019; Lisi 2019; Lachat 2019; Costello, 2019; Maarek, 2019), and that of green-leaning parties in Denmark (Nielsen 2019). In addition, Nielsen (2019) links the salience of climate change with the bad performance of Eurosceptical right-wing parties.

More studies focus on the specific performance of green parties, who have the ownership of environmental issues. However, it is unclear whether their performance is explained by the second-order feature of these elections or by the salience of environmental issues. On the one hand, green parties could benefit from the fact that European elections are second-order as they are rather small parties and have often been in the opposition (Rüdiger, 2019). On the other hand, a better performance of these parties in European elections compared to the national ones could also be explained by the fact that citizens express different preferences at each level of governance (Carrubba and Timpono, 2005).

Some descriptive work has suggested that green parties' performance in several elections is related to salience of environmental issues (Carter, 2010; Rüdiger, 2019). For instance, greens did already particularly well in 1989, and Curtice (1989) spoke of a "Green Tide" as

he observed that Green parties did generally better than other small parties. Likewise, Rüdig (2019) explains that environmental issues were relevant in the debates surrounding that election. In 2019, when green parties obtained the best result in their history, the context was clearly favourable, as environmental concerns were raising among the public, they were an important topic in the political agenda, and green parties had registered good results in elections at other levels (Pearson and Rüdig, 2020).

It is important to note that some authors highlight the striking differences across European regions, especially the divide between West/North, where green parties tend to do particularly well, and South/East, where their performance is generally poor (Angelucci et al., 2019, Rüdig, 2019, Pearson and Rüdig, 2020). This makes Angelucci et al. (2019) state that “The ‘Green wave’ that in the chronicles seems to have crossed the Old Continent, is however geographically localized” (Angelucci et al., 2019, p. 23). The results from Maggini (2019) reported above seem to support this statement.

Multivariate analysis at aggregate level provide mixed evidence. Some show that being a Green party can have a positive effect on performance, but this may be small (Ferrara and Weishaupt 2004, Hix and Marsh 2007). Hix and Marsh (2011) conclude that green parties do not seem to obtain gains from the fact that environment is an EU issue. An analysis of 1994 survey data finds that citizens with higher environmental concern are more likely to vote a Green party in both national and European elections (Carruba and Timpone, 2005).

Regarding green parties, it is important to note that they display a clear pro-EU position, at least in the West, although this was less clear in the past (Bakker et al 2012). Bakker et al (2012) claim that this reflects the fact that these parties perceive that the EU suits their pro-environment and cosmopolitan positions. Similarly, EU-9⁸ parties with a more libertarian position in the GALTAN dimension (which includes environment among several issues) display a more pro-EU position in their manifestos since 1994 (after the Maastricht treaty was signed) (Schäfer et al 2020).

⁸ Those that were already members in 1980

Methodology: Computing parties' environmental salience

This thesis computes parties' environmental salience using tweets. Several sources can provide information on parties' environmental salience. Measures based on elections' material are preferable, especially because salience may fluctuate throughout the electoral cycle (Carter 2013). One of such measures are manifestos, which guide parties' campaign (Wüst 2009). However, few people read them (Maier, Adam, and Maier 2012) and citizens may not perceive shifts in their positions (Adams et al 2014). Moreover, they cannot adapt to last minute events and changes in public opinion (Sommer-Topcu, Tavits, and Baumann 2020), and they usually cover a broad range of issues, providing less information on the topics that parties decide to prioritise during the campaign (De Sio, De Angelis, and Emanuele 2018). Using social media messages allows addressing these drawbacks, while keeping the advantage of being produced by the party/candidates (and not mediated by news' outlets). Twitter is preferred over Facebook because it has a potential larger reach and impact as it has a more public nature, journalists often mention tweets (De Sio, De Angelis, and Emanuele 2018; Jungherr 2016), and politicians' tweets may influence the media agenda (Seethaler and Melischek 2019; Jungherr 2016).

The inclusion criteria are parties/coalitions⁹ (or independent candidates) that reached the 3% threshold¹⁰ of the national vote share in their country in the 2014 or 2019 European election, or that obtained representation in at least one of these two elections. It also includes parties that reached the 3% threshold in the national elections preceding the European one, as these can also be considered relevant parties in the national system.

Parties' environmental salience in the European election campaign is based on tweets from their candidates. Tweets have been collected since the day of the Maastricht debate

⁹ Parties within coalitions are the unit of analysis when information of the candidates' party is available, there are enough tweets for the specific parties, and they appear as different parties in the CHES dataset. These are: CDU and CSU in Germany; CU and SGP in the Netherlands; members of Koalicja Europejska in Poland 2019 (PO, PSL, SLD, and Nowoczesna); in Croatia HSP AS and HDZ in 2014, HSS and the rest of the Amsterdam Coalition in 2019; in France Modem and the rest of the RENAISSANCE list in 2019; in Italy 2014 CD and SCALTA CIVICA, UDC and NCD; in Spain IU and ICV in 2014, IU and Podemos in 2019, and the members of coalitions of parties that run separately in national contests: BNG, EHB, ERC, CCa, PNV, CIU . In some cases, all those tweeting are from one of the coalition members, so the coalition is actually equivalent to this party: e.g. PCP in the Portuguese coalition CDU.

¹⁰ CHES also uses a 3% threshold.

(Monday April 29th 2019;¹¹ Monday April 28th¹² 2014), as these gave parties the opportunity to tweet about the election, until the day before election date. Candidates' twitter accounts were collected from the European Parliament website and Twitter list, Stier, Popa and Braun (2020),¹³ the CFEU MEPs database,¹⁴ the Europe Decides Twitter list,¹⁵ and by searching directly on the Twitter platform. Parties' environmental salience in the national elections' campaigns are based on the tweets posted by the party's Twitter account (which was obtained from their official websites or by searching on Twitter) in the 4 weeks preceding the election (starting on the fourth Monday before election day).

The Twitter API was used to retrieve the tweets associated with these accounts.¹⁶ Tweets with 3 characters or less were removed to ensure that the text was meaningful,¹⁷ and environmental salience was computed for the remaining tweets (336,860 tweets from candidates to the 2014 European election, 358,478 from candidates to the 2019 European election, 467,994 from parties running in the national elections).¹⁸

Each tweet was coded as 1 if it mentioned environmental issues and 0 if it did not. This task was performed using a dictionary of environmental words, and some manual coding for tweets in languages that had very low prevalence in the sample.¹⁹ A first list of relevant environmental keywords was collated from related work,²⁰ including environmental dictionaries (Bohr 2020, Cameletti et al 2020, Greenwell and Johnson 2022), environmental hashtags identified in Grouverman et al. (2018) and Pilař et al (2019), the Comparative

¹¹ <https://www.maastrichtdebate.eu/> (from 6am CET, to avoid covering Election Night in Spain)

¹² <https://www.euractiv.com/section/eu-elections-2014/news/eu-commission-candidates-show-their-faces/>

¹³ Available at <https://data.gesis.org/sharing/#!/Detail/10.7802/1.1995>

¹⁴ <https://www.citizensforeurope.eu/>

¹⁵ <https://twitter.com/EuropeDecides/lists>

¹⁶ I used the R package `academictwitteR` for this. <https://cran.r-project.org/web/packages/academictwitteR/readme/README.html>. Some additional tweets were obtained from Stier, Popa and Braun (2020) `tweet_ids.utf-8.csv` dataset using DocNow Hydrator.

¹⁷ Those with fewer characters contained only emoticons, or words without much meaning (e.g. 'OK', 'Yes'). Several tweets included images, which could have been related to the environment, but these cannot be identified with a dictionary.

¹⁸ This includes original tweets, re-tweets and quotes.

¹⁹ The dictionary covered 27 languages: French, Spanish, Polish, English, German, Italian, Dutch, Greek, Catalan, Finnish, Swedish, Danish, Portuguese, Slovenian, Galician, Basque, Czech, Croatian, Maltese, Latvian, Romanian, Bulgarian, Estonian, Hungarian, Irish, Slovakian, and Lithuanian. The tweets' language was identified using the Twitter classifier and Google's Compact Language Detector 2 <https://cran.r-project.org/web/packages/cld2/index.html>

²⁰ These were included only when appropriate. For example, some keywords were not included, because they could retrieve many false positives, or they were too specific to local or non-EU contexts.

Agendas Project²¹, a lexicoder (Albaugh, Sevenans and Soroka 2013), the ICCP project (De Sio and Weber 2020), and topic models (Dahal, Kumar and Li 2019, Hase et al 2021, Reber 2019).

Dictionaries should be adequate to the specific study (Grimmer and Stewart 2013). This first list risked being inaccurate for this context, especially because the environment is a broad topic that is constantly evolving (Cameletti et al 2020, Varini et al 2021). Thus, I updated this first list. First, the words appearing at least 50 times²² were checked and those related to the environment were added to the dictionary. Words with multiple meanings (e.g. waste) were only included as collocations. Words were translated into other languages with the General Multilingual Environmental Thesaurus (GEMET)²³ and Googletranslate cloud²⁴ (using the R package *googleLanguageR*). Several words were stemmed to allow capturing derivatives (e.g. pollut*²⁵).

Following a similar approach as Dahal, Kumar and Li (2019), a small subset²⁶ of tweets that were classified as environment-related or not in each language was checked to identify words that often lead to false positives.²⁷ To avoid this issue, a dictionary of false positives was created including common collocations that include an environmental word but are not related to the environment (e.g. ‘business climate’). This dictionary also includes words that refer to the name of a party (e.g. ‘Europe écologie’, miljöpartiet), to avoid coding as ‘environment’ tweets that simply ask to vote for a party or talk about a party’s performance,

²¹ Both the Master CAP Codebook (<https://www.comparativeagendas.net/pages/master-codebook>; Master CAP Codebook (version update August 9, 2022) (checked February 2023)) and the country specific codebooks were reviewed (Danish Policy Agendas Codebook (New Version). Codebook on topic and subtopic categories of all types of activities. Accessed at: <https://www.comparativeagendas.net/dk> (February 2023); Germany: https://comparativeagendas.s3.amazonaws.com/codebookfiles/german_codebook_2.5.pdf; Belgium: https://comparativeagendas.s3.amazonaws.com/codebookfiles/BelgianCodebook_EnglishTranslation.pdf; France: https://comparativeagendas.s3.amazonaws.com/codebookfiles/codebook_france_3.pdf; Ireland: <https://irishpolicyagendas.wordpress.com/>; Italy: https://comparativeagendas.s3.amazonaws.com/codebookfiles/codebook_it.html; Portugal: https://comparativeagendas.s3.amazonaws.com/codebookfiles/codebook_pt.html; Netherlands: <https://www.comparativeagendas.net/netherlands>.

²² This is the same threshold used by Bohr (2020)

²³ <https://www.eionet.europa.eu/gemet/en/concept/1471>

²⁴ <https://cloud.google.com/translate/pricing>

²⁵ The specific stems were assessed specifically for each language (when relevant, this was not assessed if the pertinent word was not present in tweets of the respective language).

²⁶ Between 10 and 50 of each category depending on the language.

²⁷ For example: climate, contamination, eco, environment, emissions, emitters, plastic(s), sustainable/sustainability, ecosystem, threatened with extinction, waste management, recycling, renewables. And also ‘aria pulita’ (clean air) in Italian, which is also the name of a TV programme.

activities or representatives. In addition, I also elaborated a dictionary of words with a clear negative position, with some words that are sometimes used to criticise pro-environmental parties, such as ‘climate hysteria’ (Vihma, Reischl, Andersen 2021). If tweets contained words in any of these two dictionaries, they were coded as not environment-related²⁸. The English version of the dictionaries is provided in the Appendix.

Lastly, a random selection of 1,000 tweets were manually coded to assess the validity of the dictionary in three subsamples: European elections 2014, European elections 2019, national elections.²⁹ After having addressed the issue of the false positives, the dictionary displayed high precision in each subsample (0.93, 0.96, 1 respectively)³⁰. Recall was lower (0.85, 0.71, 0.84). The environment salience measure for each party was then computed as the percentage of tweets with environment-related words among the party’s candidates out of the total number of tweets these candidates had posted. Parties with less than 15 tweets were excluded from the analysis, as computing a salience measure based on very few tweets may not be accurate.³¹

As the lower performance of the dictionary in the 2014 sample compared to the 2019 one could be an issue, the changes in parties’ environmental salience between these two elections based on candidates’ tweets was compared to the change measured using the Euromanifesto dataset. For those parties with important differences a random sample of 50 tweets was manually checked. This revealed that the 2014 measure for the Tierschutzpartei was underestimated due to the fact that many tweets talked about the rights of specific animals or other animal welfare issues that were not part of the dictionary. Thus, this party was excluded from the analysis.³² In addition, the 2014 measure for LVZS was excluded because it included very few tweets and most of them referred to personal

²⁸ In the case of false positives, they were considered environmentally related if they included another environment keyword (e.g. if some theoretical tweets would say ‘our priorities are improving the business climate and stopping climate change’, ‘the environmental party is presenting its proposals on renewable energy’).

²⁹ Those manually checked in the previous step were not part of this exercise.

³⁰ It must be noted that it is not guaranteed that these dictionaries would perform equally well with other samples, as specific checks (e.g. regarding the pertinent collocations, stemmed words and false positives) were performed with this sample. Similar checks would need to be performed if these dictionaries were to be applied to other samples.

³¹ For instance, it may overestimate parties’ salience, and the impact of false positives/negatives could be disproportionately large.

³² This was not an issue with other animalist parties (e.g. PAN, PvdD).

issues (i.e. candidates reporting their running/cycling activities). The other measures seemed less problematic, as only few false negatives were identified.³³ The final sample includes 224 parties for the 2019 election and 209 for 2014, 167 of which participated in both elections.

The salience measures obtained from Twitter are positively correlated with those provided by the 2019 Chapel Hill expert survey³⁴ and the Euromanifesto project³⁵ (see Figures 1, 2 and 3). Finding differences between the three salience measures³⁶ is not unexpected because they measure different types of salience and employ different methodologies. For example, different than the Twitter salience measures presented here, CHES salience is not specific to the European elections, it refers to the whole year and it is not a relative measure.³⁷ Euromanifesto salience is a relative measure but it indicates the salience in manifestos which are prepared before the start of the campaign and usually cover a wider range of topics.

³³ Between 0 and 2 in most cases. These were a bit higher for two parties: Greens (UK) and EELV (4 and 5 respectively). The fact that the models will also be applied to a subsample excluding green parties will show whether they still apply when excluding these parties. In addition, the models focussing on change have been tried with a hypothetical sample in which the 2014 environmental salience measure of parties has been increased by 5 or 10 points (for those parties that the manual check identified some false negatives). The relationship remained significant and the coefficients only slightly smaller.

³⁴ Environmental salience is not available in the 2014 CHES survey. The correlation coefficients is 0.69.

³⁵ The correlation coefficients are 0.53 for 2014 and 0.58 for 2019. These coefficients are higher when using only the Euromanifesto category referring to the EU governance level (they are 0.67 and 0.63 respectively). Excluding Euromanifesto negative salience provides almost identical results, as negative quasi-sentences are not very prevalent.

³⁶ Correlation between CHES and Euromanifesto for the included parties is 0.61.

³⁷ Parties may receive very high values of salience for more than one issue.

Figure 1. Parties' environmental salience.
Comparing Twitter and CHES measures (2019).

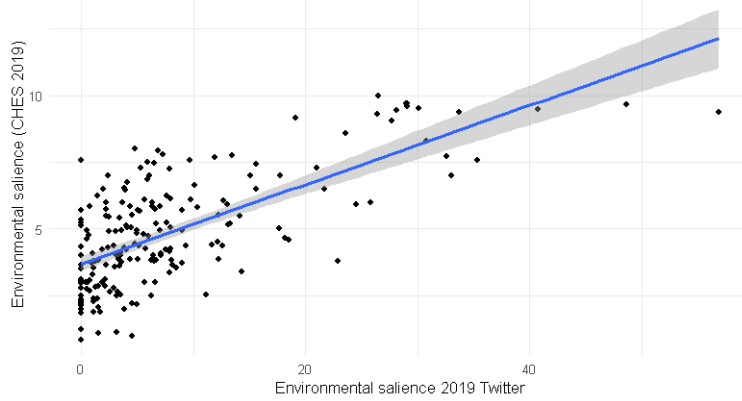


Figure 2. Parties' environmental salience.
Comparing Twitter and Euromanifesto data (2014)

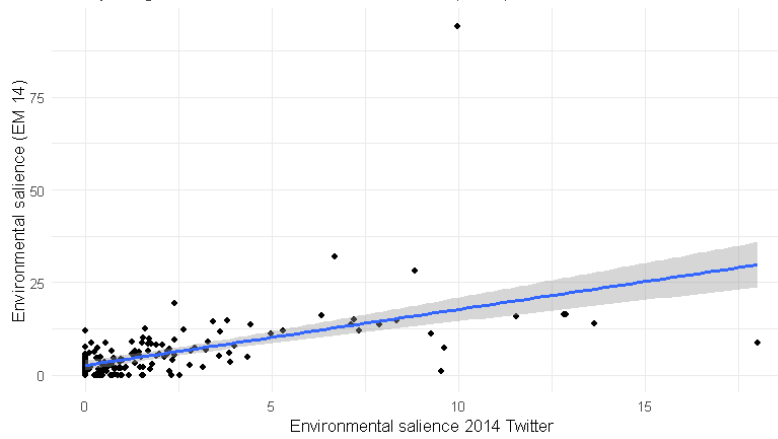
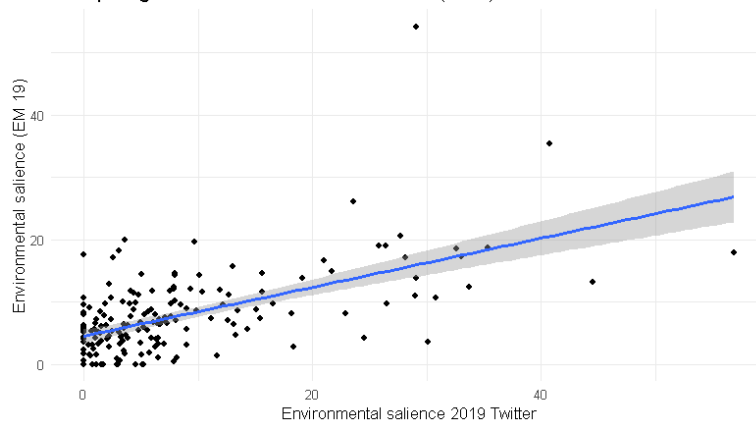


Figure 3. Parties' environmental salience.
Comparing Twitter and Euromanifesto data (2019)



It must be noted that this dictionary computes environmental salience, not position. Nonetheless, I assume that it mostly identifies pro-environmental tweets, as negative environmental salience is not very prevalent in the manifestos for European elections. It represented 0.14% of quasi-sentences in 2014 and 0.22% in 2019 (values for positive salience were 5.44 % and 7.20% respectively (Carteny et al 2023)). A similar dictionary

applied to tweets from British MPs, mostly retrieved tweets with a pro-environmental position (and others with a neutral position), but not anti-environmental tweets (Greenwell and Johnson 2022).

Paper 1. Tweeting about the environment in a European campaign.
Are candidates to the European Parliament responsive to citizens’
environmental concerns?

Abstract

The 2019 European election took place in a context in which EU citizens considered the environment as one of the most important issues facing their country and the EU. However, the extent to which this concern is being represented at the EU level is unclear, especially because the second-order theory argues that European elections are dominated by national issues, implying that they may fail to establish an electoral connection between voters and representatives on EU-policy issues, such as the environment.

Nevertheless, the high salience of environmental issues among citizens together with the fact that environmental issues are particularly relevant in EU policy and that citizens are generally aware of this relevance, should have provided politicians with incentives to be responsive to citizens’ environmental concerns and, hence, incorporate environmental issues in their campaign.

I test whether this was the case by analysing the impact of citizens’ environmental salience prior to the campaign on politicians’ environmental salience during the campaign for the 2014 and 2019 European elections. The latter is based on candidates’ tweets, and it is computed using a dictionary approach. Results show that parties respond to citizens’ environmental concerns in European elections. This indicates that these elections are not simply second-order elections, but they can establish representation on EU policy issues.

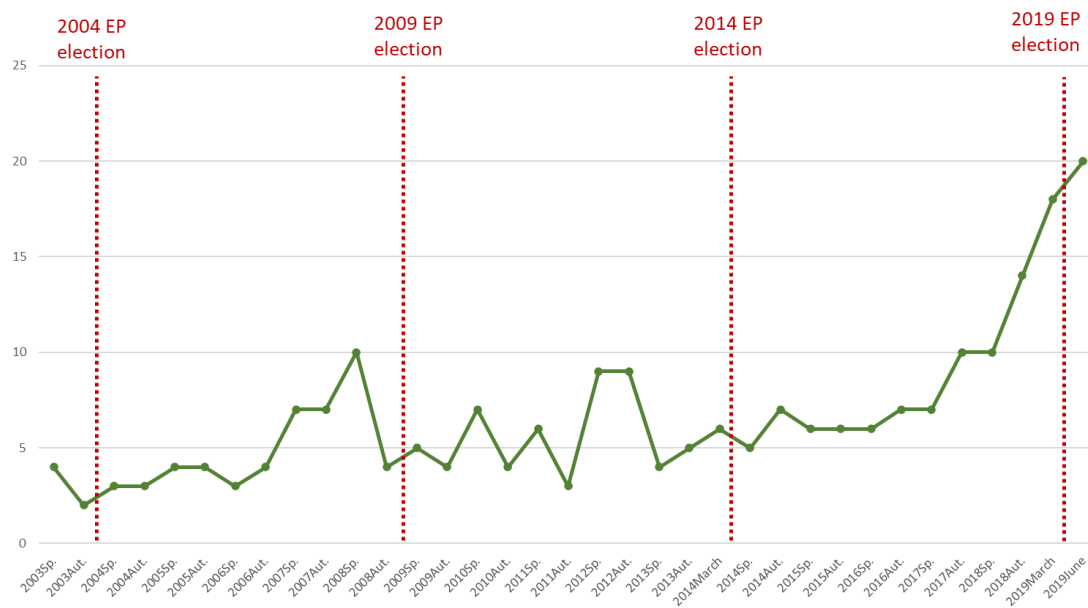
Introduction

This paper assesses whether citizens' environmental concerns are represented during the European Election campaigns. It analyses whether parties respond to citizens' environmental salience by increasing the salience of environmental issue in their campaign material (concretely, in their tweets). Citizens concern for the environmental concern has increased importantly in recent years, reaching an unprecedented high prior to the 2019 election (18%)³⁸ (Figure 1) (European Commission 2019a). The environment is currently one of the most salient issues among European citizens, and the one that experienced the highest salience growth in the 2014-2019 period (European Commission 2020a).

Nonetheless, the extent to which these concerns are being represented in the EU system is unclear. All layers in the European multi-level system can act on environment-related issues, but the EU arena is especially suited for this, as many of these issues have a trans-national component and are non-excludable (De Winter and Swyngedouw 1999; Knill and Liefferink 2013; Hix and Høyland 2011; Olson 1965). This suitability is reflected in the EU legal framework. The EU has competences to legislate in the environmental domain as this is a shared competence between the EU and Member States (TFEU Art. 4.2), and it has made great use of this power for several decades, passing several environmental legislations (Burns, 2019; Zito et al. 2019). In addition, the EU has the right and duty to act on environmental issues at the global level (TFEU Art191.1 and 216; TEU Art.3.5) and is often considered a global leader in this domain (Delreux 2013; Wurzel, Liefferink, Di Lullo 2019). More specifically, the European Parliament participates in the law-making process in the environmental domain, as most environmental issues are approved under the co-decision process (TFEU Art. 192 and 294).

³⁸ Values for similar questions in older surveys were: 10% (1998), 12% (1993), 13% (country average) (1989), 6% (1974) (European Commission 1993, 1999; EES Trend File)

Figure 1. Public environmental concern³⁹



Source: Eurobarometers

Nonetheless, nothing guarantees that the EU will continue being active in the environmental domain and the possibility of environmental dismantling exists (Burns, Eckersley, and Tobin 2020). In fact, environmental legislation has encountered opposition from some Member States (Burns 2019) and Members of the European Parliament (henceforth MEPs)⁴⁰. The ambition of the Parliament activities depends on its own composition and, thus, on the European elections. Therefore, it is important that environmentally-concerned citizens use these elections to give a mandate to MEPs to push for pro-environmental policies. The first requirement for the existence of such mandate is that parties are responsive to citizens' environmental concerns and focus on environmental issues during the campaign. Otherwise, citizens would not know to which candidate/party to give the mandate.

However, European elections have been often considered second-order elections, meaning that their relevance is low and that national factors play an important role (Reif and Schmitt 1980; Weber 2007). In consequence, national topics tend to dominate parties' campaigns (Reif 1984; Adam and Maier 2011). This could result in parties failing to incorporate

³⁹ % mentioning the environment as one of the two main issues facing their country.

⁴⁰ Some give priority to industry's interests
[https://www.europarl.europa.eu/RegData/seance_pleniere/textes_deposes/rapports/2018/0287/P8_A\(2018\)0287_EN.pdf](https://www.europarl.europa.eu/RegData/seance_pleniere/textes_deposes/rapports/2018/0287/P8_A(2018)0287_EN.pdf); https://www.europarl.europa.eu/doceo/document/A-8-2017-0003_EN.html

environmental issues in their European campaign, and could lead to a weak representation of citizens' environmental concerns if these are ignored in an arena particularly relevant for addressing them.

Nonetheless, in line with other authors that found that European factors may also play a role during the campaign and on Election day (e.g. Spoon 2012; Bakker, Jolly, and Polk 2018; Braun, Hutter, and Kerscher 2016), I expect to find that parties respond to citizens' environmental concerns during the European elections' campaign, because (1) the European level is particularly relevant to deal with environmental issues; and (2) citizens are generally aware of this relevance. As a result, parties have incentives to focus on these issues seeking for electoral gains.

This article assesses this by analysing whether citizens' environmental concern (obtained from the Eurobarometer survey) influences parties' environmental salience during the 2014 and 2019 European elections' campaign. An environmental dictionary is used to compute parties' environmental salience in these elections, using the tweets posted by their MEP candidates. Parties' Twitter accounts are used to compute their salience in national elections. Parties are the unit of analysis and random country intercepts are used to account for the fact that parties are nested within countries.

This research contributes to the literature on representation in multi-level systems, by assessing whether parties are responsive to citizens' salience in the particular situation in which an issue of high public concern is particularly important at the level typically considered as second-order. It also contributes to the literature on European elections, specifically on the debate on whether they are second-order and whether European factors matter.

Findings show that parties are responsive to citizens' environmental concerns in the European elections' campaigns. This indicates that, even though European elections are often considered second-order, public opinion is not necessarily ignored by those running in these elections and that EU policy issues can play a relevant role in them.

Parties' responsiveness in electoral campaigns

In an ideal model of political representation, politicians respond to changes in citizens' opinion (Stimson, Mackuen, and Erikson 1995) and voters select their representatives

based on how they address their preferences (Schmitt and Thomassen 1999). Electoral campaigns are key to making voters aware of the party preferences, allowing them to make an accurate choice. Several studies have found evidence that parties respond to citizens' opinion in campaigns for national elections, although sometimes the relationship is conditional on certain factors.

Some studies show that parties' salience in campaign material (e.g. manifestos, press releases, social media posts) is influenced by the issues that are most salient among citizens (Spoon and Klüver 2014; Klüver and Sagarzazu 2016; De Sio and Weber 2020). However, this may depend on the type of party. For instance, Wagner and Meyer (2014) found that only the salience of popular parties (i.e. those better evaluated by voters) is influenced by citizens' salience; and Klüver and Spoon (2014) found that the relationship was stronger among large parties and among opposition parties.

Aligning with the preferences of the median voter may not always benefit a party as this move may encounter opposition from party members and other current supporters (Abou-Chadi 2018). Thus, parties sometimes align more (or only) with their supporters' preferences. De Sio and Weber (2020) find that salience among citizens influences issue salience in politicians' tweets during national elections' campaigns but that 'issue yield', a measure that considers preferences of both current party supporters and citizens in general, is slightly more influential. Salience of environment, crime, and immigration issues in parties' manifestos for national elections is more aligned with the salience of those citizens who share a similar position to the party in the left-right scale (Magni-Berton and Panel 2018). Steenbergen et al (2007) find the same type of responsiveness but focussing on EU integration and using expert surveys. Some contextual factors (i.e. high electoral competition and increase in issue salience among the other parties' in the system) make it more likely that parties respond more to issue salience among voters than among supporters (Abou-Chadi et al 2018).

Parties issue salience in national manifestos also shifts when there is a change in issue salience among citizens (Spoon and Klüver 2014). Ezrow et al. (2011) found that mainstream parties respond to changes in the left-right position of the average voter, while niche parties respond only to their supporters' position. However, O'Grady and Abou-Chadi (2019) found no evidence that parties respond to citizens' positions shifts in specific

dimensions (i.e. economic, immigration/nationalism, social/postmaterial). The latter includes environmental issues, but they do not assess responsiveness regarding this specific issue.

Klüver and Spoon (2014) find that green parties respond to changes in environmental salience among their supporters in their national manifestos, but not among citizens in general. They find no evidence that non-green parties respond to environmental concerns among their supporters. Nonetheless, even though salience of non-green parties is generally low, they increase this salience under special circumstances such as when green parties pose a higher threat, high concern among citizens, and favourable economic conditions (Spoon, Hobolt, De Vries 2014). However, this could be a risky strategy when a Green Party has existed in the country for some time, as increasing environmental salience could mainly benefit this party (Grant and Tilley 2017). In fact, Abou-Chadi et al (2016) argues that mainstream parties seek to avoid this risk and he finds that they reduce their environmental salience when support for green parties is higher. Nonetheless, they react to increases in environmental salience in their party system by moving towards more pro-environment positions (Abou-Chadi et al. 2020). They observe this move for all parties but especially for large ones (Abou-Chadi et al. 2020). Also regarding environmental positions, Rohrschneider and Miles (2015) indicate that there is congruency between parties⁴¹ and their voters in national elections in Western countries, but not in the East. On a related note, a study in the US found that that politicians probability of tweeting about climate change was influenced by citizens' concern (Yu et al. 2021).

Responsiveness may work differently in European elections, due to the fact that parties may give priority to national topics (Reif 1984; Adam and Maier 2011), and ignore issues that are particularly relevant to EU policy. In fact, Spoon and Klüver (2014) found that, different than in national elections, parties are mostly unresponsive to citizens' issue priorities in their manifestos for European elections. They found that responsiveness in European elections is slightly higher if the national and European elections are close in time and if the country has been a Member State for longer, but they did not find more responsiveness

⁴¹ They obtain parties' positions from expert surveys.

among pro-European parties or on EU issues. They state that their findings underline the second-order nature of these elections. This could be problematic as it could imply a deficient representation of issues that are important at the European level, such as the environment.

Nonetheless, several authors have provided nuances to the second order tradition and have shown that European issues may also be present in parties' campaign material (even if their presence may be sometimes lower than national topics). This material might include references to 'Europe' (Davidson-Schmich and Vladescu 2012; Novelli 2017; Nulty et al., 2016; Wüst 2009) and might discuss EU integration (Braun and Schmitt 2018; Spoon 2012; Wüst and Schmitt 2007) and EU policy issues (Braun, Hutter, and Kerscher 2016; Eugster et al 2020). There is also some evidence that parties may respond to public opinion in the European elections' context. Issue yield influenced issue salience of Italian parties in tweets for the 2014 European election campaign (De Sio, De Angelis, and Emanuele 2018). Their measure combines several issues of distinct nature, some of which could be regarded as clear national issues. In their manifestos for the European elections, parties respond to Euroscepticism among their supporters and large parties also among the general population (Williams and Spoon 2015). They respond more to Euroscepticism when they are more internally divided on EU integration (Spoon and Williams 2017). Moreover, far-right parties respond to negative changes in public opinion on the EU (Braun, Popa and Schmitt 2019). There is no evidence that governing and opposition parties respond differently (Williams and Spoon 2015; Spoon and Klüver 2014).

Public opinion on the EU also influences the presence of EU issues in the press releases of established parties (Eugster et al 2020), and the salience of EU-policy issues in parties' manifestos (Braun, Hutter, and Kerscher 2016). However, there is less evidence regarding how parties respond to public opinion on EU-policy issues. Responsiveness to EU-policy issues is particularly relevant as these refer to the issues for which the European Parliament is competent. This is not the case for EU integration issues, and, consequently, these issues cannot establish a link between voters and representatives, as national actors (and not MEPs) have the power to decide on them (Thomassen 2016). In fact, the EU could be perceived as a more mature and stable system if European debates focus more on policies than on constitutive issues (Thomassen and Schmitt 1999).

Responding to environmental concerns in the European context

Prior research shows that parties may respond to public opinion, including public opinion on environmental issues, although this may vary depending on different factors. There is also some evidence that responsiveness can operate at the European level, although it is unclear whether this applies to European policy issues.

Facchini, Gaeta, and Michallet (2017) found that when countries become EU members, environmental salience in their manifestos for national elections decreases and theorise that this is due to the fact that, since this moment, the EU level takes care of environmental debates. They do not examine the presence of environmental issues in parties' material for European elections, but other studies show that these issues have featured importantly in the European campaigns of some parties (Wüst and Schmitt 2007; Wüst, 2009; Giebler, Haus and Wessels 2010). For example, it was the third most present topic in parties' manifestos in 1999 and 2004 among old Member States (Wüst and Schmitt, 2007; Wüst, 2009), and the third most salient topic in the 2009 campaign (Seoane Perez and Lodge 2010). In 2019, it was the second most salient topic in campaign material in the Western and Northern regions (Novelli and Johansson 2019), and it was considered important in the campaign of several Western countries (Bolin 2019; De Sio, Franklin, and Luana 2019; Kritzinger et al 2020). Nonetheless, these studies do not assess the link between this salience and public opinion. The present study seeks to contribute to fill this gap.

As some studies indicate that European policy issues in general, and environmental issues in particular, can feature in parties' European campaigns, I expect to find that they respond to citizens' environmental concern by increasing their focus on the environment during these campaigns. I expect this not only because the environment is an important EU policy issue but also because citizens generally perceive that the EU level is particularly relevant to address environmental issues. Most citizens (78%) want more EU decision-making on environmental protection (European Commission 2019b). Furthermore, a large majority (83%) agrees with EU intervention in their countries to supervise the implementation of environmental laws (European Commission 2017) and prefer decisions on environmental protection to be made 'jointly within the EU' (70%) rather than by their national

government alone (26%) (European Commission 2020b). Moreover, there are on average more citizens that select the environment and climate change as one of the most important issues facing the EU than as one of most important issues facing their country.⁴²

Therefore, we could expect environmentally concerned citizens to be willing to vote in European Parliament elections to elect MEPs who would advocate for pro-environmental legislation in the European Parliament and thus help to address these concerns. Following this, candidates might perceive that focussing on the environment may attract more voters. Nonetheless, this may depend on the level of citizens' environmental concern, which varies importantly across Member States. For instance, in Sweden, Denmark, the Netherlands, and Finland at least half of the population considered that the environment was one of main issues facing the EU in March 2019, but this percentage was below 10% in Greece and Cyprus (European Commission 2019a). In 2014, the values were lower in all countries, but the differences between them were meaningful, as citizens' environmental salience ranged from 36% in Sweden to less than 3% in Portugal, Italy and Cyprus (European Commission 2014). Thus, I expect that parties will focus more on environmental issues in those countries where citizens' concern is higher (H1).

- *H1: When citizens' environmental concern grows, parties make environmental issues more salient in their European campaign.*

I assume that candidates for MEP could be expected to be particularly attentive to those issues that are both important for citizens at EU level (i.e. that citizens select as one of the most important issues facing the EU) and are relevant EU-policy issues, as these are more related to MEPs' competences. To assess the extent to which they respond to public opinion on environmental issues because this policy is particularly relevant at EU level, I will first compare parties' responsiveness to public opinion on environmental issues with responsiveness in the health domain, which has a stronger national component than the

⁴² In March 2019, the average across EU Member States was 28.53 when referring to the EU level and 16.78 when referring to the national one (European Commission 2019a). The values for March 2014 were, respectively, 9.88 and 4.86 (European Commission 2014). The only Member States where the percentage was higher at national level were The Netherlands in 2019 and Germany and Malta in 2014.

environment, as the EU has mainly a supporting role in it.⁴³ Thus, I expect stronger responsiveness to environmental than health concerns (H2).

- *H2: Parties are more responsive to citizens' environmental salience than to citizens' health salience in their European campaign.*

Second, I will assess whether candidates respond to citizens' environmental concern by increasing their salience above their party salience in national elections. I expect them to focus more on environmental issues relative to what the party does in national elections (H3) because this is an issue with a strong trans-national component, and it is more salient among citizens at EU than at national level.

- *H3: When citizens' environmental concern is higher, parties make environmental issues more salient in their European campaign relative to the campaign for national elections.*

Methodology

As the independent variable of interest is at country level, I use linear mixed-effects models with parties (p) nested in countries (c) and random country intercepts (u_{0c}) (Bates et al 2015; Finch, Bolin, and Kelley 2019; Grilli and Rampichini 2014). I add a dummy indicating whether the party is from an EU-15 country or not, to account for potential correlation within these two groups of countries.

The dependent variable is the environmental salience of each party during the campaign (ENV_{pc}), based on candidates' tweets (see methodology section above). The main regressor is environmental concern among citizens in the country prior to the election ($ENVPO_c$) (EQ1). Concern is computed as the percentage of participants that selected climate change and/or the environment as one of the most important issues facing the EU in the Eurobarometer survey fielded in March preceding the election (European Commission 2019a, 2014). Using this survey allows computing citizen's salience before the start of the

⁴³ Except some public health matters that may be shared competences. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Aai0020>, such as those related to important cross-border health threats and tobacco and alcohol consumption. Nonetheless, the treaties stress that Member States are in charge of health policy design and healthcare delivery (TFEU, Title XIV).

European elections' campaign (tweets were collected from the end of April). Alternatively, some models will use a similar question but referring to the national level (i.e. the percentage of respondents that selected 'The environment, climate and energy issues' as one of the most important issues facing their country).

$$ENV_{pc} = \beta_0 + \beta_1 ENVPO_c + \beta_2 CYCLE_c + \beta_3 CYCLE_c^2 + \beta_4 EU_{pc} + \beta_5 LR_{pc} + \beta_6 EU15_c + \beta_7 UNEM_c + \beta_8 EP19 + U_{0c} + \varepsilon_{pc} \quad (1)$$

The models include controls that may influence citizens and parties' issue salience. First, the *cycle* variable, expressed as the percentage of the national cycle that has passed at the time of the European election, accounts for the fact that if both elections are close, national issues may dominate the European campaign and crowd out EU issues, such as the environment.⁴⁴ Moreover, a country economic situation may influence the salience of several issues and many studies suggest that environmental salience is dependent on economic performance (Carter et al., 2018; Kenny, 2019; Spoon, Hobolt, and De Vries 2014; Rüdig, 2019, Maggini et al. 2019). Therefore, each country's unemployment rate will be added as control. I use the seasonally adjusted values for the first quarter of the year of the election, from Eurostat.⁴⁵

Parties' issue salience in the European electoral campaigns is likely to be influenced by their ideology. As mentioned above, parties may be more attentive to the preferences of their supporters than to those of citizens in general. As left-wing citizens tend to have more favourable environmental attitudes (Franzen and Vogl 2013; McCright et al 2016), left-wing parties may have more incentives to focus on environmental issues. In fact, more leftist positions have been associated with more pro-environment positions in party manifestos (Carter et al., 2018), and to greater environment and climate salience (Spoon, Hobolt, De Vries 2014; Facchini et al. 2017, Farstad, 2018). Parties may also be influenced by other parties belonging to the same party family. Thus, parties' position on the left-right axis (LR_{pt}) will be added as control. I use parties' left/right position in the economic domain⁴⁶ (0-10) from the Chapel Hill expert surveys (CHES) (Jolly et al 2022; Polk et al 2017).⁴⁷ I also add

⁴⁴ I also include a squared term to account for the fact that I expect a weaker effect at midterm.

⁴⁵ Unemployment by sex and age – quarterly data [une_rt_q]

⁴⁶ I use the one referring to the economic domain because the general one may include environmental issues.

⁴⁷ When CHES values for some parties were missing for the pertinent year, but were available in the other years, the later were used (i.e. the values from 2014 or 2019 or the 2017 Chapel Hill Expert FLASH Survey).

parties' position on EU integration (EU_{pt}) (1-7) from the same survey, to control for the fact that pro-European parties are more prone to discuss EU-policy issues in general (Braun, Hutter, and Kerscher 2016), maybe due to trusting more EU institutions or to the willingness of raising the profile of such institutions. The models also include a dummy variable indicating whether the observations belong to the 2014 or the 2019 election (EP19). Several unobserved factors may be affecting differently citizens' and parties' environmental salience in each electoral context, such as environmental salience at EU or global level (e.g. messages from EU institutions, news about the *Fridays for Future* movement).

As a check, a second set of models will use as dependent variable the change in parties' environmental salience between the 2014 and 2019 European campaigns, and as independent variable the change in citizens' concern between March 2014 and March 2019. Some of the controls are also expressed as the 2014-2019 change (i.e. unemployment rate and cycle). As the literature is inconclusive regarding whether non-green parties would be expected to also respond to changes in citizens' environmental concern or not, I will assess how the models apply to a sub-sample excluding green parties. I will also assess whether the models work differently in the sub-samples for each specific election (2014, 2019).

To compare responsiveness in the environmental and health domains (H2), I use data from the Euromanifesto project (Carteny et al 2023).⁴⁸ Environmental salience is obtained from the category 'environmental protection' and health salience from the one labelled 'WS: Health Care and Nursing Service'⁴⁹. As an additional check, responsiveness is also assessed with regards to unemployment by using the categories 'Creating Jobs' and 'WS: Job Programs'. Employment policies are a particularly relevant policy area in Member States. Nonetheless, the EU role is more important than in the case of health. The EU holds several competences in this domain (TFEU Title IX), as the internal market is a shared

⁴⁸ This includes all parties included in the Euromanifesto dataset for the years 2014 and 2019. The sample differs a bit from the one used in the Twitter analysis as the latter sometimes uses members of coalitions as the unit of analysis and there are some parties whose candidates did not tweet during the European campaign. Inclusion criteria may also differ slightly between the two samples.

⁴⁹ Total salience is used as negative positions in these domains have very low prevalence. This is also more equivalent conceptually to the measure computed from tweets. Anyway, excluding negative quasi-sentences or those referring to the national level of governance produces very similar results.

competence,⁵⁰ that includes the free movement of workers.⁵¹ For this reason, responsiveness will be assessed using the total salience measure and the one excluding quasi-sentences referring specifically to the EU governance level. The main independent variables are the percentage of citizens in the pertinent country that selected health and unemployment, respectively, as one of the main issues facing their country.⁵²

Lastly, to assess H3, the dependent variable will be the difference between parties' environmental salience in European elections (based on their candidates' tweets) minus the average in parties' environmental salience in the national elections preceding and following the European contest (based on the tweets from the party's Twitter account). The main independent variable is again citizens' concern at EU level. To control for the fact that differences in environmental salience between the European and the national elections could be due to changes in public opinion (and not to different levels of governance), I include as regressor the difference in citizens' environmental salience at national level before the European election compared to the one preceding the two national elections surrounding it.⁵³ The models also control for the distance between the European and national elections,⁵⁴ as higher distance may increase the difference in environmental salience. In addition, unemployment rate will also be expressed as the difference between the one preceding the European election and that preceding the national ones. Belgium is excluded from this analysis because European and national elections were concurrent, and thus it is not possible to know whether parties' tweets refer to the national or the European elections. For the same reason, the 2019 national salience for Denmark does not include tweets posted before Tuesday May 28th, as these could refer to the European contest.

⁵⁰ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Aai0020>

⁵¹ <https://eur-lex.europa.eu/EN/legal-content/glossary/internal-market.html>

⁵² In the case of unemployment, I will also use the question referring to the Most important Issue at EU level, but this is not available for health.

⁵³ First, I computed the average between citizens' environmental concern before the national election preceding the European contest and citizens' environmental concern before the national election following the European one. Then this value was subtracted from citizens' environmental concern before the European election.

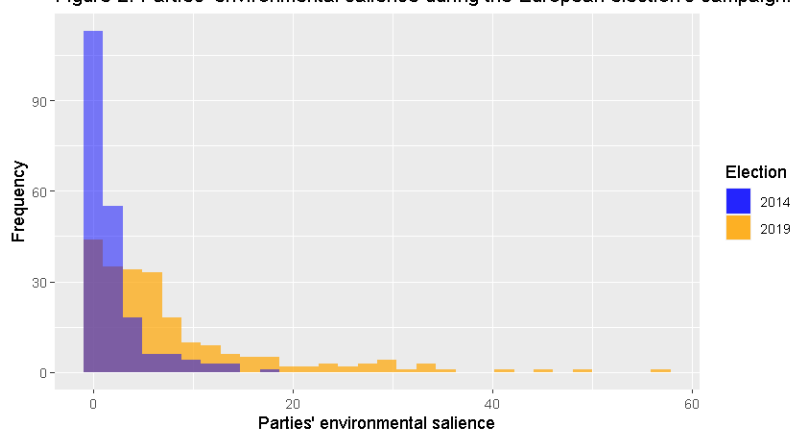
⁵⁴ This is computed as the average between the distance from the last national election and the distance until the next national election (in years).

Results

Descriptive

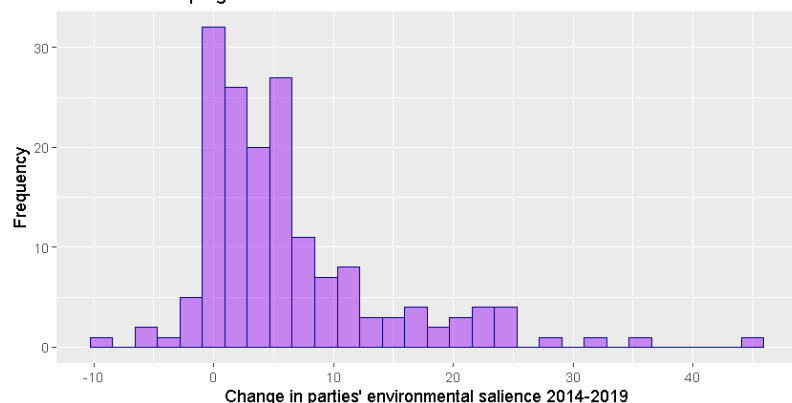
Figure 2 shows the distribution of parties' environmental salience. This was clearly higher in 2019 compared to 2014. The French greens are the party displaying the highest salience in 2019 (56.91%). Several parties with very low salience in 2019 (below 2%) are radical right parties (e.g. Dansk Folkeparti, Vox, Brexit Party), but there are also examples of the other families such as the conservative Forza Italia, the liberal Ciudadanos, the socialist PASOK, and the communist KSCM. Many parties in 2014 displayed very low salience, the highest salience belongs to the Luxembourgish Greens (18%). Most parties increased their salience in 2019 (Figure 3), with the biggest increases belonging to green parties (French Greens, ÖDP, Tierschutzpartei, Miljöpartiet) and the leftist Vänsterpartiet.

Figure 2. Parties' environmental salience during the European election's campaign.



Note: Parties' environmental salience is based on the tweets posted by their candidates in the 4 weeks preceding the election.

Figure 3. Change in parties' environmental salience in the European election's campaign 2014-2019.

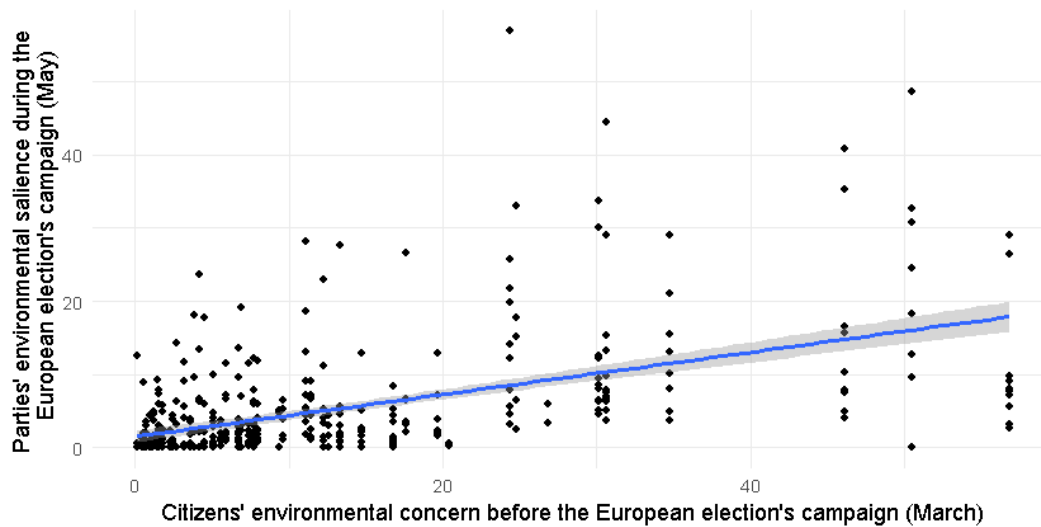


Note: Parties' environmental salience is based on the tweets posted by their candidates in the 4 weeks preceding the election.

Figure 4 suggests that there is some relationship between citizens' concern for the environment and parties' environmental focus during the campaign. Nonetheless, the

figure also shows important variation between parties facing the same level of citizens' environmental concern. The following section assesses this more in-depth.

Figure 4. Relationship between Citizens' and Parties' environmental salience



Notes: The plot includes data from the 2014 and 2019 European elections. Parties' environmental salience is based on the tweets posted by their candidates in the 4 weeks preceding each election. Citizens' environmental concern is computed as the percentage of citizens in a given country that selected climate change and/or the environment as one of the main issues facing the EU in the Eurobarometer survey fielded in March of the corresponding election year.

Impact of citizens' environmental concern on parties' environmental salience

Table 1 shows that environmental concern has a significant impact on parties' environmental salience. Model 3, which includes all the controls, estimates that a 10p.p. increase in the percentage of the population that selects environment as one of the most important issues facing the EU is related with a 2.4p.p. increase in the percentage of a party's tweets that mentioned environmental words during the campaign for European elections. The coefficient is similar when using the percentage of citizens who consider the environment one of the most important issues facing their country (model 6). In addition, parties that are more left-wing and more pro-EU focussed more on environmental issues during the campaign. The relationship between citizens' concern and parties' salience remains significant, albeit a bit weaker, if green parties are excluded from the sample (see table A1 in Appendix 2), implying that these results are not exclusively driven by green parties. Figure 5 displays the results of model 3. This estimates that, when the other covariates are held at their mean and the party is from a non-EU15 country, when only 10% of citizens in the country are concerned about environmental issues, parties in this country

mention environmental issues in less than 2% of their campaign tweets for the 2014⁵⁵ European elections' campaign. By contrast, the model estimates that when half of citizens in a country consider the environment and/or climate change as one of the main issues facing the EU, more than 10% of parties' tweets mention an environmental issue. Overall, these results show support for H1 (when environmental concern is higher, parties make environmental issues more salient). It is important to note that splitting the sample by election indicates that this relationship is much stronger in 2019 compared to 2014 (table A1). Nonetheless, there is no clear difference between the two elections if manifestos are used to compute environmental salience, as in this case the relationship between citizens' environmental concern and parties' salience was already strong in 2014 (Table A2, Appendix).

⁵⁵ 2014 is the reference category.

Table 1. Impact of citizens' environmental concern on parties' environmental salience

	Parties' environmental salience					
	(1)	(2)	(3)	(4)	(5)	(6)
Citizens' environmental concern (EU level)	0.27*** (0.02)	0.24*** (0.03)	0.24*** (0.03)			
Citizens' environmental concern (National level)				0.30*** (0.02)	0.21*** (0.03)	0.22*** (0.03)
Unemployment Rate		0.04 (0.08)	0.02 (0.08)		-0.001 (0.09)	-0.02 (0.09)
Cycle		0.15 (4.69)	0.15 (4.63)		-2.91 (4.97)	-3.47 (4.88)
Cycle (sq)		0.43 (4.31)	0.33 (4.29)		3.26 (4.61)	3.60 (4.56)
EU-15		1.59* (0.72)	1.26 (0.73)		1.80* (0.81)	1.43 (0.83)
2019 election		1.04 (0.88)	0.73 (0.85)		2.87*** (0.82)	2.50** (0.79)
Left-Right position (economic)			-1.01*** (0.14)			-1.02*** (0.14)
EU position			0.75*** (0.18)			0.77*** (0.18)
Constant	-0.62 (0.51)	-2.15 (1.67)	-0.40 (2.05)	1.41** (0.48)	0.15 (1.73)	1.99 (2.10)
Variance country level	0.056	0	0.305	1.229	0.698	1.028
Number of countries	28	28	28	28	28	28
N	433	433	401	433	433	401
Log Likelihood	-1.421.62	-1.415.56	-1.278.05	-1.433.66	-1.421.83	-1.283.34
AIC	2.851.25	2.849.11	2.578.10	2.875.32	2.861.66	2.588.68
BIC	2.867.53	2.885.75	2.622.04	2.891.60	2.898.30	2.632.61

Notes: The table presents the results of the linear mixed-effects with parties nested in countries. The number of observations refers to the number of parties included in each model. Standard errors are in parentheses.

The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

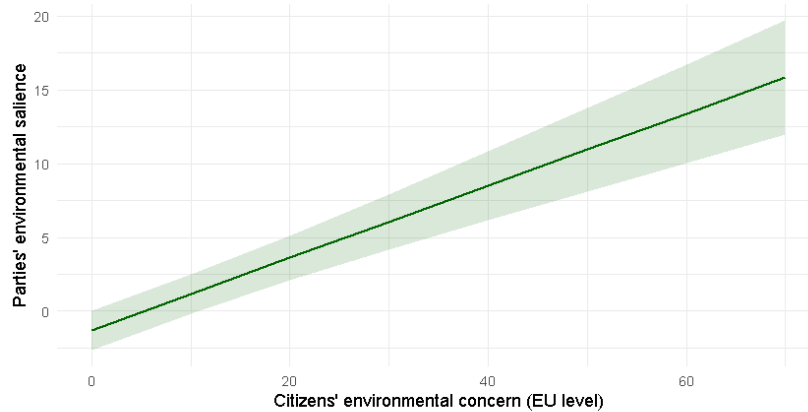
Table 2 shows that parties' increase in environmental salience between the 2014 and 2019 elections is related with changes in the environmental concern of citizens in their country. Concretely, model 3 estimates that for each additional 1pp increase in citizens' environmental concern, parties' environmental salience increases 0.21pp more. For instance, the model predicts that if citizens' concern does not change, parties increase their environmental salience by about 2pp, while if citizens' concern increases by 15pp, parties salience would increase by approximately 5pp (see Figure 6). Being more left-wing and more pro-EU is also related to larger increases in parties' environmental salience. As before, the relationship is still significant when green parties are excluded from the sample, although the coefficients are a bit smaller (see Table A3 in the Appendix).

Table 2. Impact of the change in citizens' environmental concern on the change in parties' environmental salience

	Parties' environmental salience change 2014-2019					
	(1)	(2)	(3)	(4)	(5)	(6)
Citizens' environmental concern change 2014-2019 (EU level)	0.22*** (0.06)	0.19* (0.08)	0.21** (0.08)			
Citizens' environmental concern change 2014-2019 (National level)				0.18** (0.06)	0.13* (0.07)	0.16* (0.07)
Unemployment Rate change 2014- 2019		0.09 (0.23)	0.02 (0.23)		0.05 (0.25)	-0.03 (0.24)
Cycle change 2014-2019		-0.36 (2.80)	-0.05 (2.78)		-0.20 (2.92)	0.10 (2.84)
EU-15		1.42 (2.00)	0.82 (1.96)		2.81 (1.83)	2.08 (1.77)
Left-Right position (economic)			-1.38*** (0.24)			-1.38*** (0.24)
EU position			0.75* (0.32)			0.78* (0.32)
Constant	1.38 (1.37)	1.69 (1.94)	4.45 (2.87)	3.56*** (1.07)	2.66 (1.90)	5.21 (2.83)
Variance country level	2.395	3.544	5.493	4.068	4.624	6.055
Number of countries	28	28	28	28	28	28
N	167	167	160	167	167	160
Log Likelihood	-575.53	-572.30	-526.81	-577.57	-573.35	-527.58
AIC	1.159.06	1.158.59	1.071.63	1.163.15	1.160.71	1.073.15
BIC	1.171.53	1.180.42	1.099.31	1.175.62	1.182.54	1.100.83

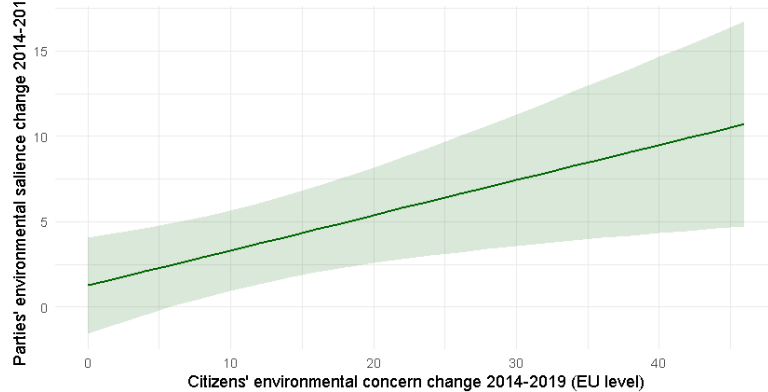
Notes: The table presents the results of the linear mixed-effects with parties nested in countries. The number of observations refers to the number of parties included in each model. Standard errors are in parentheses. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Figure 5. Predicted effect of citizens' environmental concern on parties' environmental salience



Notes: This figure plots the estimates of model 3 in Table 1. Covariates are held at their mean, except factors for which the reference category is used (i.e. non-EU-15, 2014 election).

Figure 6. Predicted effect of the change in citizens' environmental concern on the change in parties' environmental salience 2014-2019



Notes: This figure plots the estimates of model 3 in Table 2. Covariates are held at their mean, except factors for which the reference category is used (i.e. non-EU-15 country).

Parties' salience in their European elections' manifestos is much more aligned with citizens' concern in the environmental domain than in health and unemployment ones (Table 3). In fact, there is no apparent relationship between the level of citizens' concern about health in a given country and parties' focus on this issue in their manifestos. There is some relationship between the percentage of citizens that consider unemployment as one of the most important issues facing their country and the percentage of parties' manifestos that cover job creation issues (see model 3). Nonetheless, the coefficient is much smaller than in the case of the environment. Moreover, it ceases to be significant if quasi-sentences referring to the EU governance level are excluded from the salience measure (see models 5 and 6). Thus, parties could be responding to citizens' unemployment concerns by proposing policies at EU level aimed at addressing this. Figures 7-9 plot the first three models, which clearly show that responsiveness is larger in the environmental domain.

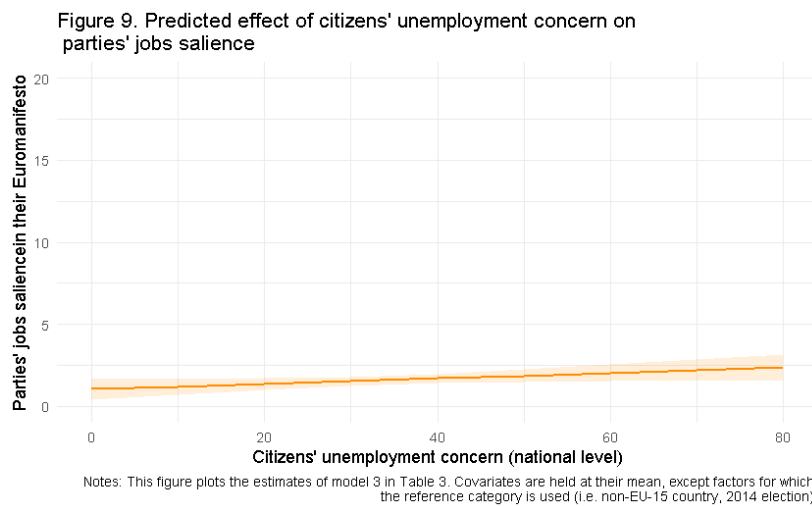
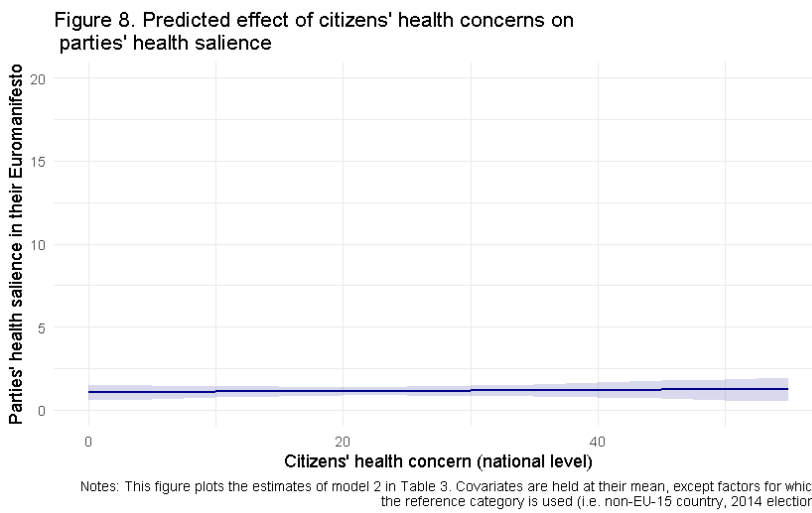
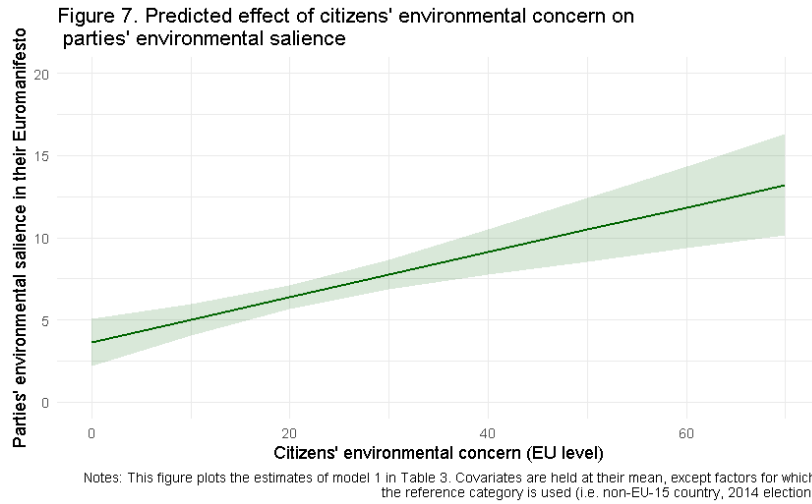
Table 3. Impact of citizens' concern on parties' salience in the environment, employment and health domains, based on parties' manifestos for the European elections 2014 and 2019.

	Parties' environmental salience (1)	Parties' health salience (2)	Parties' job salience (total) (3)	Parties' job salience (excluding the EU level) (4)	Parties' job salience (excluding the EU level) (5)	Parties' job salience (excluding the EU level) (6)
Citizens' environmental concern (EU level)	0.14*** (0.03)					
Citizens' health concern (National level)		0.004 (0.01)				
Citizens' unemployment concern (National level)			0.02* (0.01)		0.005 (0.01)	
Citizens' unemployment concern (EU level)				0.01 (0.01)		-0.01 (0.01)
Unemployment Rate	0.002 (0.08)	-0.003 (0.03)				
Cycle	0.65 (4.70)	-0.63 (1.50)	1.76 (1.44)	1.93 (1.45)	0.20 (0.96)	0.31 (0.97)
Cycle (sq)	-1.90 (4.38)	0.93 (1.41)	-1.29 (1.36)	-1.38 (1.37)	-0.28 (0.92)	-0.40 (0.92)
EU-15	1.79* (0.80)	-0.85** (0.27)	-0.36 (0.27)	-0.44 (0.29)	-0.61** (0.21)	-0.57** (0.22)
2019 election	-0.11 (0.17)	0.002 (0.05)	-0.17** (0.06)	-0.21** (0.07)	-0.08 (0.04)	-0.14** (0.05)
Left-Right position	-0.10*** (0.03)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.004)	-0.01 (0.004)
EU integration position	-0.01 (0.03)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Constant	231.78 (337.37)	-2.17 (91.65)	335.90** (125.59)	420.48** (149.54)	156.32 (87.07)	279.41** (100.52)
Variance country level	1.122	0.254	0.305	0.32	0.209	0.216
Number of countries	28	28	28	28	28	28
N	402	403	403	403	403	403
Log Likelihood	-1.273.73	-800.86	-774.82	-775.74	-602.43	-602.03
AIC	2.569.47	1.623.71	1.569.64	1.571.49	1.224.87	1.224.07
BIC	2.613.43	1.667.70	1.609.63	1.611.48	1.264.86	1.264.06

The table presents the results of the linear mixed-effects with parties nested in countries. The number of observations refers to the number of parties included in each model. Standard errors are in parentheses. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Parties' salience in the three domains and their left-right and EU integration positions come from the Euromanifesto dataset (Carteny et al 2023).

The 2014 measure for the UK's Green Party is a clear outlier (94% while the second highest is 54%) and has been excluded from the analysis.



Parties' tweets for the national elections' campaigns are also responsive to citizens' environmental concern (see Table A4 in the Appendix). However, responsiveness is clearly

stronger in recent years. Comparing salience in the two levels indicates that higher environmental concern leads to larger parties' environmental salience in European elections relative to national elections only when green parties are excluded from the analysis (Table 4, model 6). Model 6 estimates that if the percentage of people in a country that consider the environment one of the most important issues facing the EU is one percentage point higher, the differential of parties' environmental salience between European and national elections would be 0.06pp higher. Thus, there is some support for H3.

Table 4. Impact of citizens' environmental concern on parties' environmental salience in European elections (differential between European and National elections)

	Parties' environmental salience (differential European - National elections)					
	Whole sample			Non-green parties		
	(1)	(2)	(3)	(4)	(5)	(6)
Citizens' environmental concern (European level)	0.07*** (0.02)	0.04 (0.04)	0.05 (0.04)	0.06*** (0.02)	0.05 (0.03)	0.06* (0.03)
Citizens' environmental concern differential (National level)		-0.01 (0.07)	-0.03 (0.07)		-0.02 (0.06)	-0.03 (0.06)
Unemployment Rate differential		-0.48 (0.27)	-0.50 (0.27)		-0.16 (0.23)	-0.18 (0.23)
Distance between the European and national elections (in years)		1.42* (0.71)	1.37 (0.73)		0.95 (0.58)	0.99 (0.59)
EU-15		-0.80 (0.85)	-1.47 (0.91)		-0.56 (0.70)	-1.08 (0.73)
2019 election		0.83 (1.07)	0.81 (1.10)		0.70 (0.92)	0.69 (0.92)
Left-Right position (economic)			-0.42** (0.14)			-0.42** (0.13)
EU position			-0.15 (0.20)			-0.11 (0.17)
Constant	-0.21 (0.57)	-2.05 (1.84)	1.39 (2.37)	-0.07 (0.46)	-1.58 (1.52)	1.39 (1.98)
Variance country level	0.915	0.441	0.884	0	0	0.093
Number of countries	27	27	27	27	27	27
N	249	249	237	219	219	209
Log Likelihood	-758.17	-752.33	-711.79	-625.90	-624.16	-592.06
AIC	1.524.34	1.522.66	1.445.59	1.259.81	1.266.32	1.206.13
BIC	1.538.41	1.554.32	1.483.73	1.273.36	1.296.82	1.242.90

Notes: The table presents the results of the linear mixed-effects with parties nested in countries. The number of observations refers to the number of parties included in each model. Standard errors are in parentheses. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Discussion and conclusions

The analysis shows that parties are responsive to citizens' environmental concerns in the European elections' context. Parties focus more on environmental issues during the European elections' campaign in contexts of higher environmental concern among citizens, and they also increase their salience in line with shifts in public opinion. Different than Spoon and Klüver (2014), the findings indicate that parties do not ignore citizens' preferences when running for European elections, at least in the case of the environment.

This is an issue that is particularly relevant for EU policy, and that citizens tend to associate with this level. Similar results may apply to issues sharing similar characteristics.

This seems a favourable situation for the representation of citizens' preferences in the environmental domain, as the EU level is particularly suited to this domain. This study only assesses responsiveness at the campaign stage, and for citizens' concerns to be properly represented responsiveness should also manifest at the policy stage. Nonetheless, responsiveness during the campaign is a first sign that environmental concerns are being taken into account.

It must be acknowledged that the direction of the relationship is unclear. I tried to minimise endogeneity by using a measure of citizens' salience that preceded the measure of parties' salience. However, parties' previous environmental salience may have influenced this measure of citizens' salience. In fact, the literature is inconclusive regarding the direction of the causality between citizens' and politicians' preferences. While some studies indicate that this is a bottom-up relationship (e.g. Klüver and Spoon 2014), others find that it is reciprocal (e.g. Steenbergen et al 2007). Nevertheless, the results are positive for representation purposes as parties' and citizens' salience are congruent regarding an issue relevant for the pertinent governance level (i.e. the EU level).

The findings also show that European elections are a relevant arena to debate EU policy issues, at least when an EU issue enjoys high relevance among the public. It is not the case that candidates simply decide to focus their campaign on national issues detached from the work that they will be asked to perform in the Parliament if they are elected. This implies that these elections are more relevant, and connected with EU policies, than what is sometimes thought or claimed. Or in other words, that they are not simply second-order elections.

As some literature had already found, responsiveness to environmental issues is not exclusive to the European level. This makes sense as national and local governments also hold extensive competences in these issues. In fact, the ideal from an environmental point of view is that all levels are committed with its protection. Nonetheless, this study has found some evidence that higher environmental concern makes parties increase their environmental salience above the one displayed in the national contest. This suggests that

European elections can have an agenda of its own and could be perceived as a useful contest to discuss about and vote on issues with a stronger European component. However, this result was only found among non-green parties. It could be the case that as owners of green issues, green parties are more prone to discuss these issues at all levels, while other parties may adapt more their issue focus to each level. The fact that the study found that non-green parties also respond should be underlined, as the literature was inconclusive in this regard. In line with the results from Spoon, Hobolt, and De Vries (2014), the fact that environmental concern is quite high in several countries may give them incentives to respond.

The strength of the relationship clearly differed between 2014 and 2019, being much stronger in the latter. This could suggest that a minimum level of salience is required to find a relationship. Nonetheless, this difference was not found when using the Euromanifesto dataset. This could be due to the different nature of the two campaign materials. For instance, while manifestos must cover a wider range of topics, candidates can use Twitter to focus on a smaller range of issues. Social media is also more flexible than manifestos, which are usually elaborated following a lengthy process. Both things may make social media more responsive to public opinion, especially when the issue is quite high among the public. Nonetheless, it is unclear whether responsiveness in social media translates into responsiveness in policy output (it could be the case that manifestos offer a better guide of the actions a party would later do in parliament or in government). In addition, there is also the risk that important issues quickly disappear from the social media agenda when their salience among citizens decreases a bit.

The comparison with other issues shows that candidates for MEPs are more responsive to environmental concerns than to issues that have a more national component. This suggests that parties adapt to the level for which they are running. However, it could also be the case that parties are more responsive to environmental concerns than health and employment also at the national level. Future research could investigate this further.

Paper 2. Winning votes with greener tweets? Assessing the impact of parties' environmental salience on citizens' vote in the 2019 European election

Abstract

The months preceding the 2019 European Parliament election saw an important increase in concern for the environment among EU citizens. As the environment is a relevant EU policy issue, it would seem rational for citizens to use these elections to provide MEPs with a mandate to push for more ambitious environmental legislation. Nonetheless, it has often been stressed that European elections are largely second-order and fail to provide MEPs with a mandate to act on EU policies. This could lead to a weak representation of citizens' environmental concerns and is also linked to claims that the EU suffers from a democratic deficit. However, as citizens generally acknowledge the importance of environmental action at EU level, I expect to find a connection between parties' environmental salience during the campaign and citizens' vote choice in this European election.

I assess this by analysing whether parties' environmental salience, based on the tweets their candidates posted during the campaign, influences citizens' vote choice. Results show that larger environmental salience increased the likelihood of voting a party when citizens trust the European Parliament and that environmentally concerned citizens switched to parties with higher environmental salience in the European elections' campaign. This suggests that European elections can provide MEPs with a mandate to act on environmental issues, and possibly other EU policy-issues.

Introduction

The European Environment Agency 2019 urged policymakers to tackle the sustainability challenges (European Environment Agency 2019) and policymakers at EU level seem to be responding to this. For instance, they have recently adopted the European Climate Law to meet EU's climate-neutrality target⁵⁶, and addressing, in words of the Commission's president Ursula Von Der Leyen, 'the gravest planetary crisis of all time'.⁵⁷ The EU level is relevant to address environmental challenges due to the trans-national nature of these issues (De Winter and Swyngedouw 1999; Knill and Liefferink) and because it has competences in environmental issues (TFEU Art. 4.2). Traditionally, the EU has been particularly active in this domain (Burns 2019), but it remains to be seen whether EU policies will be ambitious enough to meet the current environmental goals.

Approval of the European Parliament is needed for most environmental issues (TFEU Art. 192 and 294) and this institution has introduced many pro-environment amendments (European Parliament 1999; 2004; 2009; 2014; 2019a; Schoenefeld and Knodt 2020). However, it is important that citizens use the European elections to provide MEPs with a mandate to act on environmental issues, in order to increase the chances that the parliament remains a pro-environment institution and to give MEPs more strength and incentives to advance pro-environmental legislation. In 2019, the environment was one of the most salient issues among citizens (European Commission 2019b). However, even when citizens are concerned about the environment, they may fail to express this concern in European elections if they consider these elections second-order and, thus, more about national topics. Nonetheless, some authors have shown that European issues may also influence vote choice in European elections (e.g. Bakker, Jolly, and Polk 2018) and I expect this to be the case for this specific EU issue, the environment. I expect this due to the importance of this policy domain at the EU level and because citizens acknowledge this relevance.

This paper assesses this by investigating the relationship between parties' environmental salience during the campaign for the 2019 European elections and citizens' vote choice in

⁵⁶ https://ec.europa.eu/clima/eu-action/european-green-deal/european-climate-law_en

⁵⁷ https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_21_4701

these elections. Parties' environmental salience measures have been computed from candidates' Twitter accounts using a dictionary of environmental words.

Findings indicate that parties' environmental salience influenced the vote choice of citizens who trust the European Parliament and that environmentally concerned citizens switch to parties with higher environmental salience in European elections. This suggests that parties can mobilise voters focussing on EU policy issues, especially if these issues are salient among citizens and if citizens trust the parliament.

Background

Voting behaviour in European elections

One of the conditions for political representation to work is that voters select parties based on how these represent their preferences (Schmitt and Thomassen 1999). However, voters can select representatives based on different issues, which may or belong or not to the representative competences. The latter could mean that representatives lack a mandate to act on the issues they are responsible for. In fact, some authors have highlighted that there is weak electoral connection between voters and representatives at the European level, as citizens do not give MEPs (Members of the European Parliament) a 'European mandate' to act on EU policies (Franklin, Van der Eijk, and Marsh 1996; Hix and Marsh 2007). This is due to second order nature of these elections, which is reflected in lower turnout and voters expressing their opinion on national matters rather than on EU policies (Adam and Maier 2011; Reif and Schmitt 1980; Reif 1984; Weber 2007). As a result, governing parties often lose support in these elections compared to the previous national election because citizens use these elections to punish them (Marsh, 1998; Reif and Schmitt, 1980; Schmitt, 2005). In addition, lower relevance makes strategic voting less prevalent, meaning that voters are more likely to express their true preference. This benefits small parties (Reif and Schmitt, 1980, Ferrara and Weishaupt, 2004; Hix and Marsh, 2007, 2011, Schmitt and Toygür, 2016, Ehin and Talving 2020).

Some authors have stressed that an important condition for considering European elections to be less second-order, is that they are "European in nature" (Van der Eijk and Franklin, 1996, p34), meaning that citizens vote according to their position on EU unification or EU policies, or that switches between national and European elections reflect differences in

the salience of EU matters (Marsh, 1998; Van der Eijk and Franklin, 1996). However, some found that parties' position and/or salience on EU integration did not impact their performance (Ferrara and Weishaupt 2004; Schmitt and Toygür 2016), or that their effect was small compared to that from governing status and party size (Hix and Marsh 2007). Nonetheless, some recent studies have found that parties' positions on EU integration and some EU policies (e.g. assimilation, free-market, taxes on banks, criminal sanctions) may affect their performance (positively or negatively) (Treichsel et al., 2017; Maggini et al., 2019).

Moreover, at the individual level, several studies have shown that EU attitudes can explain vote choice. Citizens tend to choose a party close to their position on EU integration (De Vries and Tillman 2011; Plescia et al 2020); negative attitudes towards the EU are related with casting a Eurosceptic vote (Hernández and Kriesi, 2016; Hobolt and De Vries, 2016, van Spanje and de Vreese, 2011; Braun and Tausendpfund 2020); and the EU integration issue may explain vote switch between national and European elections. For instance, the extent to which a voter and a given party are (dis)similar in their EU position has been associated with switching/staying loyal in general (Bakker, Jolly, and Polk 2018; Hobolt and Spoon 2012), when focussing on the governing party (Giebler et al., 2017; Hobolt, Spoon and Tilley, 2009), and regarding switching from mainstream to niche parties (Hong, 2015). Similarly, negative attitudes towards the EU or disapproving its performance have been linked to switching from governing parties to niche parties (Bakker, Jolly, and Polk 2018; Hong, 2015); and being pro-EU integration and evaluating positively governing parties' EU performance with switching from opposition to governing parties (Clark and Rohrschneider 2009).

It must be stressed that most of the above studies do not disregard completely the second-order theory, as often the effects of national factors are also found to be similarly or more important, notably the evaluation of the national government (Bakker, Jolly, and Polk 2018, Braun and Tausendpfund, 2020; Clark and Rohrschneider, 2009; Hobolt, Spoon and Tilley, 2009; Hobolt and Spoon, 2012, Hobolt and De Vries 2016; Marsh, 2009; Schmitt et al 2020). In fact, a study on the 2019 election underlines that national government evaluation and left-right positions were more important than EU integration positions to explain vote

choice, which makes the authors conclude that European elections are still second-order, although maybe less than in the past (Plescia et al 2020).

It is questionable whether choosing MEPs based on EU integration issues can provide a 'European mandate', as these belong to the competences of national actors (Thomassen 2016). Moreover, an excessive importance of these issues could strengthen the role of Eurosceptics inside the European Parliament, which could be risky for the future of the European Union (Hix, Noury, Roland 2019). Therefore, apart from facilitating the representation of citizens' environmental concerns and the advancement of environmental legislation, that environmental issues play an important role in European elections can also be beneficial for the EU.

Some studies indicate that positions in the left-right axis are relevant to explain vote choice in European elections (e.g. Bakker, Jolly, and Polk 2018; Hobolt and Spoon, 2012, Rosema and de Vries, 2011; Van der Eijk, Franklin, and Van der Brug 1999) and that there is a linkage between voters' preferences and MEPs based on the left-right dimension (Thomassen 2009; Van der Eijk, Franklin, and Van der Brug 1999; Vasilopoulou and Gattermann 2013). However, the importance of left-right positions does not provide information on the relative importance of European or national factors, as some left-right issues may belong more to the national level, and others to the European one.

The role of environmental issues

Rohrschneider and Miles (2015) find that citizens' environmental attitudes influence their vote choice, because they make them vote for more leftist parties in the West and centre-right parties in the East. However, it is unclear that all left-wing parties (equally) represent citizens' environmental concerns. Moreover, it is unknown whether their results would apply to European elections.

Some studies focussing on green parties' performance found that they perform better in European elections even after controlling for party size (Ferrara and Weishaupt, 2004; Hix and Marsh, 2007), so not only because they are often small parties. Nonetheless, Hix and Marsh (2007) stress that these effects are small. Moreover, Carrubba and Timpone (2005) relate voting for greens in the 1994 election to the second-order nature of European elections, as it was more likely among those who perceived that the power of the European

Parliament was lower. However, due to the work that the European Parliament has performed since then, citizens may see now this institution as useful to address their environmental concerns. Moreover, their study was conducted in a context of lower environmental concern.

In the 2019 context, it would make sense to expect that the environment was a relevant factor in voters' choice because citizens were especially concerned about environmental issues in the months preceding the election (European Commission 2019a) and this election elected Members of the European Parliament, which has competences to act on environmental issues and has often made use of them. Moreover, citizens seem to be aware that the EU is relevant for environmental policy. For instance, they want more EU decision-making in this domain (European Commission 2019b),⁵⁸ and prefer decisions that decisions referring to this are made 'jointly within the EU' (European Commission 2020b).

In fact, the environment was one of the main EU issues that motivated participation in the European election (Kantar 2019) (the second most mentioned after 'economy and growth') and being concerned about the environment increased the likelihood to participate (Braun and Schäfer 2021). Thus, it could be expected that parties' environmental salience influenced citizens' voting choice, implying that parties obtained votes thanks to focussing on this issue during the campaign (H1).

- *H1: The more focused on environment a party is, the higher the likelihood that voters chose this party in the 2019 European election.*

It has been suggested that the salience of environmental issues benefited green parties in the 2019 election in some countries (Bolin et al 2019; De Sio, Franklin, and Luana 2019; Partheymüller, Schlipphak and Treib 2020; Pearson and Rüdiger, 2020). Han and Finke (2022) show that voters with a more pro-environmental position were more likely to vote for a green party in the 2019 election, especially where environmental issues were more salient in their national elections' context, when the Green Party was smaller and where this party was considered as more able to address environmental issues by environmentally concerned citizens. My analysis goes beyond green parties and environmentally concerned

⁵⁸ Selected by 78%, the second issue after terrorism (79%).

citizens, as this would better indicate the relevance of this issue in the elections and its potential to make European elections less second order.

In 2014 citizens' environmental concern was lower⁵⁹ and only 12% selected 'fight against climate change' as a motivation to participate in the European election⁶⁰ (TNS Opinion, 2014). Thus, I do not expect to find a relationship in this context. In fact, parties' position on renewable energies seems to have influenced their 2019 performance in the Centre-North region (Maggini et al. 2019), while these positions did not have an effect in 2014 (Trechsel et al., 2017). Different from these studies (Maggini et al. 2019; Trechsel et al. 2017), I focus on environmental issues in general, as the European Parliament can act on many other environmental issues beyond renewable energy. Similarly, EU citizens are worried by several environmental concerns (climate change, air pollution, waste, marine pollution...) (European Commission 2020b), and promoting renewable energies is not enough to address all of them. The present paper also uses salience instead of position, which are not highly correlated as not all pro-environmental parties focus importantly on these issues in their European manifestos (Carteny et al 2023). That candidates focus heavily on these issues during their European campaign may signal better to voters whether they will give a special priority to environmental issues during their work as MEPs, and this may be more likely to influence their voting decision.

Several studies have found that issue salience can influence vote choice (Dennison 2019; Walgrave, Lefevere, Tresch 2020) and some have identified an effect of environmental salience specifically. A study of 38 countries focusing on the national context found that individuals with more favourable environmental attitudes chose parties with larger environmental salience in their manifestos (Papp 2022). A study conducted in the Netherlands found that congruence between the importance an individual gives to the environment and the importance they perceive a party assigns to it influenced individuals' likelihood to vote for the corresponding party, although the effect was rather small (Van der Brug 2004). Issue salience may also be relevant at EU level. In fact, individuals who

⁵⁹ In March 2014 6% of Europeans selected environmental issues as one of the most important issues facing their country, and 5% and 4% selected that one the most important issues facing the EU was climate change and the environment respectively (European Commission 2014). These percentages were clearly higher in March 2019: 18%, 20%, and 14% respectively (European Commission. 2019a).

⁶⁰ The first issue was unemployment (45%), followed by economic growth (40%).

perceived that their most salient issue was mainly dealt with at EU level were more likely to participate in the 2009 European election (Clark 2014). Thus, salience may also affect individuals' vote choice.

Nonetheless, the impact of parties' environmental salience on citizens' vote choice in the European Parliament elections may be dependent on whether citizens trust this institution. Trusting the European Parliament may be a pre-requisite for citizens to perceive that MEPs will be able or willing to advance pro-environmental legislation. Thus, I expect the relationship to be stronger among citizens who tend to trust the European Parliament (H2a).

- *H2a: The more focused on the environment a party is, the higher the likelihood that voters chose this party in the 2019 European election, especially among voters who tend to trust the European Parliament.*

I also expect the relationship to be stronger among citizens with higher EU knowledge (H2b), as these may be more aware of the role of the European Parliament in environmental issues and parties' preferences in these issues. Previous studies had found that higher political knowledge increases the impact of EU integration positions on vote choice among citizens (De Vries et al. 2011), and the congruence between citizens and parties in the EU integration dimension (McEvoy 2012).

- *H2b: The more focused on the environment a party is, the higher the likelihood that voters chose this party in the 2019 European election, especially among voters with higher EU knowledge.*

Many studies on European elections have analysed the different performance of parties in these compared to the national elections and voters' switches between the two elections. These switches could be due to second-order factors (e.g. expressing discontent against the national government), changes in their preferred party at national level, or also to prioritising different issues in the two elections (Marsh, 1998; Carruba and Timpone, 2005). The latter would imply that European elections are less second-order (Marsh, 1998; Van der Eijk and Franklin, 1996). Due to their trans-national nature and the EU previous work and competences in this domain, citizens may give more priority to environmental issues in

European than in national elections. In consequence, those concerned about environmental issues may switch from the party voted in national elections towards a party focussing more on the environment during the European campaign (H3).

- *H3 Environmentally concerned citizens switch towards a party with larger environmental focus.*

Methodology

Vote choice

To assess vote choice, I follow a similar approach as Sorace (2021) and I use a dataset in stacked format in which individuals appear as many times as the number of parties (p) included in this study that run in their constituency. This allows to include both parties' and individuals' traits in the model. The dependent variable (V_{ip}), expressed as a binary variable, equals to 1 if the citizen voted a given party and 0 if she did not (see EQ 1). Observations (i) (each party-voter combination) are cross-nested in voters and parties. However, the intraclass correlation coefficient (ICC) shows that random effects at the voter level are irrelevant.⁶¹ Therefore, this analysis uses mixed-effects logistic regressions with observations nested in parties (with random effects at party level, u_p). The main independent variable is the environmental salience of each party minus the average environmental salience of parties in the corresponding country (Env_v). This measure reflects better the choices voters face than using the total salience values, as they are constrained to the party offer in their country.

These models control for other party characteristics that the literature has found to influence vote choice and parties' performance in European elections (X_{jp}): party size, governing status, EU position and left-right position. The latter is expressed as the distance in the position between each voter and party (LR_{ip}). These variables are also likely to affect campaign focus. For instance, left-wing parties generally display larger environment and climate salience in their manifestos (Spoon, Hobolt, De Vries 2014; Facchini et al. 2017, Farstad, 2018) and pro-EU parties are more likely to discuss EU policy issues in them (Braun, Hutter, and Kerscher 2016).

⁶¹ ICC for parties is 0.095 and for voters 0. This makes sense because each voter can only choose one party.

$$V_{ip} = \alpha + \beta_1 ENV_p + \beta_j X_{jp} + \gamma_1 LR_{ip} + u_p + \varepsilon_{ip} \quad (1)$$

These models will use data from the 2019 election and will be compared with similar models applied to the 2014 election, which took place in a context of lower environmental salience. To assess H2a and H2b, parties' environmental salience will be interacted with a dummy indicating whether the citizen tends to trust or not the European Parliament (in 2019) and European institutions (in 2014), and with voters' EU knowledge. The latter is computed as the number of correct responses in some factual questions about the EU.⁶²

Switching

To assess switching, I will use as dependent variable the differential in environmental salience during the European election campaign between the party that the citizen (i) voted in this election and the party this citizen had voted in the national contest (ENVP_Diff_i) (see EQ 2). This variable indicates whether the voter switched towards a more environmentally focussed party (H4). The main independent variable is a dummy indicating whether the voter selected the environment as one of the most important issues or not (ENV_MII_i). One limitation of this analysis is that citizens' environmental salience may have changed between the European and the national election, and this change may explain the vote switch rather than the fact that the elections refer to two different levels of governance. For this reason, the 2019 analysis is restricted to those countries that had national elections shortly before the European election (i.e. the earliest in March 2019), or that had concurrent elections. These are Estonia, Finland, Spain, and Belgium. The 2014 analysis uses respondents' hypothetical vote in a national election taking place the day after the European post-electoral survey rather than their national vote recall.⁶³

These models are estimated with OLS. They control for other party traits that have been found to explain differential behaviour between European and national election (i.e. size of the party voted in the national election, government status of this party, EU position), or voting behaviour in general (i.e. left-right position⁶⁴) (X_{ji}). Country dummies (C_c) are

⁶² The 2014 survey includes two questions about the EU and the 2019 survey three.

⁶³ This question is not available in the 2019 survey.

⁶⁴ EU and left-right positions are expressed as the difference in these positions between the party voted in European elections and that voted/willing to vote in national elections.

included to control for country factors that could explain switching (e.g. issues related to national politics).

$$\text{ENVP_Diff}_{i=} \alpha + \beta_1 \text{ENV_MII}_i + \beta_j X_{ji} + C_c + \varepsilon_i \quad (2)$$

Data

Individual's vote choice in the 2019 European election and the preceding national election is obtained from the 2019 Eurobarometer post-electoral survey (European Commission and European Parliament 2019). This survey also provides individuals' left-right position, whether they trust the European Parliament⁶⁵, questions to assess their EU knowledge, and their most important issues at national and EU level. The EES 2014 voter survey (Schmitt et al 2016) provides data on the party individuals voted in the 2014 European election and what they would vote in a hypothetical national election taking place the day after the interview, individuals' left-right position, whether they trust European institutions⁶⁶, questions to assess their EU knowledge, and their most important issues at national level. Parties' left-right and their EU position are obtained from the Chapel Hill expert surveys (CHES)⁶⁷ (Jolly et al 2022; Polk et al 2017). Parties' size⁶⁸ and government status come from ParlGov,⁶⁹ and when these were not available, they have been obtained from countries' official websites and the Euromanifesto project (Carteny et al 2023). Parties' environmental salience is obtained from candidates' tweets (see methodology section above).

Results

Impact of parties' environmental salience on citizens' vote choice

The simple logit model indicates that parties' environmental salience during the 2019 European election's campaign influences voters' choice. This also applies to the model pooling the observations from the 2014 and 2019 elections (table 1). Nonetheless, the

⁶⁵ This is a dummy variable with two options: 'tend to trust', 'tend not to trust'.

⁶⁶ The variable trust in the European Parliament is not available in the 2014 survey. Trust in EU institutions is measured in a four-point scale, which has been converted into a dummy variable to make it equivalent to the 2019 variable. In this, 1='Yes, totally' or 'Yes, somewhat', and 0='no, not really', or 'no, not at all'.

⁶⁷ CHES values for coalitions are the average of its members when these are of similar importance and are available. Otherwise, the leader code has been assigned to the coalition.

⁶⁸ Share of the national vote.

⁶⁹ <https://www.parlgov.org/>

relationship ceases to be significant in the 2019 election once party random effects are included (table 2). Thus, there is not enough support for H1. The relationship is not significant in any of the models in the 2014 sub-sample. Figures 1 and 2 plot models 1 and 2 in table 2, respectively. These show that the effect of parties' environmental salience on the likelihood of selecting the party is slightly positive in 2019 but practically flat in 2014. Being pro-EU and a larger party increased the probability of choosing a given party in both elections, when controlling by the other covariates.

Table 1. Impact of parties' environmental salience on vote choice in the 2014 and 2019 European Elections (logit model)

	Voting for the Party (1=yes, 0=no)		
	logistic		
	2019 election	2014 election	Whole sample
	(1)	(2)	(3)
Parties' environmental salience (differential vs country average)	0.02** (0.01)	0.01 (0.02)	0.02* (0.01)
Voter-Party Left-Right distance	-0.01 (0.02)	0.02 (0.02)	0.004 (0.02)
Party size	0.14*** (0.04)	0.06 (0.04)	0.10** (0.03)
Party's EU position	0.06*** (0.01)	0.06*** (0.01)	0.06*** (0.004)
Governing party	0.07 (0.11)	-0.10 (0.13)	-0.03 (0.09)
Constant	-3.39*** (0.21)	-2.93*** (0.18)	-3.13*** (0.15)
Number of parties	195	183	238
Number of voters	12647	11688	24176
Number of countries	28	28	28
N	90.674	79.022	169.696
Log Likelihood	-33.475.89	-30.350.45	-63.898.00
AIC	66.963.77	60.712.89	127.808.00

Notes: The table presents the results of a logit model. The number of observations refers to the number of voter-party dyads. Standard errors are in parentheses and they are clustered at party level.

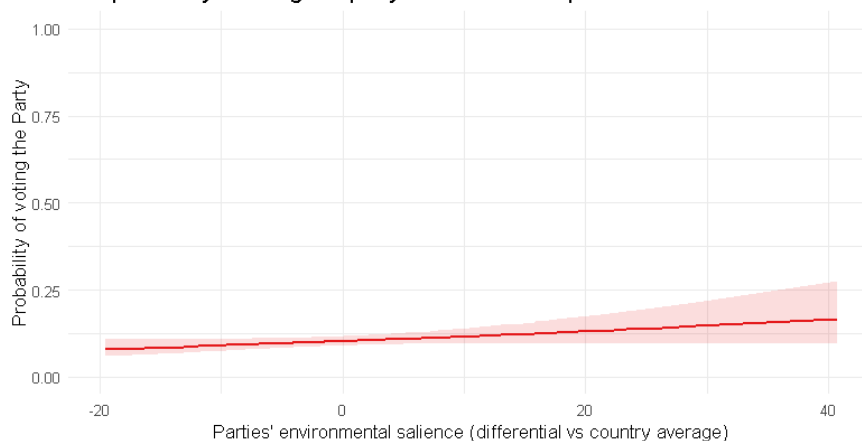
The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Table 2. Impact of parties' environmental salience on vote choice in the 2014 and 2019 European Elections (mixed-effects logistic regression)

	Voting for the Party (1=yes, 0=no)		
	generalized linear mixed-effects		
	2019 election (1)	2014 election (2)	Whole sample (3)
Parties' environmental salience (differential vs country average)	0.01 (0.01)	0.01 (0.02)	0.02*** (0.002)
Voter-Party Left-Right distance	0.001 (0.004)	0.0004 (0.004)	0.0001 (0.003)
Party size	0.15*** (0.04)	0.10* (0.04)	0.04 (0.02)
Party's EU position	0.06*** (0.01)	0.07*** (0.01)	0.03*** (0.002)
Governing party	0.06 (0.15)	-0.13 (0.16)	-0.13*** (0.03)
Constant	-3.67*** (0.20)	-3.36*** (0.19)	-2.63*** (0.12)
Variance party level	0.685	0.639	0.895
Number of parties	195	183	238
Number of voters	12647	11688	24176
Number of countries	28	28	28
N	90.674	79.022	169.696
Log Likelihood	-31.622.22	-28.550.33	-60.785.46
AIC	63.258.43	57.114.67	121.584.90
BIC	63.324.34	57.179.61	121.655.20

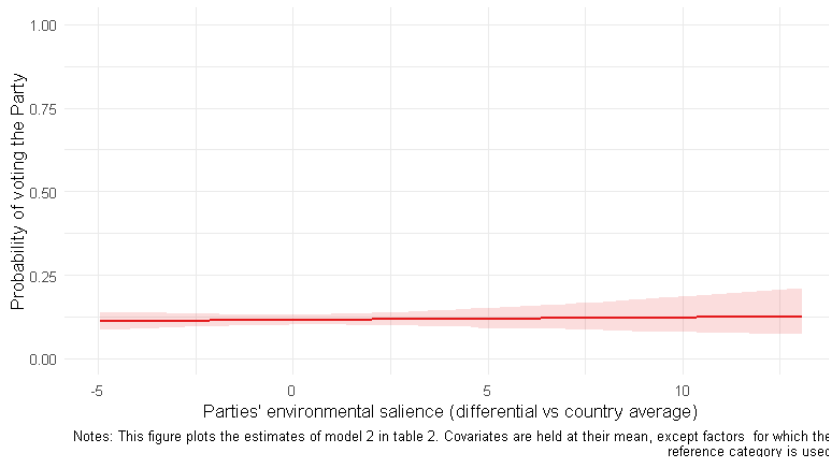
Notes: The table presents the results of the mixed-effects logistic regression with voter-party dyads nested in parties. The number of observations refers to the number of voter-party dyads. Standard errors are in parentheses. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Figure 1. Predicted effect of parties' environmental salience on the probability of voting this party in the 2019 European election



Notes: This figure plots the estimates of model 1 in table 2. Covariates are held at their mean, except factors for which the reference category is used.

Figure 2. Predicted effect of parties' environmental salience on the probability of voting this party in the 2014 European election



Trust in the European Parliament moderates the relationship between parties' environmental salience and vote choice in 2019. Table 3 shows that parties' environmental salience had a stronger effect on the vote choice of those who tended to trust the Parliament. Thus, there is support for H2a. Figure 3 shows that parties' environmental salience increased the likelihood of voting a party in the 2019 European elections among those who tended to trust the institution. Trust in EU institutions also moderated the relationship in 2014 (Table 3, model 2), but the effect of parties' environmental salience on the probability of voting the party among trusting individuals seems weaker than in 2019 (see Figure 4). However, voters' EU knowledge does not moderate the relationship (table 3, models 2 and 4), thus there is no support for H2b.

Table 3. Impact of parties' environmental salience on vote choice in the 2014 and 2019 European Elections moderated by citizens' trust in the European Parliament/European institutions and citizens' EU knowledge

	Voting for the Party (1=yes, 0=no)			
	generalized linear mixed-effects			
	2019 election		2014 election	
	(1)	(2)	(3)	(4)
Parties' environmental salience (differential vs country average)	-0.01 (0.01)	0.01 (0.01)	-0.02 (0.02)	-0.01 (0.03)
Voter trusts the European Parliament	-0.003 (0.02)			
Voter EU knowledge		-0.003 (0.01)		0.001 (0.02)
Voter trusts the European institutions			0.02 (0.02)	
Voter-Party Left-Right distance	0.001 (0.005)	0.001 (0.004)	0.001 (0.004)	0.0005 (0.004)
Party's EU position	0.15 ^{***} (0.04)	0.15 ^{***} (0.04)	0.10 [*] (0.04)	0.10 [*] (0.04)
Party size	0.06 ^{***} (0.01)	0.06 ^{***} (0.01)	0.07 ^{***} (0.01)	0.07 ^{***} (0.01)
Governing party	0.05 (0.15)	0.06 (0.15)	-0.12 (0.15)	-0.13 (0.15)
Party environmental salience*Citizen trusts EP	0.03 ^{***} (0.003)			
Party environmental salience*Voter EU knowledge		0.001 (0.002)		0.01 (0.01)
Party environmental salience*Citizen trusts EU institutions			0.04 ^{***} (0.01)	
Constant	-3.71 ^{***} (0.20)	-3.67 ^{***} (0.20)	-3.37 ^{***} (0.19)	-3.36 ^{***} (0.19)
Variance party level	0.687	0.685	0.631	0.639
Number of parties	195	195	183	183
Number of voters	11728	12647	11440	11688
Number of countries	28	28	28	28
N	84.227	90.674	77.349	79.022
Log Likelihood	-29.288.41	-31.622.01	-27.954.11	-28.548.76
AIC	58.594.82	63.262.01	55.926.23	57.115.52
BIC	58.678.89	63.346.75	56.009.53	57.199.02

Notes: The table presents the results of the mixed-effects logistic regression with voter-party dyads nested in parties. The number of observations refers to the number of voter-party dyads. Standard errors are in parentheses. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Figure 3. Predicted effect of parties' environmental salience on the probability of voting this party in the 2019 European election by trust in the European Parliament.

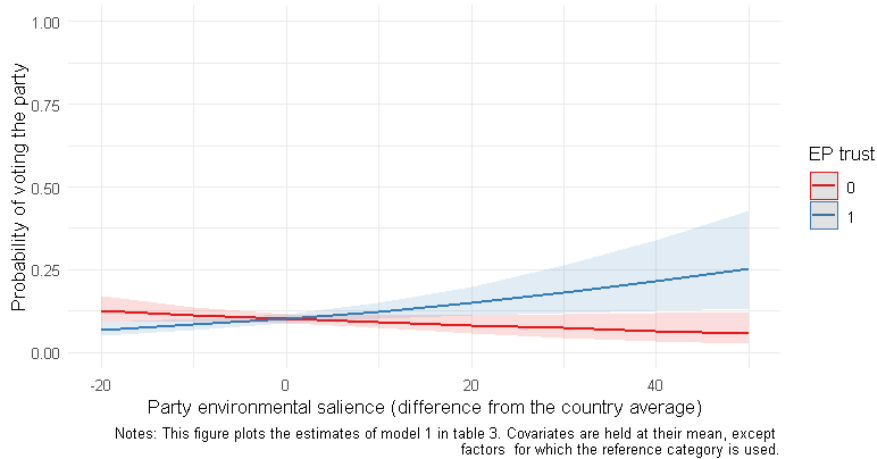
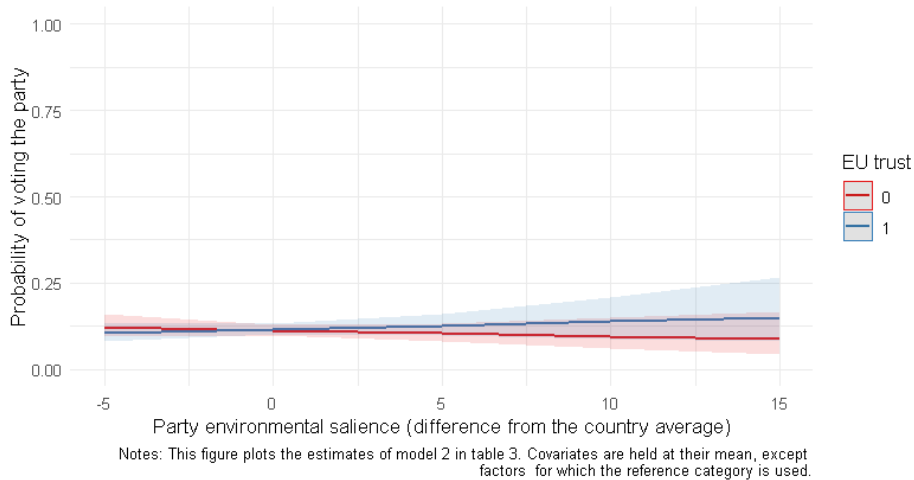


Figure 4. Predicted effect of parties' environmental salience on the probability of voting this party in the 2014 European election by trust in European institutions.



Switching

Considering the environment one of the most important issues at national or European level has a positive impact on the environmental salience differential in the European campaign between the party they voted in the 2019 European election and the one they had voted in the previous national contest (Table 4, models 1 and 2). As Figure 5 shows, environmentally concerned citizens tended to switch towards a party that focussed more on the environment than the one they had voted in national elections, after controlling for the other covariates that may also affect switching. This provides support for H3. The differential may be small, but it must be noted that only a small part of voters switch and that this analysis only includes four countries. It could be somewhat surprising that the effect is stronger when using the most important issue at national level rather than at

European one. Nonetheless, this does not necessarily mean that they were casting a vote based on national factors, as they may want MEPs to act to address this problem that their country is facing. In fact, EU action can influence national environmental policies and the state of the environment in Member States. The relationship was also significant in 2014, although this was weaker (Table 4 model 3, Figure 6).

Table 4. Relationship between voters' environmental concern and the environmental salience differential between the party they prefer at the EU and national level

	Parties' environmental salience differential		
	OLS		
	2019 election		2014 election
	(1)	(2)	(3)
Environmentally-concerned (EU level)	0.39*		
	(0.19)		
Environmentally-concerned (National level)		0.65**	0.35***
		(0.23)	(0.08)
Size party chose at national level	0.04**	0.04**	0.01***
	(0.01)	(0.01)	(0.002)
Choosing a governing party at national level	-0.09	-0.07	0.19***
	(0.21)	(0.21)	(0.04)
EU position differential	2.17***	2.17***	0.19***
	(0.12)	(0.12)	(0.02)
Left-Right position differential	-1.02***	-1.01***	-0.53***
	(0.08)	(0.08)	(0.02)
Constant	-0.41	-0.39	-0.29***
	(0.22)	(0.21)	(0.09)
Number of countries	4	4	28
N	2.022	2.022	10.359
R ²	0.26	0.26	0.11
Adjusted R ²	0.25	0.26	0.10
Residual Std. Error	4.11 (df= 2013)	4.10 (df= 2013)	1.69 (df= 10326)
F Statistic	87.33*** (df= 8, 2013)	87.95*** (df= 8, 2013)	38.42*** (df= 32, 10326)

Notes: The table presents the results of an OLS regression with Country Fixed Effects. Parties' environmental salience differential is computed as the environmental salience during the European election campaign of the party the voter chose in the European election minus the environmental salience during the European election campaign of the party the voter preferred in the national election. The preferred party in the national election is the party voted in the national election preceding the European election in the 2019 analysis (this only includes countries with a national election shortly before the 2019 European election or concurrent: Estonia, Finland, Spain and Belgium). In the 2014 analysis the preferred party in the national election is the one the voter would choose in a national election happening the day after the survey. Voters are environmentally-concerned if they choose the environment as one of the most important issues facing the EU/their country. Standard errors are in parentheses. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Figure 5. Predicted effect of being environmentally-concerned on the environmental salience differential between the party preferred at the EU and national level (2019)

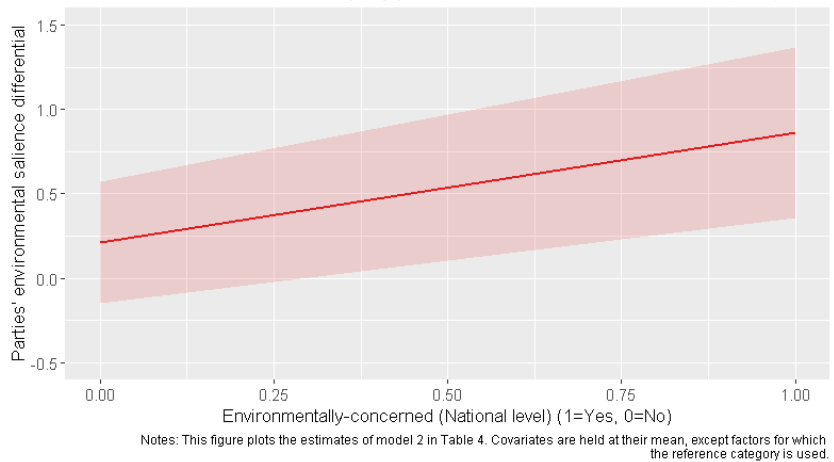
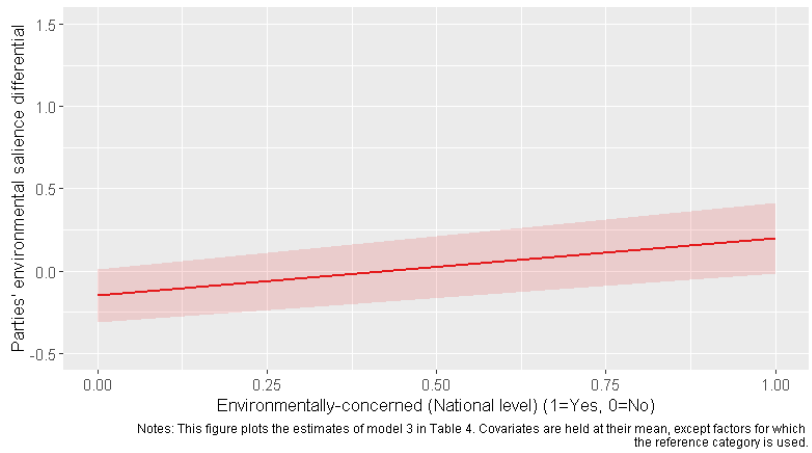


Figure 6. Predicted effect of being environmentally-concerned on the environmental salience differential between the party preferred at the EU and national level (2014)



Discussion and conclusions

Results show that parties' environmental salience was a relevant factor to explain the vote choice of citizens who trust the European Parliament. This suggests that these citizens used the 2019 European elections to provide MEPs with a mandate to act on environmental issues. This group of citizens constituted a sizeable part of the population (56%) and was more numerous than those who tended not to trust the European Parliament (36%) (European Commission 2019b). This could facilitate the representation of environmental concerns in the European Parliament. In addition, a more environmentally committed European Parliament could help to advance more ambitious environmental policies at EU level. Trust was already a relevant moderator in 2014, but the relationship was weaker.

Results also show that some environmentally concerned citizens vote differently in national and European elections, opting in the latter for a party that makes environmental issues more salient in the European campaign than the citizen's preferred option in national

elections. This indicates that parties can attract additional voters in European elections by focussing more on these issues.

Both results show that EU-policy issues can play a role in European elections. Parties can win votes by focussing on EU-policy issues, especially when these are salient among the population. The relationship between being environmentally concerned and switching towards a party with larger environmental salience was found both in 2014 and 2019. Nonetheless, the number of citizens who were concerned about the environment was higher in the latter. In both elections, parties' environmental salience influenced vote choice among citizens who trust the European Parliament /EU institutions, but the effect was stronger in 2019. This suggests that specific EU policy issues can play a larger role in European elections when these issues are more salient.

That EU policy issues, and not only EU constitutive issues, can be important in European elections, means that European elections have some European nature, and they can provide MEPs with a mandate to act on EU policies. In other words, they are not simply second-order but also a useful channel to express preferences relevant for EU policy-making.

The fact that environmental issues seemed more important in 2019 compared to 2014 does not necessarily mean that the 2014 European elections had a lower European component than the 2019 ones, as other European issues may have been relevant. Similarly, if in the future the salience of the environment decreases, other EU issues could gain importance. Nonetheless, this may be dependent on whether a sizeable number of citizens trust the European Parliament. If trust in this institution decreases, the role of EU policy issues in European Parliament elections may also decrease.

It must be acknowledged that there may be some endogeneity issues. First, citizens may have decided their vote before the campaign started, and parties' campaign content may be responding to increases in environmental salience among their supporters, target voters or constituents. Second, the party citizens voted may have influenced their perception of the most important issues facing their country and the EU. Nonetheless, even if the direction of the relationship could be questioned, the results are positive for representation as they

indicate congruence between parties and voters in the European context and, especially, in an issue that belongs importantly to the competences of MEPs.

Paper 3. Representation of environmental issues in the European Parliament. From the campaign to the plenary

Abstract

Concern for the environment increased among EU citizens before the 2019 European Parliament elections. Some candidates discussed environmental issues during the campaign and concerned citizens possibly used these elections to provide MEPs with a mandate to act on this EU policy. Nonetheless, the representation of citizens' environmental concerns would be weak if this representation is confined to the campaign period.

This paper investigates whether MEPs are fulfilling their campaign commitments by assessing whether their environmental salience during the campaign is related with casting pro-environmental votes (based on the emissions' reduction target that each MEP supported). Environmental salience is computed through a content analysis of tweets (using a dictionary approach) that MEPs had posted during the campaign. The analysis includes 427 MEPs from twenty-five EU countries. Results indicate that MEPs who focussed more on environmental issues during the campaign were more likely to vote for a more ambitious target. This shows that the European Parliament can represent citizens' concerns in domains relevant for EU policy.

Introduction

Calls for urgent climate action are ubiquitous nowadays. For instance, the European Environment Agency report 'The European environment —state and outlook 2020' (European Environment Agency 2019) stressed the need to tackle urgently the sustainability challenges that the planet is facing. This concern is also high among EU citizens and they consider that environmental issues are one of the most important issues facing the EU and their countries (European Commission 2022; 2020a, 2019).

Within the EU multi-level system, it is paramount that the EU level address these concerns⁷⁰. First, supranational action is particularly appropriate in this domain because many environmental issues are trans-national and non-excludable (De Winter and Swyngedouw 1999; Knill and Liefferink 2013; Olson 1965; Sinnott 1995). Second, the EU can work in this domain as the treaties allow⁷¹ (and require) this. In fact, the EU has worked extensively on environmental issues since the 1970s (Burns 2019). As a result, the EU has now an extensive environmental acquis, and many environmental policies originate at the European level (Burns, Eckersley, and Tobin 2020; Börzel 2005; Börzel and Buzogány 2019; Klüver and Spoon 2015; Delreux and Happaerts 2016). This existing legislation can be reformed to meet the current targets, or it could potentially be weakened. In addition, as implementing environmental policies may entail political costs (Stokes 2016), national governments may be reluctant to implement such policies on their own. Lastly, citizens generally desire more EU decision-making on environmental issues (European Commission 2019a),⁷² and indicated that it should be one of the main priorities of the 9th European Parliament (European Parliament 2019b).⁷³

The European Parliament has been particularly active in the environmental domain, and it has often adopted a more pro-environmental position than the Commission (Arregui and Perarnaud 2021, Buzogány and Četković 2021). For instance, it has introduced several amendments to make EU legislation more pro-environment (European Parliament 1999; 2004; 2009; 2014; 2019a; Schoenefeld and Knodt 2020). Moreover, as most environmental

⁷⁰ This does not mean that action by other governance levels (and non-political actors) is unnecessary.

⁷¹ The environment is one of the 11 areas with shared competence between the EU and Member States (TFEU Art. 4.2).

⁷² Selected by 78%, the second issue after terrorism (79%).

⁷³ Selected by 32%, the most selected issue.

issues require the approval of both the Parliament and the Council (TFEU Art. 192 and 294), it can block attempts to weaken existing legislation. However, it is not guaranteed that the Parliament will always adopt an ambitious pro-environment position, as Members of the European Parliament (henceforth, MEPs) may also oppose environmental legislation. Nonetheless, in 2019, environmental issues featured importantly in the campaign material of some parties and candidates and these issues were a motivator to participate for some citizens, which suggests that environmentally-focussed MEPs have a mandate to adopt these ambitious positions in the environmental domain.

This paper seeks to assess whether MEPs keep their commitment to the environmental cause and carry out this mandate by casting more ambitious environmental votes in the European Parliament plenary. The latter is based on the emissions' reduction target that MEPs supported in the context of the European Climate Law, the law that the EU approved in June 2021 with the aim of achieving climate neutrality by 2050.⁷⁴ MEPs' environmental salience during the campaign has been computed from their tweets using a dictionary of environmental words.

Results show that MEPs who tweeted more about environmental issues during the campaign were more likely to defend a more stringent target in the plenary, which indicates that MEPs are carrying out the environmental mandate.

Can European elections provide MEPs with a mandate to act on environmental issues?

The 'second-order elections' theory would question that citizens use European elections to provide MEPs with a mandate to act on EU policies, such as the environment. 'Second-order elections' are perceived by voters and political actors as less relevant than national elections, which implies that national topics have a predominant role in parties' campaign and in citizens' voting decision (Adam and Maier 2011; Reif and Schmitt 1980; Reif 1984; Weber 2007). This makes it difficult that citizens give MEPs a 'European mandate' to act on EU policies (Franklin, Van der Eijk, and Marsh 1996; Hix and Marsh 2007). Nonetheless, several authors have shown that European elections can also be about European issues. For instance, parties manifestos cover EU integration and EU policy issues (Braun, Hutter,

⁷⁴https://climate.ec.europa.eu/eu-action/european-green-deal/european-climate-law_en#formal-adoption

and Kersch 2016), and attitudes towards EU integration can explain citizens' vote choice (e.g. Bakker, Jolly, and Polk 2018; De Vries and Tillman 2011; Hernández and Kriesi, 2016; Hobolt and De Vries, 2016). This implies that citizens may decide to use European elections to give MEPs a mandate to act on EU integration or policy issues. The latter is especially important as EU policy issues relate more closely to MEPs' competences (Thomassen 2016).

One of these EU policy issues, the environment, was already present in the campaign of some parties before 2019 (Wüst and Schmitt 2007; Wüst, 2009; Giebler, Haus and Wessels 2010; Seoane Perez and Lodge 2010). In 2019, it was particularly salient in the campaign of several countries, especially in the West (Bolin 2019; De Sio, Franklin, and Luana 2019; Kritzinger et al 2020, Novelli and Johansson 2019). This could suggest that parties were responding to the increased concern among citizens, implying that citizens' environmental concerns were represented at the campaign stage. Moreover, environmental issues probably influenced citizens' voting decision in the 2019 European election. First, environmental issues motivated citizens' participation in the election (Kantar, 2019; Braun and Schäfer 2021). In addition, some descriptive work suggests that the salience of environmental issues benefited the performance of greens or parties with a green orientation, at least in some countries (Bolin et al 2019; De Sio, Franklin, and Luana 2019; Partheymüller, Schlipphak and Treib 2020; Pearson and Rüdiger, 2020). Linked to this, a preliminary analysis on the 2019 election suggests that parties' position on renewable energies influenced their performance in countries from Centre-North Europe (Maggini et al. 2019).

This suggests that environmentally concerned citizens may have provided MEPs with a mandate to act on environmental issues. This could help advance more ambitious environmental legislation and represent citizens' environmental concerns. Nonetheless, this representation would be weak if it were confined to the campaign period, as representation also entails that parties legislate according to their voters' preferences, and the programmes they presented during the campaign (Rose and Borz 2013). Thus, that MEPs keep their campaign commitment is especially important to ensure that these concerns are adequately represented. Moreover, fulfilling their campaign commitments and working to address citizens' environmental concerns in an area especially important for EU policy could help raise the profile of individual MEPs and the European Parliament as a

whole. It would also show that the European Parliament is serving its function of representing EU citizens.

The study only focuses on one domain, but this is a domain in which we would expect to observe representation in the European Parliament, provided this institution is serving its function. This is because of the characteristics that the environment has: trans-national nature, belonging to the EU competences, perception among citizens that the EU has an important role in this domain, and being salient among the population. Results from this study may be also applicable to issues sharing (some of) these traits.

Voting in the European Parliament

MEPs' voting in the European Parliament can be influenced by different actors. MEPs have two main principals: their European party group (henceforth EPG) and their national party (Hix 2002; McElroy and Benoit 2011). Policy positions of the second principal tend to exert a greatest influence on MEPs' voting (Hix 2002), but this may vary depending on the distances between the two principals on the left-right and EU integration dimensions (Coman 2009), the salience of each topic for the national party (Klüver and Spoon 2015), and the electoral system (Hix 2004; Coman 2009). MEPs in more candidate-focused systems may feel that the voter is an important principal. In fact, Däubler and Hix (2018) found that MEPs were more responsive to public opinion in systems with open or strongly flexible lists. MEPs in the 1999-2004 term considered that the most important was to represent the citizens in their country (Scully and Farrell 2003), but the importance attributed to the other groups (i.e. the voters of their party, citizens in their constituency, their national party, all EU citizens, their European party) was not much smaller, making the authors conclude that MEPs represent "multiple principals" (Scully and Farrell 2003).

The EPG generally exerts more influence than the Member State over the vote of MEPs and national parties. A study on legislative proposals in the 2004-2005 period, shows that in case of diverging positions between the European group and the Member States, national parties are more likely to vote with their European group than their Member State (Costello and Thomson 2016). Similarly, there is more cohesion within European parties than within MEPs belonging to the same country (Hix and Noury 2009). This also applied to MEPs from Visegrad countries voting on energy and climate issues (Zapletalová and Komínková 2020).

Nonetheless, it is important to note that, although European parties display cohesion, this is not absolute and there are many cases in which MEPs belonging to the same European group vote differently (Bowler and McElroy 2015; Klüver and Spoon 2015; McElroy and Benoit 2011). This desertion is often explained by the position of their Member State. National parties may vote differently than their European group, when their Member States disagrees with the European group, especially when the issue is salient for the Member State (Costello and Thomson 2016). For instance, MEPs tended to oppose climate legislation when their Member State had opposed this in Council, even when they were not from parties in the national government (especially in some Member States) (Buzogány and Četković 2021). Moreover, in 2009, nationality was more important than the European party group in explaining national parties' position on the EU integration dimension (while the opposite applied to the left-right dimension) (Bressanelli 2013).

Some authors stress that decisions in the European Parliament are dominated by a grand coalition of three groups: EPP, S&D and liberals (Costello 2022), which may hinder MEPs' representation task as they may be forced to forgo their programme commitments to agree with the other groups (Rose and Borz 2013). The ideological composition of the grand coalition⁷⁵ explained the legislation positions of the European Parliament better than the ideological composition of the median MEP in the 1999-2019 period (Costello 2022). Nonetheless, parties' left-right position explained coalition formation (i.e. whether two European parties tend to vote the same) in the fifth and sixth parliament (first half) (Hix and Noury 2009).

Ideology also influences MEPs' voting. The main dimension to explain their voting in the plenary has traditionally been the left-right dimension (Hix, Noury, and Roland 2006, 2019). However, the EU integration became the most important dimension in the 2014-2019 term, but especially for votes related to the economic crisis (e.g. on economic and monetary affairs) (Blumeau and Lauderdale 2018; Hix, Noury, Roland 2019).

⁷⁵ On average more pro-integration, more liberal in the GALTAN index and more right-wing in the economic dimension than the median MEP and the national governments (i.e. the Council) (Costello 2022).

The European Parliament and environmental issues

While Hix, Noury, and Roland (2019) indicate that the left-right was still the main dimension predicting votes in the environmental domain in the 2014-2019 term, Buzogány and Četković (2021) found that the EU integration dimension was more important than the left-right and GALTAN positions in explaining support for climate legislation.

In the 2014-2019 term, four parliamentary groups generally voted in favour of climate legislation: S&D, EPP, ALDE and the Greens (Buzogány and Četković 2021; Wendler 2019). It must be noted that the GUE-NGL group often voted against it because they considered the legislation not ambitious enough (Buzogány and Četković 2021). In fact, Rose and Borz (2013) underline the high agreement on green issues between parties belonging to the Greens and Left-Green European groups. Cohesion within European party groups seems quite high, with some exceptions. Buzogány and Četković (2021) stress that cohesion was lower in the EFDD and GUE-NGL groups. Focusing on positions on green issues rather than parliamentary voting, Rose and Borz (2013) find important disagreement within the EPP, ALDE, and the Conservatives.

It must be noted that the extent to which the European Parliament can advance pro-environmental legislation is somehow limited by the fact that the Commission is the institution in charge of presenting legislation proposals. The Parliament can propose amendments to these proposals, but the Council should also agree with them. In fact, the European Parliament often needs to reduce its ambition and/or include compensations for industries or Member States to ensure that legislation passes (Wendler 2019). Moreover, as mentioned above, the Council (i.e. the national government) can also influence MEPs' voting behaviour (Buzogány and Četković 2021).

The EU Climate Law

The 2019-2024 European Commission seems particularly eager to work in the environmental domain as shown by the fact that the “European Green Deal” appeared first in the list of its six priorities⁷⁶. In line with this, the Commission introduced the proposal for the European Climate Law (2020/0036 (COD)) in March 2020, aimed at helping the EU

⁷⁶ https://ec.europa.eu/info/sites/info/files/political-guidelines-next-commission_en_0.pdf

achieve the goal of climate neutrality⁷⁷, one of the objectives of the European Green Deal.⁷⁸ Moreover, reducing greenhouse emissions is key to achieve the Paris Agreement goal of not surpassing a 1.5°C temperature increase.⁷⁹

The legislative proposal indicated that the Commission would “explore options for a new 2030 target of 50 to 55 % emission reductions compared with 1990” (Art. 2(3))⁸⁰, and after the impact assessment The Commission indicated that the target should be 55%⁸¹ (see Table 1). The previous target was 40% (Regulation (EU) 2018/1999, Art. 2(11)).⁸² The European Parliament had recently asked for a 55% target in the ‘Resolution on the European Green Deal’⁸³. Nonetheless, the Parliament Committee on the Environment, Public Health and Food Safety (ENVI) proposed to increase further this target to 60% (Amendment 100),⁸⁴ and this was approved in the plenary session on October 8th 2020⁸⁵. Some Parliamentary groups proposed other amendments that were not accepted: the ECR group wanted the Commission to come up with a new target proposal and intended to remove any mention to a specific target (Amendment 136/rev)⁸⁶; The Left group proposed that the target be 70% (Amendment 109),⁸⁷ and the Greens/ EFA wanted to raise the target to 65% (Amendment 141)⁸⁸. During the parliamentary debate, some MEPs expressed concerns that the Climate Law could have negative consequences for the economy and for energy availability, while others stressed that a higher target was needed to avoid global temperatures raising more than 1.5°C.⁸⁹ After interinstitutional negotiations the target was set to 55% (recital 17, Art 3.1).⁹⁰ This made many MEPs from the Greens and Left group

⁷⁷ <https://oeil.secure.europarl.europa.eu/oeil/popups/summary.do?id=1611082&t=e&l=en>

⁷⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1584881073085&uri=CELEX:52019DC0640>

⁷⁹ https://unfccc.int/sites/default/files/english_paris_agreement.pdf

⁸⁰

[https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2020/080/COM_COM\(2020\)0080_EN.pdf](https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2020/080/COM_COM(2020)0080_EN.pdf)

⁸¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0562&qid=1667233763957>

⁸² https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2018.328.01.0001.01.ENG

⁸³ <https://oeil.secure.europarl.europa.eu/oeil/popups/summary.do?id=1605295&t=e&l=en>

⁸⁴ https://www.europarl.europa.eu/doceo/document/A-9-2020-0162-AM-001-100_EN.pdf

⁸⁵ https://www.europarl.europa.eu/doceo/document/TA-9-2020-0253_EN.html

⁸⁶ https://www.europarl.europa.eu/doceo/document/A-9-2020-0162-AM-134-136_EN.pdf

⁸⁷ https://www.europarl.europa.eu/doceo/document/A-9-2020-0162-AM-107-109_EN.pdf

⁸⁸ https://www.europarl.europa.eu/doceo/document/A-9-2020-0162-AM-139-143_EN.pdf

⁸⁹ https://www.europarl.europa.eu/doceo/document/CRE-9-2020-10-06-ITM-011_EN.html

⁹⁰ [https://www.europarl.europa.eu/RegData/commissions/envi/inag/2021/05-06/ENVI_AG\(2021\)692729_EN.pdf](https://www.europarl.europa.eu/RegData/commissions/envi/inag/2021/05-06/ENVI_AG(2021)692729_EN.pdf) ; https://www.europarl.europa.eu/doceo/document/TC1-COD-2020-0036_EN.pdf ; <https://oeil.secure.europarl.europa.eu/oeil/popups/summary.do?id=1667705&t=e&l=en>

vote against the text agreed in these negotiations⁹¹, which was nonetheless approved by the plenary. Most MEPs from the EPP, Renew and S&D voted in favour, while most belonging to the IDG voted against. Most ECR members abstained, but many voted against the law (Hix et al 2022).

Table 1. Proposed emission reduction target (European Climate Law)

	Target
Previous target	40%
Commission Proposal	55%
ENVI Proposal	60%
Greens/ EFA proposal	65%
Left group proposal	70%

Representation of environmental issues in policy making

Representatives may be responsive to public opinion at the policy stage in different topics (Stimson et al 1995). Some studies have found a link between public opinion on the environment and representatives' voting in the US Congress (Vandeweerd et al. 2016) and the environmental policies enacted by governments (Anderson et al 2017; Schaffer, Oehl, Bernauer 2021). This shows that representatives may be willing to align with citizens' preferences in the environmental domain. Moreover, environmental salience in the national manifestos of governmental parties influences the stringency of environmental policies implemented at national level (Lundquist 2022) and of the positions expressed in the Council of the EU (Leinaweaver and Thomson 2016). Similarly, if MEPs campaigned on these issues, they have incentives to be consistent with this in the plenary, in order to avoid disappointing their voters, keep their support and increase the chances of performing well in future election contests. Moreover, as mentioned above, MEPs consider especially important to represent the citizens in their country (Scully and Farrell 2003). MEPs may also be willing to align with the preferences of other actors, such as their national party, their European party group, their national government and different interest groups, whose

⁹¹https://www.europarl.europa.eu/doceo/document/CRE-9-2021-06-24-ITM-004_EN.html ;
https://www.europarl.europa.eu/doceo/document/CRE-9-2021-06-24-ITM-002_EN.html

preferences may not always align with those of their voters or the citizens in their constituency. Nonetheless, I argue that the incentive of aligning with the preferences of voters/citizens should be especially important in the present context because the environment is one of the most important issues for citizens (European Commission 2022), they consider that it should be one of the main priorities of the 9th European Parliament (European Parliament 2019b), and they generally support the objectives of the European Green Deal (European Commission and European Parliament 2021).

Thus, my main hypothesis is:

H1. MEPs that give more attention to environmental issues during the campaign cast more ambitious votes in the European Parliament.

Some particular characteristics of the European Parliament may put this in doubt. First, some authors stress that the European Parliament lacks the typical confrontation between contrasting positions, such as between government and opposition, which could make accountability more difficult (Follesdal and Hix, 2006, Schmitt, 2005, Thomassen 2016). If MEPs perceive that they will not be held accountable for their actions, they may have less incentives to fulfil their campaign commitments. Nonetheless, Sorace (2021) suggests that accountability may be possible in the European Parliament context, as parties may be rewarded by voters if their MEPs are present in the voting sessions. In addition, parties and representatives may want to portray themselves as pro-environmental to obtain electoral rewards (also) in other elections. The fact that several electoral systems allow citizens to cast preferential votes gives MEPs incentives to care also about individual accountability and to portray themselves as more environmentally committed than their party, if necessary. Even if their system does not include preferential votes, MEPs may still have reasons to do this. For example, in order to raise their profile for intra-party competitions.

Second, if MEPs perceive that European elections are based on national issues, they may not feel they have a mandate to act on European policy issues. Nonetheless, several studies have shown that EU issues also matter in European elections, and environmental issues motivated participation in 2019. Thus, several MEPs probably perceive that they were elected to work on EU policies, such as the environment. Moreover, some studies have found that EU institutions can be responsive to public opinion. Citizens' favourable opinions

on EU policy change related to actual policy change, but dependent on salience (Wrátil 2019). The codecision procedure led EU employment policies to align better with changes in EU citizens positions on the left-right and economic conservatism (Sorace 2022). Moreover, parliamentary questions of MEPs in the 7th term on economic policy were substantively representative of the mean voter positions (Sorace 2018).

Nonetheless, it is unclear whether MEPs would be more willing to stick with their campaign commitments or to respond to public opinion, which evolves over time. In fact, the percentage of EU citizens that considered the environment one of the main issues facing their country and the EU was lower during the vote on the climate law target than during the 2019 electoral campaign (European Commission 2020c) (most probably due to the Covid shock). Thus, it could be the case that MEPs are more likely to keep their campaign commitments in countries where environmental salience among citizens decreased less (or increased).

H2. MEPs that give more attention to environmental issues during the campaign cast more ambitious votes in the European Parliament, especially when citizens' environmental salience increased, or decreased less.

Methodology

MEPs vote

The measure of MEPs' environmental ambition is based on the Climate Law, concretely on how they voted in the amendments related to the target for reducing greenhouse gas emissions. As explained above, reducing these emissions is paramount to combat climate change. In addition, these amendments allow to quantify MEPs ambition by ordering them depending on the target that they agree with. An index ranging from 1 (the least ambitious) to 5 (the most ambitious) has been computed. This index has the following values:

- 1: MEP voted the amendment that wanted to eliminate any mention of a target (and didn't vote any of the other amendments).

- 2: MEP did not vote for any amendment (meaning they wanted to stick with the Commission's proposed target: 55% reduction).⁹²
- 3: MEP voted the amendment that wanted to increase the target to 60%.
- 4: MEP voted the amendment that wanted to increase the target to 65%.
- 5: MEP voted the amendment that wanted to increase the target to 70%.⁹³

Moreover, these amendments were voted before the interinstitutional negotiations and might represent better the MEP's preference than the vote on the final proposal where several MEPs may accept the compromise reached in these negotiations even if they do not find this ambitious enough. It could also be the case that MEPs defended a larger target than their preferred target because they expected this to be lowered in interinstitutional negotiations. Nonetheless, I expect that this would affect similarly most MEPs. Data on votes have been obtained from the VoteWatch Europe project (Hix et al 2022).

All options were chosen by a sizeable number of MEPs (Figure 1). As expected, members of the Greens/EFA and The Left groups were more ambitious, and all but one member chose the most ambitious option. By contrast, all members from the ECR opted for the least ambitious one. Agreement within national parties is very high, but not perfect.⁹⁴ For this reason, MEPs are the unit of analysis here instead of national parties. In line with the reviewed literature, the national party seems more influential than the European party, even though agreement within European parties is high.⁹⁵ Figure 2 shows that there is variation within most countries, which suggests that, in accordance with the existing literature, the European party is more important in explaining MEPs' vote than the Member State (Costello and Thomson 2016; Hix and Noury 2009).

⁹² For example, see the intervention by Peter Liese in the debate clearly stating this. https://www.europarl.europa.eu/doceo/document/CRE-9-2020-10-06-ITM-011_EN.html

⁹³ MEPs who voted favourably to the last three amendments were assigned a 5.

⁹⁴ The intraclass correlation coefficient for national parties regarding the vote on the emissions' target is 0.944.

⁹⁵ The intraclass correlation coefficient for European parties regarding the vote on the emissions' target is 0.863.

Figure 1. Target ambition by European Party Group

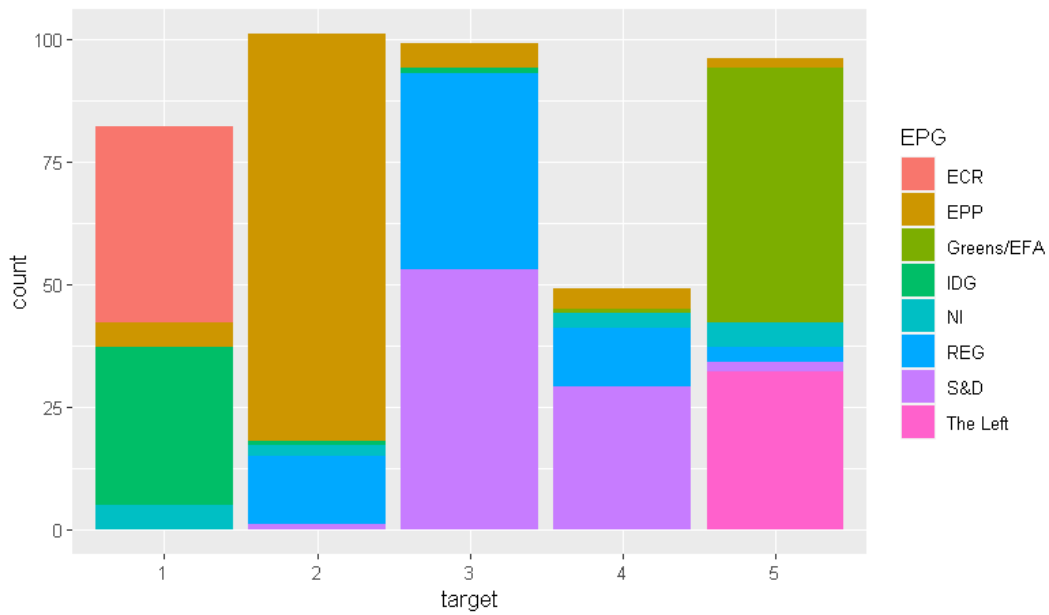
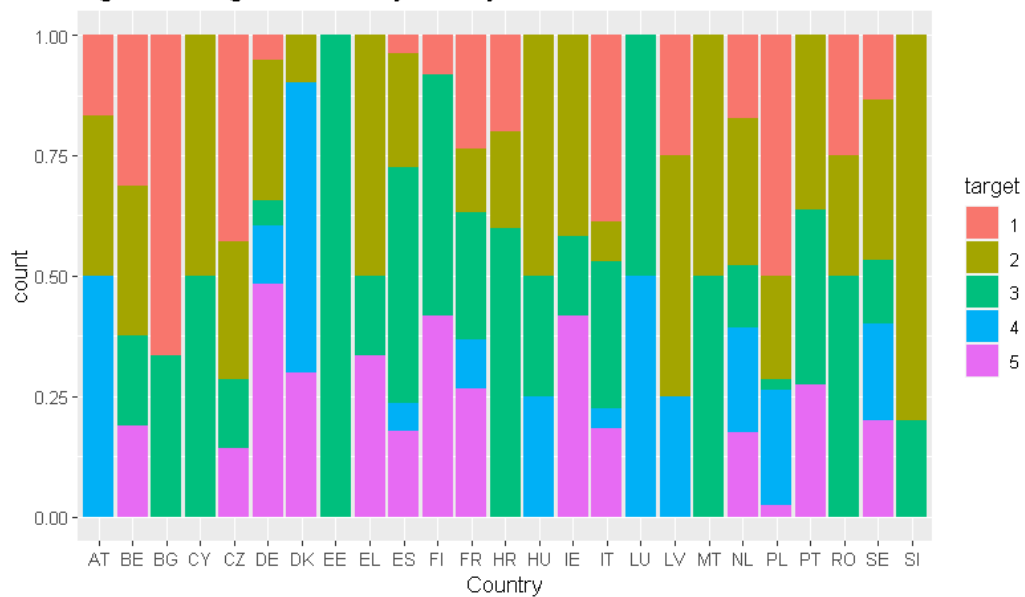


Figure 2. Target ambition by country



MEPs' environmental salience

MEPs' environmental salience is based on their tweets. Different from manifestos and expert surveys, Twitter makes it possible to have a MEP-specific salience measure (provided they are active on the platform). The procedure followed to compute environmental salience is explained above in the methodological section.

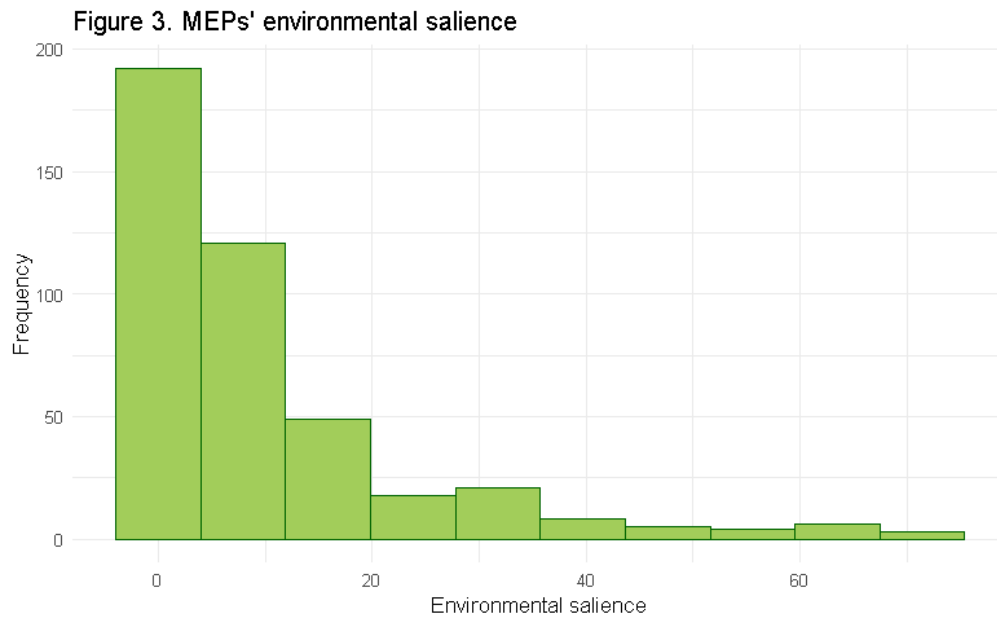
The sample included 68,633 tweets, 40,614 of which were retweets and 4,141 quotes. MEPs with fewer than 15 tweets have not been included. Among the 697 MEPs who participated in the vote on the EU climate law amendments related to the target for

reducing emissions, 427 tweeted at least 15 times during the 2019 campaign (61%). This includes MEPs from all Member States except from Lithuania and Slovakia. The sample includes representatives from all European parties, but some European parties are less represented (i.e. the EPP and Identity & Democracy) (see Table 2). Western MEPs are clearly more represented in the sample. In addition, among the included MEPs there are more women and former MEPs, and they come from parties that are a bit more pro-EU and left-wing, compared to those who have not been included. They also supported a more ambitious target (see Table A1 in the Appendix)

Table 2. MEPs per European Party Group.

Party	MEPs included	MEPs casting a vote	Completeness
ECR	40	64	63%
EPP	99	177	56%
Greens/EFA	53	69	77%
Identity & Democracy	34	64	53%
None	15	40	38%
Renew Europe	69	103	67%
S&D	85	142	60%
The Left	32	38	84%
TOTAL	427	697	61%

Figure 3 shows that, in line with the literature mentioned above, some MEPs had discussed environmental issues on Twitter during the campaign. The MEPs with the highest environmental salience were Manuela Ripa (71%), Marie Toussaint (71%) and Martin Häusling (68%), all from the Greens/EFA group. As expected, members of this group show the highest salience on average (32%), followed by The Left (12%), while the groups with the lowest salience are the ECR (2.7%) and IDG (2.79%).



Models

The dependent variable is the index indicating each MEP's (*i*) ambition regarding the target for reducing emissions (*Vote_cl_i*), which ranges from 1 to 5. As this variable is ordinal, an ordered logit model is used. The main independent variable is the MEP's environmental salience during the campaign (*ENV_i*).

$$\text{Vote_cl}_{i=} \alpha + \beta_1 \text{ENV}_i + \beta_j X_{ji} + \varepsilon_i$$

The models control for parties' EU and left-right position and government status (in May 2019 and in October 2020), whether the electoral system allows preferential votes, being from Eastern or Western Europe, citizens' environmental concern, having previously served as MEP, gender, and age (*X_{ji}*). Being pro-integration is quite correlated with parties' environmental salience and pro-environmental positions (Bakker et al 2020),⁹⁶ and pro-integration and former MEPs may want to cast ambitious votes to strengthen the power of the European Parliament. Similarly, they may be more prone to discuss EU policy issues during the campaign. Left-right parties tend to be more pro-environment (Bakker et al 2020; Carter et al, 2018; Wang and Keith 2020), and are more likely to advance ambitious

⁹⁶ Data from the 2019 CHES expert survey indicates that EU-27 parties' EU integration position has a correlation coefficient of 0.37 with pro-environmental positions and of 0.34 with environmental salience.

environmental legislation (Tobin 2017). Government status may influence vote in the plenary, as national governments need to implement EU legislation, and also their EU campaign, especially knowing that citizens may use the European elections to punish the national government (Schmitt 2005). Preferential votes give more agency to individual MEPs, making them more responsive to public opinion (Däubler and Hix 2018). This may also make them care more about individual accountability and, thus, more willing to be consistent with their environmental salience during the campaign. Citizens' concern may influence MEPs' campaign focus and their vote in the plenary, as they are probably attentive to public opinion., Women tend to display higher environmental concern (Franzen and Vogl 2013) and cast more pro-environmental votes in the European Parliament (Ramstetter and Habersack 2019), and younger MEPs may care more about environmental issues, as younger people are more environmentally concerned (Franzen and Vogl 2013). Lastly, Eastern Member States typically give less priority to environmental issues (Wurzel, Liefferink, Di Lullo 2019), which may affect the behaviour of their MEPs.

Parties' ideological variables are obtained from the 2019 CHES survey (Bakker et al 2020), and government status from ParlGov.⁹⁷ Citizens' environmental concern is computed as the percentage of citizens in the MEP's country that considered 'the environment and climate change' as one of the most important issues at EU level in summer 2020, using the Eurobarometer survey prior to the vote on the emissions' targets (European Commission 2020c). The change in this percentage between March 2019 (before the European Parliament election) (European Commission 2019a) and summer 2020 will be used to test H2. Standard errors will be clustered by national party.

I will also apply OLS models in which the dependent and main independent variable will be expressed as the differential between the MEP and their EPG. For this I first compute the average of ambition and environmental salience for each EPG and I then subtract this from each MEP value. Non-assigned MEPs (n=15) are not included in this analysis. In line with the reviewed literature, I expect high voting cohesion within EPGs, but also some variation. Several candidates showed moderate/high environmental salience during the campaign, and salience has been found to explain national parties' defection from their EPGs (Klüver

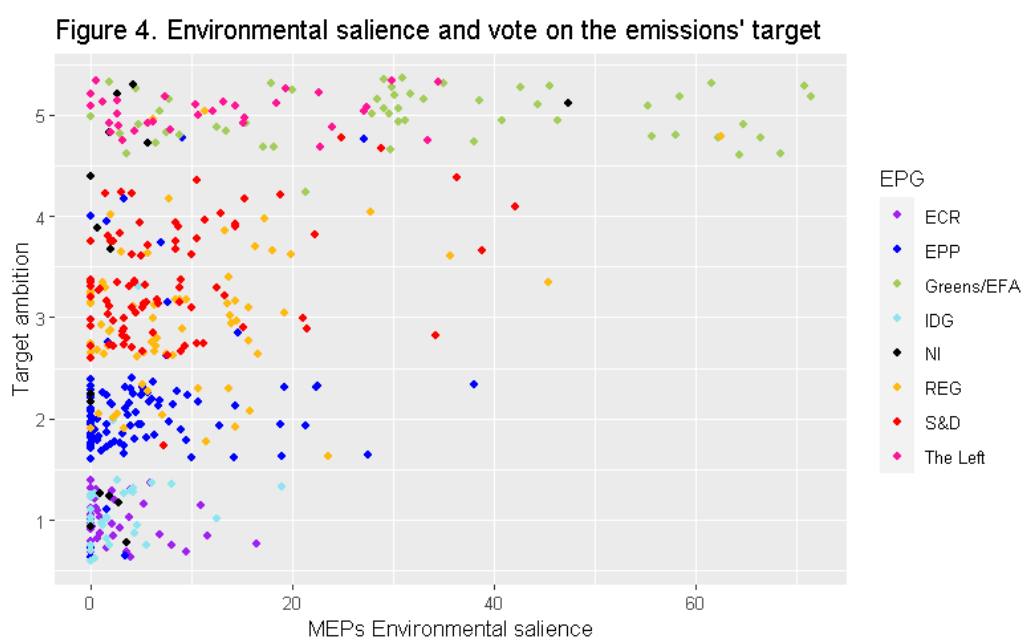
⁹⁷ <https://www.parlgov.org/>

and Spoon 2015). Therefore, candidates that had focussed more on environmental issues during the campaign compared to their EPG average, may be more ambitious than the rest of their EPG members.

Results

Descriptive

Figure 4 shows that MEPs who focused more on environmental issues during the campaign generally supported a more stringent target. Nonetheless, many MEPs who had hardly focused on the environment also casted clear pro-environment votes. As members of the same European group tend to cast similar votes, this could suggest that pro-environment MEPs in some groups are pushing their group colleagues towards this position. It could also mean that during the campaign members of each group split the topics and that some of them did not focus on the environment because they were responsible for other issues.



Impact of MEPs environmental salience on MEPs vote

Table 3 displays the results of the ordered logit. This indicates that MEPs who focused more on environmental issues during the campaign are more likely to support a more ambitious target in the plenary. This implies support for H1. The impact of MEPs environmental salience remains significant when controls are included, although it is weaker when their party's left-right position is added. MEPs from more pro-integration and left-wing parties,

from opposition parties, from Western countries, and women are also more likely to support more ambitious targets.

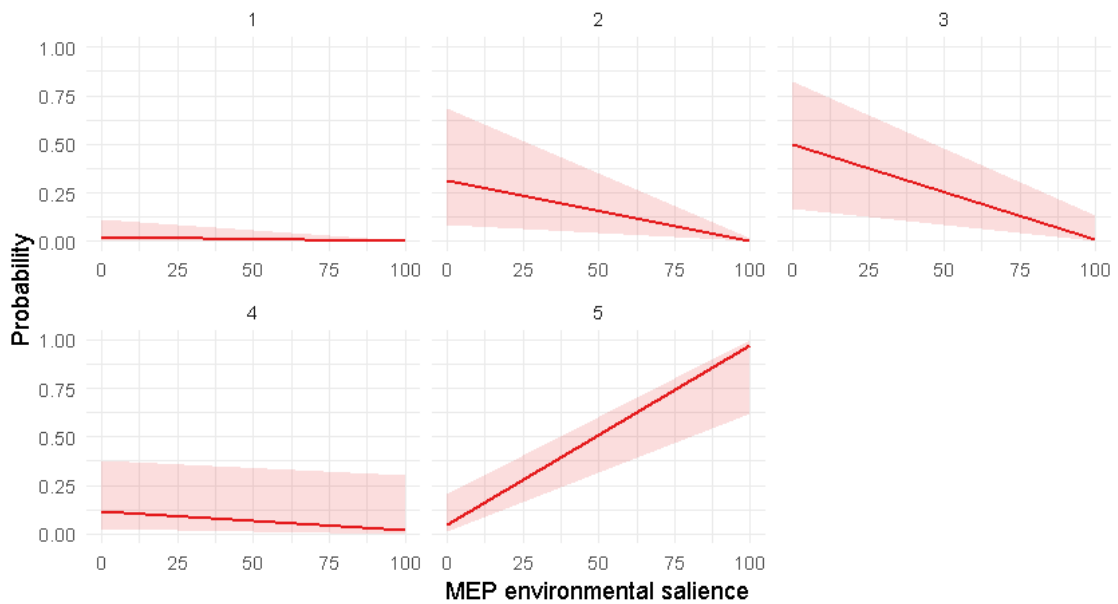
Figure 5 displays the predicted probabilities based on model 4. It indicates that environmental salience is positively related with the probability of choosing the most stringent target, while it decreases the probability of choosing the second and third options (i.e. agreeing with the target proposed by the Commission and the ENVI committee respectively). However, environmental salience does not seem to influence the likelihood of choosing the two other options.

Table 3. Impact of MEPs' environmental salience on their ambition regarding the target to reduce emissions (ordered logit)

	MEP ambition regarding the emissions' target			
	(1)	(2)	(3)	(4)
y>=2	0.76 (0.44)	2.77*** (0.76)	-0.84 (1.48)	1.99 (1.61)
y>=3	-0.54 (0.32)	1.31 (0.69)	-2.91 (1.63)	-1.01 (1.83)
y>=4	-1.75*** (0.30)	0.01 (0.68)	-4.36* (1.74)	-3.29 (1.95)
y>=5	-2.57*** (0.36)	-0.87 (0.72)	-5.24** (1.84)	-4.60* (2.08)
MEP environmental salience	0.11*** (0.02)	0.11*** (0.02)	0.11*** (0.02)	0.06*** (0.02)
Party in the national government (May 2019)		-1.33 (0.79)	-0.81 (0.63)	0.17 (0.58)
Party in the national government (October 2020)		0.63 (0.70)	-0.29 (0.59)	-2.26*** (0.65)
Preferential vote		-0.22 (0.63)	0.04 (0.54)	0.08 (0.54)
West		0.46 (0.70)	0.75 (0.49)	1.65** (0.63)
Citizens' environmental salience		-0.03 (0.03)	-0.02 (0.02)	0.02 (0.03)
Female		0.49** (0.17)	0.50** (0.18)	0.44* (0.20)
Age		-0.03** (0.01)	-0.03* (0.01)	-0.01 (0.01)
Former MEP		0.14 (0.24)	0.08 (0.23)	0.05 (0.25)
EU position (national party)			0.68*** (0.21)	1.09*** (0.27)
Left-right position (economic) (national party)				-1.00*** (0.14)
N	427	427	420	420
R ²	0.32	0.42	0.56	0.76
chi ²	158.30*** (df = 1)	218.11*** (df = 9)	319.16*** (df = 10)	542.46*** (df = 11)

Notes: The table presents the results of the ordered logit. Standard errors are in parentheses. They are clustered by national party. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Figure 5. Predicted effect of MEPs' environmental salience on the probability of supporting each target



As the parallel lines assumption does not hold for some models and regressors,⁹⁸ multinomial logit models have been applied as a robustness check (Appendix table A2). The results seem aligned with the previous plots, as higher environmental salience makes it more likely for MEPs to choose the most ambitious target versus each of the other options, except versus option 1. Nonetheless, it is unclear that environmental salience during the campaign affects the choice between the other options.

There is no evidence that environmental salience among citizens moderates the relationship between MEPs' environmental salience and their vote on the climate law targets (Table 4). Thus, there is no support for H2.⁹⁹ Nonetheless, the fact that the change in environmental salience does not moderate the relationship, could be positive for the environment because it shows that MEPs were still willing to keep their campaign commitments even though environment was a less salient topic for the population. It must be noted that some of the countries that experienced the biggest drops in citizens' environmental salience were those with highest salience in Spring 2019 (Denmark, Finland, the Netherlands, Sweden). Thus, MEPs from these countries may have perceived that

⁹⁸ Results from the Brant test indicate that the parallel lines assumption does not hold for model 4. For model 2 it fails for the set of regressors ('omnibus') but not for MEP's environmental salience.

⁹⁹ Using the question referring to the most important issue at EU level did not produce significant results.

citizens still had pro-environmental positions even though health issues were temporarily more salient.

Table 4. Impact of MEPs' environmental salience on their ambition regarding the target to reduce emission

	MEP ambition regarding the emissions' target
y>=2	2.35 (1.48)
y>=3	-0.62 (1.60)
y>=4	-2.91 (1.66)
y>=5	-4.21* (1.76)
MEP environmental salience (campaign)	0.06 (0.05)
Change in citizens' environmental concern	0.01 (0.04)
MEP env salience*change in citizens env concern	-0.001 (0.003)
N	420
R ²	0.76
chi ²	540.99*** (df = 12)

Notes: The table presents the results of the ordered logit. Standard errors are in parentheses. They are clustered by national party. Controls and intercepts have been omitted from the table to facilitate reading. The models include the same controls as Model 4 in Table 3. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Table 5 shows that MEPs who focussed more on environmental issues during the European Elections campaign compared to the other members of their EPG, were more ambitious than the latter when choosing the emissions' reduction target. The coefficient could be considered rather small (0.007). If we were to compare a MEP that had an environmental salience 10 percentage points larger than their EPG average with one that had the same salience as the average, the first would be expected to be 0.07 points more ambitious in the 1-5 scale when voting in the plenary. As discussed above, there was (almost) no variation in the voting choice within several EPGs. If the same models are run using only MEPs from EPG with variation (i.e. EPP, REG, and S&D) this value would be 0.14 (Table 6). The other regressors indicate that MEPs from parties in the national government were clearly less ambitious than their EPG co-members, while higher citizens' concern (only in Table 5, model 4) and belonging to a more left-wing party are associated with larger ambition.

Table 5. Impact of MEPs' environmental salience on their ambition regarding the target to reduce emissions (differential between MEPs' and EPG values) (OLS)

	MEP and EPG differential in the ambition regarding the emissions' target (OLS)			
	(1)	(2)	(3)	(4)
MEP and EPG differential in environmental salience	0.009** (0.003)	0.007* (0.003)	0.007* (0.003)	0.007* (0.003)
Party in the national government (May 2019)		0.036 (0.106)	0.058 (0.100)	0.109 (0.100)
Party in the national government (October 2020)		-0.236* (0.098)	-0.281** (0.105)	-0.339*** (0.101)
Preferential vote		0.096 (0.092)	0.104 (0.088)	0.120 (0.087)
West		-0.112 (0.118)	-0.101 (0.111)	-0.088 (0.110)
Citizens' environmental salience		0.007 (0.004)	0.008 (0.004)	0.008* (0.004)
Female		0.094 (0.065)	0.093 (0.064)	0.086 (0.066)
Age		-0.001 (0.003)	-0.001 (0.003)	-0.0001 (0.003)
Former MEP		0.022 (0.059)	0.024 (0.060)	0.019 (0.057)
EU position (national party)			0.024 (0.022)	0.028 (0.022)
Left-right position (economic) (national party)				-0.036* (0.017)
Constant	0.000 (0.045)	-0.025 (0.167)	-0.151 (0.226)	-0.051 (0.236)
N	412	412	406	406
R ²	0.038	0.131	0.145	0.163
Adjusted R ²	0.035	0.112	0.123	0.140
Residual Std. Error	0.511 (df = 410)	0.491 (df = 402)	0.486 (df = 395)	0.482 (df = 394)
F Statistic	16.074*** (df = 1; 410)	6.734*** (df = 9; 402)	6.699*** (df = 10; 395)	6.973*** (df = 11; 394)

Notes: Standard errors are in parentheses. They are clustered by national party. The significance levels are: *p<0.05; **p<0.01; ***p<0.001

Table 6. Impact of MEPs' environmental salience on their ambition regarding the target to reduce emissions (differential between MEPs' and EPG values) (OLS). Subsample EPP, REG, and S&D.

	MEP and EPG differential in the ambition regarding the emissions' target (OLS)			
	(1)	(2)	(3)	(4)
MEP and EPG differential in environmental salience	0.022*** (0.007)	0.018** (0.007)	0.018** (0.007)	0.014* (0.006)
Party in the national government (May 2019)		0.079 (0.209)	0.105 (0.165)	0.205 (0.179)
Party in the national government (October 2020)		-0.384* (0.180)	-0.455** (0.158)	-0.612*** (0.164)
Preferential vote		0.145 (0.176)	0.153 (0.140)	0.132 (0.134)
West		-0.070 (0.176)	-0.023 (0.142)	-0.021 (0.152)
Citizens' environmental salience		0.007 (0.007)	0.008 (0.007)	0.011 (0.007)
Female		0.123 (0.094)	0.124 (0.093)	0.113 (0.093)
Age		-0.001 (0.004)	-0.001 (0.004)	0.001 (0.003)
Former MEP		-0.030 (0.073)	-0.002 (0.070)	0.0002 (0.070)
EU position (national party)			0.086 (0.156)	0.062 (0.154)
Left-right position (economic) (national party)				-0.101** (0.037)
Constant	0.000 (0.069)	-0.011 (0.240)	-0.565 (1.172)	0.045 (1.227)
N	253	253	251	251
R ²	0.090	0.216	0.239	0.293
Adjusted R ²	0.086	0.187	0.207	0.261
Residual Std. Error	0.619 (df = 251)	0.584 (df = 243)	0.573 (df = 240)	0.553 (df = 239)
F Statistic	24.715*** (df = 1; 251)	7.440*** (df = 9; 243)	7.544*** (df = 10; 240)	9.014*** (df = 11; 239)

Notes: Standard errors are in parentheses. They are clustered by national party. The significance levels are: *p<0.05; **p<0.01; ***p<0.001

Discussion and conclusions

Results show that there is a relationship between MEPs' focus on environmental issues during the European election campaign and their vote on such issues in the European Parliament (at least in the specific case of the target to reduce emissions). More specifically, larger environmental salience during the campaign increases the likelihood to have opted for the most ambitious target (i.e. the amendment proposed by The Left group to increase the target to 70%). This indicates that MEPs are fulfilling their campaign commitments and can represent citizens' concerns in domains relevant to EU competences, such as the environment. This suggests that European Parliament elections can establish an electoral connection between citizens and representatives on issues relevant for EU policy. Focussing on one of such issues, the environment, has shown that, first, several candidates for MEPs use the European campaign to stress their commitment regarding this issue. This allows environmentally concerned voters to elect these candidates/parties and provide them with a mandate to advance pro-environmental legislation. Second, this connection is not constrained to the campaign period, but MEPs who had indicated their commitment with

environmental protection during the campaign, also show their commitment at the crucial time of voting environmental legislation, allowing citizens' environmental concerns to be represented at the policy stage.

That environmental concerns are represented in the European Parliament is positive for the overall representation of citizens' environmental concerns and for the environment, given the importance and suitability of the EU level in dealing with environmental issues. It is also positive for the legitimacy of the European Parliament, as it shows that it can serve as a useful institution to discuss EU policies and to represent citizens' preferences in domains relevant to this level.

It is relevant to note that European parties often attempt to have a rather unified position in the plenary. This may weaken the relationship between individual MEPs' campaign focus and their parliamentary vote, but it is not necessarily bad for the representation of environmental concerns. In fact, Figure 5 showed that many MEPs who had hardly focused on the environment casted rather pro-environment votes, suggesting that they are encouraged to vote in this direction thanks to belonging to a European Party group with several environmentally committed MEPs. This could also be due to a difference between salience and position: several MEPs may be generally pro-environment but may give priority to other issues on Twitter that are not in contradiction with environmental protection (e.g. rights of minorities, workers or refugees).

A more serious issue would have been to find a weak or non-existent relationship due to many MEPs with high environmental salience failing to cast pro-environment votes. This would indicate that MEPs are not coherent with their campaign promises and would imply a broken connection between citizens and their representatives in the European Parliament. Nonetheless, the findings show that this is not the case. Moreover, results also indicate that higher environmental salience leads MEPs to express a more ambitious vote in the plenary than the other members of their EPG (especially within the EPP, REG, and S&D groups).

Results did not show evidence that the change in public opinion moderates the relationship between MEPs' environmental salience during the campaign and their vote in the plenary. Nonetheless, this does not mean that public opinion is irrelevant, as it could be one of the

factors explaining MEPs' issue focus during the campaign. As environmental salience decreased during this period, this could be interpreted as good news, as it suggests that MEPs maintained their commitment with environmental issues even though this were less present in the political agenda at that point in time. It must be noted that the fact that environmental salience among citizens decreased does not imply that they did not care about the environment anymore. It could simply mean that they had more pressing issues (e.g. health and economic issues), but their position on the environment may have remained largely unchanged.

It is important to recognise that the representation of citizens' concerns in the European Parliament is limited by the fact that the EU institutional framework does not give the Parliament absolute power over EU legislation. In the present case, the European Parliament had proposed a higher target but, after interinstitutional negotiations, it accepted a lower threshold. It may also be limited by inaccurate implementation by national or regional authorities. The fact that belonging to a party that is part of the national government was negatively related to ambition in some models, may raise the question of whether national governments are sometimes reluctant to commit to ambitious EU environmental legislation.

The study focuses on MEPs' vote in the plenary, but it is important to note that MEPs' work extends beyond this. They may exert larger influence within EU institutions than what can simply be observed with the roll-call votes. For instance, they may be pushing the Commission or other MEPs towards certain positions (either to push or stop certain legislation). Nonetheless, it is difficult to observe these informal negotiations.

Findings of this study are limited to those MEPs who were active on Twitter during the electoral campaign. Eastern MEPs were less likely to tweet during the campaign. Future work could analyse other social media platforms (e.g. Facebook) to have a more comprehensive view of candidates' communication.

Appendix

Tables for paper 1

Table A1. Impact of citizens' environmental concern on parties' environmental salience (sub-samples)

	Parties' environmental salience								
	Sample excluding green parties			2014 election sub-sample		2019 election sub-sample			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Citizens' environmental concern (EU level)	0.20*** (0.01)	0.18*** (0.02)	0.18*** (0.02)	0.08** (0.03)	0.05 (0.03)	0.07* (0.03)	0.30*** (0.04)	0.28*** (0.05)	0.29*** (0.04)
Unemployment Rate		-0.01 (0.05)	-0.03 (0.05)		0.01 (0.05)	0.002 (0.05)		0.06 (0.17)	0.01 (0.15)
Cycle		-0.40 (3.01)	-1.04 (3.02)		-3.24 (3.22)	-3.45 (3.23)		0.28 (8.24)	1.37 (7.71)
Cycle (sq)		0.34 (2.76)	0.81 (2.78)		3.28 (3.03)	3.25 (3.06)		1.43 (7.56)	0.50 (7.04)
EU-15		0.79 (0.45)	0.64 (0.46)		1.54*** (0.42)	1.32** (0.43)		1.17 (1.50)	0.56 (1.40)
2019 election		0.77 (0.55)	0.66 (0.54)						
Left-Right position (economic)			-0.56*** (0.09)			-0.37*** (0.09)			-1.59*** (0.25)
EU position			0.33** (0.11)			0.36** (0.12)			0.99** (0.31)
Constant	-0.60 (0.32)	-0.76 (1.07)	0.84 (1.31)	1.13** (0.38)	0.90 (1.11)	1.09 (1.36)	-1.37 (1.23)	-2.71 (2.79)	0.37 (3.44)
Variance country level	0	0	0.045	0.16	0	0	0	0	0
Number of countries	28	28	28	28	28	28	28	28	28
N	389	389	361	209	209	194	224	224	207
Log Likelihood	-1.078.34	-1.075.41	-982.25	-523.43	-515.93	-473.91	-794.97	-788.88	-703.99
AIC	2.164.69	2.168.83	1.986.50	1.054.86	1.047.87	967.82	1.597.95	1.593.77	1.427.98
BIC	2.180.54	2.204.50	2.029.28	1.068.23	1.074.61	1.000.50	1.611.59	1.621.06	1.461.31

Notes: The table presents the results of the linear mixed-effects with parties nested in countries. The number of observations refers to the number of parties included in each model. Standard errors are in parentheses.

The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Table A2. Impact of citizens' environmental concern on parties' environmental salience, based on parties' manifestos for the European elections (sub-samples)

	Parties' environmental salience	
	2014 election sub-sample (1)	2019 election sub-sample (2)
Citizens' environmental concern (EU level)	0.18** (0.06)	0.15*** (0.04)
Unemployment Rate	-0.04 (0.09)	0.08 (0.14)
Cycle	7.61 (6.12)	-3.49 (6.86)
Cycle (sq)	-7.96 (5.73)	0.54 (6.34)
EU-15	2.01* (0.82)	0.87 (1.25)
Left-Right position	-0.07** (0.03)	-1.05*** (0.15)
EU integration position	-0.03 (0.03)	0.05 (0.06)
Constant	1.97 (2.05)	8.82*** (2.44)
Variance country level	0.352	1.742
Number of countries	28	28
N	192	210
Log Likelihood	-584.24	-664.44
AIC	1.188.49	1.348.88
BIC	1.221.06	1.382.35

Notes: The table presents the results of the linear mixed-effects with parties nested in countries. The number of observations refers to the number of parties included in each model. Standard errors are in parentheses.

The significance levels are: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Parties' environmental salience comes from the Euromanifesto dataset (Carteny et al 2023). The 2014 measure for the UK's Green Party is a clear outlier (94% while the second highest is 54%) and has been excluded from the 2014 analysis.

Table A3. Impact of the change in citizens' environmental concern on the change in parties' environmental salience (Sample excluding green parties)

	Parties' environmental salience change 2014-2019		
	(1)	(2)	(3)
Citizens' environmental concern change 2014-2019 (EU level)	0.15** (0.05)	0.14* (0.06)	0.16* (0.06)
Citizens' environmental concern change 2014-2019 (National level)		-0.04 (0.19)	-0.08 (0.19)
Unemployment Rate change 2014- 2019		0.92 (2.31)	0.93 (2.27)
Cycle change 2014-2019		0.10 (1.60)	-0.23 (1.58)
EU-15			-0.88*** (0.20)
Left-Right position (economic)			0.31 (0.25)
EU position	1.60 (1.11)	1.11 (1.58)	3.88 (2.31)
Variance country level	2.501	3.116	3.41
Number of countries	28	28	28
N	146	146	141
Log Likelihood	-455.52	-453.08	-429.80
AIC	919.04	920.16	877.61
BIC	930.97	941.05	904.15

Notes: The table presents the results of the linear mixed-effects with parties nested in countries. The number of observations refers to the number of parties included in each model. Standard errors are in parentheses. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Table A4. Impact of citizens' environmental concern on parties' environmental salience in national elections

	Parties' environmental salience in national elections								
	All elections			Older elections (2010-2017)		Newer elections (2018-2022)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Citizens' environmental concern (National level)	0.34*** (0.04)	0.31*** (0.04)	0.32*** (0.04)	0.12*** (0.03)	0.09** (0.03)	0.11*** (0.03)	0.45*** (0.05)	0.40*** (0.07)	0.40*** (0.06)
Unemployment Rate		-0.09 (0.09)	-0.11 (0.08)		-0.01 (0.05)	-0.02 (0.05)		-0.09 (0.28)	-0.12 (0.26)
EU-15		1.59 (0.83)	1.25 (0.84)		1.46** (0.52)	1.25* (0.54)		2.17 (1.75)	2.24 (1.70)
Left-Right position (economic)			-0.79*** (0.12)			-0.39*** (0.10)			-1.35*** (0.28)
EU position			0.83*** (0.17)			0.46*** (0.13)			1.25*** (0.37)
Constant	-0.44 (1.59)	-0.79 (1.88)	-1.30 (2.15)	2.04* (0.95)	0.96 (1.12)	0.51 (1.43)	0.60 (1.44)	0.15 (2.42)	1.10 (3.39)
Variance country level	1.303	0.992	1.162	0.03	0	0	0	0	0.502
Number of countries	28	28	28	28	28	28	23	23	23
N	579	579	544	368	368	345	211	211	199
Log Likelihood	-1.897.03	-1.895.51	-1.746.93	-1.026.16	-1.023.85	-956.97	-763.03	-761.12	-696.57
AIC	3.826.06	3.827.02	3.533.86	2.074.32	2.073.71	1.943.93	1.542.05	1.542.23	1.417.14
BIC	3.895.84	3.905.52	3.619.84	2.117.31	2.124.51	2.001.59	1.568.87	1.575.75	1.456.66

Notes: The table presents the results of the linear mixed-effects with parties nested in countries and year fixed-effects. The number of observations refers to the number of parties included in each model. The models include the relevant parties at European elections that also competed in the national ones and additional parties that reached at least 3% in the national contests but did not participate in the European elections. Belgian national elections 2014 and 2019 and tweets from Danish parties in the period May 13-28th 2019 are excluded due to concurrency between national and European elections. Standard errors are in parentheses. The significance levels are: *p<0.05; **p<0.01; ***p<0.001. The models are also significant when using citizens' environmental concern at EU level. Parties' environmental salience is based on the tweets posted by the party accounts in the weeks preceding each national election. Citizens' concern is obtained from the Eurobarometer just preceding each national election campaign. Unemployment rate refers to the quarter preceding each campaign.

Tables for paper 3

Table A1. Comparison between included and excluded MEPs

Party	MEPs included	MEPs missing
Female	43.33%	33.70%
Former MEPs	45.90%	32.22%
Age (mean)	52.32	51.34
East	19.20%	48.89%
Party EU position (mean)	5.31	4.87
Party Left-right position (mean)	5.53	5.99
Target ambition (mean)	2.944	2.415
Target ambition=1	19.20%	24.81%
Target ambition=2	23.65%	35.19%
Target ambition=3	23.19%	23.70%
Target ambition=4	11.48%	6.30%
Target ambition=5	22.48%	10.00%

Table A2. Impact of MEPs' environmental salience on the ambition of their vote on the emissions' target (multinomial logit)

	Likelihood of choosing the target			
	Reference=5 (1)	Reference=4 (2)	Reference=3 (3)	Reference=2 (4)
MEP environmental salience*Ambition=1	-0.14 (0.10)	-0.02 (0.10)	0.01 (0.10)	0.02 (0.10)
MEP environmental salience*Ambition=2	-0.16*** (0.04)	-0.04 (0.03)	-0.003 (0.03)	
MEP environmental salience*Ambition=3	-0.16*** (0.04)	-0.03 (0.03)		0.003 (0.03)
MEP environmental salience*Ambition=4	-0.12*** (0.03)		0.03 (0.03)	0.04 (0.03)
MEP environmental salience*Ambition=5		0.12*** (0.03)	0.16*** (0.04)	0.16*** (0.04)
N	420	420	420	420
R ²	0.63	0.63	0.63	0.63
Log Likelihood	-245.28	-245.28	-245.28	-245.28
LR Test (df = 48)	838.51***	838.51***	838.51***	838.51***

Notes: The table presents the results of the multinomial logit. Standard errors are in parentheses. Controls and intercepts have been omitted from the table to facilitate reading. The models include the same controls as Model 4 in Table 3. Standard errors are in parentheses. The significance levels are: *p<0.05; **p<0.01; ***p<0.001.

Dictionary of environmental words (English)

biodivers	depart* gas	greening	protect* natur*
CONTAMINAT	depart* nuclear	Habitat* Directive	protect* planet*
healthy air	depart oil	habitat* protect*	protect* plants
methanisation	desertification	ice loss	Protect species
pollut	destroy* planet*	ice melt	protect* wildlife
accord Paris	destruct* natur*	ice melting	protection species
acid rain	diesel car* ban*	ice melts	Radioactive Waste
against oil	diesel departure	just transition	recycl*
agricultur* transition	diesel driving ban*	kerosene tax	recycled
air quality	diesel exit	kill* planet	reduc* CO2
alternative energy	diesel phase	kyoto protocol	reduc* emission*
amazon* *forest*	dirty air	lake de oxygenation	reduc* plastic*
animal abuse	dumping waste	lake deoxygenation	renewable energ*
animal cause	earth day	lake remediation	renewable source
animal cruelty	earth hour	Land Conservation	renewables
animal dignity	earth overshoot day	life earth	resource conservation
animal election	eco	limit* planet*	restor* natur*
animal pledge	eco friendly	liveable planet	rights nature
animal polic*	eco tax	low carbon	risk* extinct*
animal protection	eco transition	low emission*	sav* bees
animal rights	ecocide	march against monsanto	sav* natur*
animal species	ecolog*	marine life	sav* planet
animal suffering	ecological transition	marine life protect*	save forest*
animal testing	ecosystem*	mass extinction	sea level*
animal* condition*	ecotax	melting ice	ship waste
animal* experiment*	Electric fishing	micro plastic*	single use plastic*
animal* extinct*	Electric pulse fishing	million* species	singleuse plastic*
animal* transport*	electrofishing	mobility transition	smog
animal* welfare	emission	mountain waste	solar energy
animals circus	emission rights	natur* conservation	solar panel*
anti nuclear	emission target*	natur* destruct*	solid waste
anti smog	emission* reduction	natur* preserv*	species animals
antinuclear	emission* trading	natur* restor*	species disappear*
auto* emission*	emissions	natural heritage	species extinct*
ban coal	emitter*	natural life	species plants
ban* diesel car*	endangered animals	natural resource*	species protect*
ban* plastic*	endangered species	natural world	SPECIES RISK
bee conservation	energetic transition	nature cris*	SPECIES THREATEN*
bee protection	energy transition	nature loss	stop diesel
benzene emission*	environment	nature plan	stop oil drilling
bio diversity	exit coal	nature polic*	stop oil exploration
breathable air	exit diesel	nature programme	stop oil extraction
campaign* animal*	exit gas	nature protect*	stop* drilling oil
car emission*	exit nuclear	nature rights	stop* exploration oil
carbon	exit oil	net zero	stop* extract* oil
Carbon Border Adjustment	experiment* animal*	new green deal	stratospheric ozone
Carbon Border tax	extinct* animal*	nitrogen emission*	sulfur emission*
carbon capture	extinct* species	noise pollution	sulphur emission*
carbon dioxide	forest conservation	nuclear departure	sustainability
carbon dioxide emission*	forest preservation	nuclear exit	sustainabl*

carbon dioxide levels	forest* protect*	nuclear graveyard	sustainable development
carbon emission*	fossil energ*	nuclear phase	sustainable europe
carbon footprint	fossil fuel*	nuclear waste	sustainable mobility
carbon levels	fossil source*	ocean dumping	tax carbon
carbon neutral*	fracked gas	oil departure	tax CO2
CARBON PRIC*	fridays for future	oil exit	tax kerosene
CARBON SINK	fur animal	oil leak*	There Is No Planet B
CARBON TAX*	future planet*	oil phase	threat* extinct*
care planet*	gas departure	oil spill*	THREATEN* SPECIES
chemical waste	gas emission*	organic agricult*	traffic emission*
circular economy	gas exit	organic conver*	transition organic
circus animals	gas phase	organic farm*	transport* animals
clean air	global warming	overshoot day	vote animals
clean energy	glyphosate	ozone layer	waste avoidance
clean seas	green ambition*	palm oil	waste dumping
Clean tech	Green Architecture	Paris accord	waste management
Clean technology	green belt	paris agreement	waste mountain
clean transport	green building*	pesticide*	waste reduction
cleaner air	green development	phas* coal	waste separation
climate	green economy	phas* diesel	waste treatment
climaticide	green energies	phas* gas	Water Conservation
CO2	green energy	phas* nuclear	water scarcity
CO2 border tax	green future	phas* oil	wild animals
CO2 capture	green growth	planet B	wildlife protect*
CO2 emission*	green housing	planet first	wind energy
CO2 footprint	green hydrogen	planet live	wind farm*
CO2 levels	green industr*	planet profit	wind park*
CO2 neutral*	green infrastructure*	planet* emergency	wind power
CO2 PRIC*	green investment	planet* future	wind turbine*
CO2 reduction	green issues	planet* limit*	windfarm*
CO2 SINK	green jobs	planet* preserv*	windmill*
CO2 tax	green new deal	planet* protect*	world bee day
coal ban	green pact	planet* resource*	zero carbon
coal departure	green polic*	plant life protect*	zero emission*
coal exit	green power	plants protect*	zero waste
coal phase	green proposal*	plant species	fossil resource*
coast* erosion	green protectionism	plastic	fossil departure
coast* protect*	green revolution	plastic* ban*	fossil exit
conserv* forest*	green rule	plastic* reduc*	fossil phase
conserv* natur*	green sector*	plastics	depart* fossil
Conservation Water	green society	pollinat*	exit fossil
conver* organic	green tax*	Preserv* forest*	phas* fossil
crime* planet*	green tech	preserv* natur*	protect* plant life
defen* animal*	green technolog*	preserv* planet*	nuclear ??? departure
defen* planet*	green transition	protect* animal*	nuclear ??? exit
defen* the nature	green transport*	protect* bees	nuclear ??? phase
DEFOREST*	greener	protect* coast*	protect* marine animals
depart* coal	GREENHOUSE EFFECT*	Protect* forest*	
depart* diesel	greenhouse gas	protect* marine life	

Dictionary of environmental words (Hashtags and general words to be used in all languages subsamples)

animalwelfare	climatejustice	greeneconomy	refusesingleuse
biodiversityday	climatemarch	greenenergy	renewableenergy
breakfreefromplastic	Climatesceptics	greenjobs	SavePlanet
climateaction	Climateskeptics	greennewdeal	savethebees
climatechange	climaticide	greenpeace	SavethePlanet
ClimatePact	climatosceptiques	greenpolicies	savethesea*
climatestrike	co2	greentax	schoolstrike4climate
COP18	co2e	greentransition	ScienceBasedTargets
COP19	co2steuer	greenwashing	shalegas
COP20	CO2tax	greveclimática	singleuseplastic*
COP21	combatspourleclimat	grevemondialepourleclimat	stopcambioclimatico
COP22	conference cop	huelgamundialporelclima	stopcambioclimático
COP23	criseclimática	jourdudepassement	stopsmog
COP24	crisiclimatica	journeemondialesdesabeilles	strajkklimatyczny
COP25	czystepowietrze	journeemondialesdesabeilles	strikeclimate
endangeredspecies	diamundialdelmedioambiente	justiceclimatique	sustainabledevelopment
lessplastic	dieselgate	justtransition	sustainableeurope
lessplastic	drasticonplastic	keepitintheground	taxecarbone
Monsanto	earthday	klimaschutzwaehlen	ThereIsNoPlanetB
Natura2000	earthhour*	klimaschutzwählen	ThinkGreen
Naturaday	earthovershootday	klimatnazmiane	Today'sClimateFact
oceanplastic	ecocide	klimatnazmianę	transitionenergetique
*palmoil	ecofriendly	kyoto protocol	transitionenergetique
plasticfree	ecologicaltransition	kyotoprotocol	transizioneecologica
plasticpollution	economiaverda	lowcarbon	Uniting4Climate
strike4climate	economiaverde	lowemission	unpaisanimalista
*strike4thclimate	economíaverde	marchagainstmonsanto	unpaísanimalista
*strikeforclimate	ecotransition	marchecontremonsanto	urxenciaclimatica
*strikefortheclimate	emergenciaclimatica	marchepourleclimat	urxenciaclimática
wildlifetrafficking	emergenciaclimática	marchfortheclimate	vote4animals
accord Paris	emergènciaclimàtica	microplastic*	voteclimate
accorddeparis	emergênciaclimática	Natura 2000	voteforclimate
actonclimate	emergenzaclimatica	Natura day	voterpourleclimat
airquality	emexenciaclimatica	netzero	votezpourleclimat
alteraçoesclimaticas	emexenciaclimática	newgreendeal	weltbientag
alteraçõescimáticas	empleoverde	no planet b	wildforlife
ArcticDavos	endangeredemoji	nomasplasticos	windpower
ariapulita	energetictransition	nomáspásticos	worldbeeday
ArticRefuge	energialimpia	nomoreplastics	worldenvironmentday
cambiamenticlimatici	energytransition	noplanetb	youthforclimate
cambiamentoclimatico	europasostenible	noplastic	zerocarbon
cambioclimatico	extinction rebellion	nowyzielonyład	zeroemissions
cambioclimático	extinctionrebellion	nuclearphaseout	zerowaste
canviclimatic	fazpeloclima	oceanplastic	
CarbonBubble	fightforyourworld	OnePlanet	
carbonfootprint	fightfortheclimate	overshootday	
carbonneutral	fossilfuel*	pactefinanceclimat	
carbontax	fracking	palmoil	
circulareconomy	frackingno	parents4future	
cleanenergy	fridayforfuture	parentsforfuture	
cleanseas	fridays for future	Paris accord	
CleanTech	fridaysforfuture	paris agreement	
climate	g7environment	Parisaccord	
climate strike*	g7environnement	parisagreement	
climateambition	gazdeschiste	passonplastic	
climatebreakdown	globalwarming	peoplesclimate	
climatecrisis	Go100RE	plasticsstrategy	
climatedebate	GoVegan	plasticwaste	
climateelection	green new deal	promisefortheplanet	
climateemergency	greenbuilding	protectantarctic	

Dictionary of false positives (English)

biz climate	podcast emission
business environment	regulatory climate
climate fear	safe environment
climate hate	sustainability pensions
contaminated blood	sustainable budget
create environment	sustainable business
digital environment	sustainable compromise
economic climate	sustainable economic growth
economic environment	sustainable funding
enterprise environment	sustainable growth
entrepreneurial environment	sustainable nhs
environment work	sustainable public finances
environment workplace	sustainable public services
environment workplace	sustainable recovery
environmental parties	sustainable working life
environmental party	tax climate
evidence contamin*	watching emission
extremist environment	work* environment
favourable environment	working environment
fiscal sustainability	workplace environment
hl plastics	
hostile environment	
investment environment	
justine greening	
plastic folder	

Dictionary of negative words (English)

climate alarmism
climate hysteria
climate hysteric
climate hysterics
climate madness
climate mania
climate maniac
climate maniacs

References

- Abou-Chadi, Tarik, Christoffer Green-Pedersen, and Peter B. Mortensen. 2020. "Parties' policy adjustments in response to changes in issue saliency." *West European Politics* 43, no. 4 (June): 749-771.
- Abou-Chadi, Tarik. 2016. "Niche party success and mainstream party policy shifts—how green and radical right parties differ in their impact." *British Journal of Political Science* 46, no. 2 (April): 417-436.
- Abou-Chadi, Tarik. 2018. "Electoral competition, political risks, and parties' responsiveness to voters' issue priorities." *Electoral Studies* 55 (October): 99-108.
- Adam, Silke, and Michaela Maier. 2011. "National parties as politicizers of EU integration? Party campaign communication in the run-up to the 2009 European Parliament election." *European Union Politics* 12, no. 3 (September): 431-453.
- Adam, Silke, and Michaela Maier. 2016. Campaigning on or Downplaying EU Integration? Explaining the Saliency Parties Attach to EU Matters in European Parliamentary Election Campaigns. In Van der Brug, Wouter, and Claes Holger Vreese, eds. (Un) intended Consequences of European Parliamentary Elections. Oxford University Press.
- Adam, Silke, Eva-Maria Antl-Wittenberg, Beatrice Eugster, Melanie Leidecker-Sandmann, Michaela Maier, and Franzisca Schmidt. 2017. "Strategies of pro-European parties in the face of a Eurosceptic challenge." *European Union Politics* 18, no. 2 (June): 260-282.
- Adams, James, Lawrence Ezrow, and Zeynep Somer-Topcu. 2014. "Do voters respond to party manifestos or to a wider information environment? An analysis of mass-elite linkages on European integration." *American Journal of Political Science* 58, no. 4 (October): 967-978.
- Albaugh, Quinn, Julie Sevenans and Stuart Soroka. 2013. Lexicoder Topic Dictionaries, June 2013 versions, McGill University, Montreal, Canada.
- Anderson, Brilé, Tobias Böhmelt, and Hugh Ward. 2017. "Public opinion and environmental policy output: a cross-national analysis of energy policies in Europe." *Environmental Research Letters* 12, no. 11 (November): 114011.
- Angelucci, Davide, Luca Carrieri, and Mark N. Franklin. 2019. Much ado about nothing? The EP elections in comparative perspective. In *The European Parliament Elections of 2019*, pp. 15-27. Roma: LUISS University Press.
- Arregui, Javier and Perarnaud, Clément, 2021, "A new dataset on legislative decision-making in the European Union: the DEU III dataset", <https://doi.org/10.34810/data53>, Repositori de Dades de Recerca, V1, UNF:6:QhhMr5aOxF70lckkESrI9A== [fileUNF]. Available at: <https://dataverse.csuc.cat/dataset.xhtml?persistentId=doi:10.34810/data53>
- Bakker, Ryan, Catherine De Vries, Erica Edwards, Liesbet Hooghe, Seth Jolly, Gary Marks, Jonathan Polk, Jan Rovny, Marco Steenbergen, and Milada Anna Vachudova. 2012. "Measuring party positions in Europe: The Chapel Hill expert survey trend file, 1999–2010." *Party Politics* 21, no. 1 (November): 143-152.

- Bakker, Ryan, Liesbet Hooghe, Seth Jolly, Gary Marks, Jonathan Polk, Jan Rovny, Marco Steenbergen, and Milada Vachudova. 2020. "2019 Chapel Hill Expert Survey." Version 2019.1. Available on chesdata.eu. Chapel Hill, NC: University of North Carolina, Chapel Hill.
- Bakker, Ryan, Seth Jolly, and Jonathan Polk. 2018. "Multidimensional incongruence and vote switching in Europe." *Public Choice* 176, no. 1-2 (July): 267-296.
- Bates, Douglas, Martin Mächler, Ben Bolker, and Steve Walker. 2014. "Fitting linear mixed-effects models using lme4." arXiv preprint arXiv:1406.5823 (June).
- Bellucci, Paolo, Diego Garzia, and Martiño Rubal Maseda. 2012. "Does Europe Matter in European Elections? A Composite Model of the 2009 European Parliament Elections In Banducci, S. et al. (2012). *An Audit of Democracy in the European Union*. European University Institute.
- Belot, Céline, and Virginie Van Ingelgom. 2015. "Les attitudes européennes ont-elles enfin joué un rôle dans les élections au Parlement européen?." *Revue européenne des sciences sociales* 53, no. 1: 49-78.
- Bhatti, Yosef, and Kasper M. Hansen. 2012. "The effect of generation and age on turnout to the European Parliament—How turnout will continue to decline in the future." *Electoral Studies* 31, no. 2 (June): 262-272.
- Blais, André, and Filip Kostelka. 2015. "The decision to vote or abstain in the 2014 European elections." *Revue européenne des sciences sociales* 53, no. 1: 79-94.
- Blomgren, Magnus. 2019. More or less EU – still the fundamental conflict in Sweden. In *Euroreflections: Leading academics on the European Elections 2019*, eds. Niklas Bolin, Kajsa Falasca, Marie Grusell, and Lars Nord. Mid Sweden University, Demicom.
- Blondel, Jean, Richard Sinnott, and Palle Svensson. 1997. "Representation and voter participation." *European Journal of Political Research* 32, no. 2 (October): 243-272.
- Blumenau, Jack, and Benjamin E. Lauderdale. 2018. "Never let a good crisis go to waste: Agenda setting and legislative voting in response to the EU crisis." *The journal of politics* 80, no. 2 (April): 462-478.
- Bohr, Jeremiah. 2020. "Key events and challenges: A computational text analysis of the 115th house of representatives on Twitter." *Environmental Politics* 30, no. 3 (April): 399-422.
- Bolin, Niklas, Kajsa Falasca, Marie Grusell, and Lars Nord. 2019. *Euroreflections: Leading academics on the European Elections 2019*. Mid Sweden University, Demicom.
- Boomgaarden, Hajo G., Claes H. De Vreese, Andreas RT Schuck, Rachid Azrout, Matthijs Elenbaas, Joost HP Van Spanje, and Rens Vliegenthart. 2013. "Across time and space: Explaining variation in news coverage of the European Union." *European Journal of Political Research* 52, no. 5 (August): 608-629.
- Börzel, Tanja A. 2005. "Mind the gap! European integration between level and scope." *Journal of European Public Policy* 12, no. 2 (April): 217-236.

Börzel, Tanja A., and Aron Buzogány. 2019. "Compliance with EU environmental law. The iceberg is melting." *Environmental Politics* 28, no. 2 (February): 315-341.

Bowler, Shaun, and Gail McElroy. 2015. "Political group cohesion and 'hurrah' voting in the European Parliament." *Journal of European Public Policy* 22, no. 9 (October): 1355-1365.

Braun, Daniela, and Constantin Schäfer. 2021. "Issues that mobilize Europe. The role of key policy issues for voter turnout in the 2019 European Parliament election." *European Union Politics* (September).

Braun, Daniela, and Hermann Schmitt. 2018. "Different emphases, same positions? The election manifestos of political parties in the EU multilevel electoral system compared." *Party Politics* 25, no. 5, (September): 640-650.

Braun, Daniela, and Markus Tausendpfund. 2020. "Electoral behaviour in a European Union under stress." *Politics and Governance* 1: 28-40.

Braun, Daniela, and Tobias Schwarzbözl. 2019. "Put in the spotlight or largely ignored? Emphasis on the Spitzenkandidaten by political parties in their online campaigns for European elections." *Journal of European Public Policy* 26, no. 3 (March): 428-445.

Braun, Daniela, Sebastian Adrian Popa, and Hermann Schmitt. 2019. "Responding to the crisis: Eurosceptic parties of the left and right and their changing position towards the European Union." *European Journal of Political Research* 58, no. 3 (August): 797-819.

Braun, Daniela, Swen Hutter, and Alena Kerscher. 2016. "What type of Europe? The salience of polity and policy issues in European Parliament elections." *European Union Politics* 17, no. 4 (December): 570-592.

Bressanelli, Edoardo. 2013. "Competitive and coherent? Profiling the Europarties in the 2009 European Parliament elections." *Journal of European Integration* 35, no. 6 (September): 653-668.

Burns, Charlotte, Peter Eckersley, and Paul Tobin. 2020. "EU environmental policy in times of crisis." *Journal of European Public Policy* 27, no. 1 (January): 1-19.

Burns, Charlotte. 2019. "In the eye of the storm? The European Parliament, the environment and the EU's crises." *Journal of European Integration* 41, no. 3 (April): 311-327.

Buzogány, Aron, and Stefan Četković. 2021. "Fractionalized but ambitious? Voting on energy and climate policy in the European Parliament." *Journal of European Public Policy* 28, no. 7 (July): 1038-1056.

Cameletti, Michela, Silvia Fabris, Stephan Schlosser, and Daniele Toninelli. 2020. "Dictionary-based Classification of Tweets About Environment."

Carrubba, Cliff, and Richard J. Timpone. 2005. "Explaining vote switching across first-and second-order elections: Evidence from Europe." *Comparative Political Studies* 38, no. 3 (April): 260-281.

Carrubba, Clifford J. 2001. "The electoral connection in European Union politics." *The Journal of politics* 63, no. 1 (February): 141-158.

Carteny, Giuseppe, Reinl, Ann-Kathrin, Braun, Daniela, Popa, Sebastian A., and Schmitt, Hermann. 2023. European Parliament Election Study 1979-2019, Euromanifesto Study. GESIS, Cologne. ZA5102 Data file Version 3.0.0, <https://doi.org/10.4232/1.14120>.

Carter, Neil, Robert Ladrech, Conor Little, and Vasiliki Tsagkroni. 2018. "Political parties and climate policy: A new approach to measuring parties' climate policy preferences." *Party politics* 24, no. 6 (November): 731-742.

Carter, Neil. 2010. "The Greens in the 2009 European parliament election." *Environmental Politics* 19, no. 2 (March): 295-302.

Carter, Neil. 2013. "Greening the mainstream: party politics and the environment". *Environmental Politics* 22, no.1 (February): 73-94.

Chopin, Thierry, and Giulia Sandri. 2019. The 2019 EP elections in France: Second (dis)order elections?. In *Euroreflections: Leading academics on the European Elections 2019*, eds. Niklas Bolin, Kajsa Falasca, Marie Grusell, and Lars Nord. Mid Sweden University, Demicom.

Christensen, Henrik Serup and Marco Svensson La Rosa. 2019. Finland: European Elections in the aftermath of national elections. In *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.

Clark, Neil, and Robert Rohrschneider, R. 2009. "Second-order elections versus first-order thinking: How voters perceive the representation process in a multi-layered system of governance." *European Integration*, 31, no. 5 (June), 645-664.

Clark, Nicholas. 2014. "Explaining low turnout in European elections: the role of issue salience and institutional perceptions in elections to the European Parliament." *Journal of European Integration* 36, no. 4 (June): 339-356.

Clark, Nicholas. 2015. "The Federalist Perspective in Elections to the European Parliament." *JCMS: Journal of Common Market Studies* 53, no. 3 (May): 524-541.

Close, Caroline. 2019. Belgium: Increasing polarization at the heart of Europe, but not over Europe. In *Euroreflections: Leading academics on the European Elections 2019*, eds. Niklas Bolin, Kajsa Falasca, Marie Grusell, and Lars Nord. Mid Sweden University, Demicom.

Coman, Emanuel Emil. 2009. "Reassessing the influence of party groups on individual members of the European Parliament." *West European Politics* 32, no. 6 (November): 1099-1117.

Costello, Rory, and Robert Thomson. 2016. "Bicameralism, nationality and party cohesion in the European Parliament." *Party Politics* 22, no. 6 (November): 773-783.

Costello, Rory. 2019. European elections gradually becoming less 'second-order' in Ireland. In *Euroreflections: Leading academics on the European Elections 2019*, eds. Niklas Bolin, Kajsa Falasca, Marie Grusell, and Lars Nord. Mid Sweden University, Demicom.

- Costello, Rory. 2022. "How does the composition of the European Parliament shape its role in EU decision-making?." *Journal of European Public Policy* 29, no. 1 (January): 117-135.
- Curtice, John. 1989. "The 1989 European Election: protest or green tide?." *Electoral Studies* 8, no. 3 (December): 217-230.
- Dahal, Biraj, Sathish AP Kumar, and Zhenlong Li. 2019. "Topic modeling and sentiment analysis of global climate change tweets." *Social network analysis and mining* 9 (December): 1-20.
- Däubler, Thomas, and Simon Hix. 2018. "Ballot structure, list flexibility and policy representation." *Journal of European Public Policy* 25, no. 12 (December): 1798-1816.
- Davidson-Schmich, L. K. and Vladescu, E. 2012. Political Parties and 2009 European Parliament Election Campaign Content. In Banducci et al. (Eds.). *An Audit of Democracy in the European Union. Papers presented at the final conference of the infrastructure design study 'Providing an infrastructure for research on electoral democracy in the European Union', 18-19 November 2010, Brussels.*
- De Sio, Lorenzo, and Till Weber. 2020. "Issue yield, campaign communication, and electoral performance: a six-country comparative analysis." *Online Appendix. West European Politics* 43, no. 3 (April): 720-745.
- De Sio, Lorenzo, Andrea De Angelis, and Vincenzo Emanuele. 2018. "Issue yield and party strategy in multiparty competition." *Comparative Political Studies* 51, no. 9 (August): 1208-1238.
- De Sio, Lorenzo, Russo Luana, and Mark N. Franklin. 2019. Explaining the outcome. Second-order factors still matter, but with an exceptional turnout increase. In De Sio, L., Franklin, M. N., Russo, L. (e.d) *The European Parliament Elections of 2019.* Roma: LUISS University Press.
- De Vreese, Claes H., Susan A. Banducci, Holli A. Semetko, and Hajo G. Boomgaarden. 2006. "The news coverage of the 2004 European Parliamentary election campaign in 25 countries." *European Union Politics* 7, no. 4 (December): 477-504.
- De Vries, Catherine E., and Erik R. Tillman. 2011. "European Union issue voting in East and West Europe: The role of political context." *Comparative European Politics* 9 (February): 1-17.
- De Vries, Catherine E., Wouter Van der Brug, Marcel H. Van Egmond, and Cees Van der Eijk. 2011. "Individual and contextual variation in EU issue voting: The role of political information." *Electoral Studies* 30, no. 1 (March): 16-28.
- De Vries, Catherine, and Sarah Hobolt. 2016. EU issue voting in national and European Parliamentary elections. In Van der Brug, Wouter, and Claes Holger Vreese, eds. *(Un) intended Consequences of European Parliamentary Elections.* Oxford University Press.

De Winter, Lieven, and Marc Swyngedouw. 1999. "The scope of EU government". In *Political representation and legitimacy in the European Union*, eds. Hermann Schmitt and Jacques Thomassen. Oxford: Oxford University Press: 47-73.

Delreux, Tom, and Sander Happaerts. 2016. *Environmental policy and politics in the European Union*. Macmillan International Higher Education.

Delreux, Tom. 2013. "The EU as an actor in global environmental politics". In *Environmental policy in the EU: actors, institutions and processes (3rd Edition)*, eds. Andrew Jordan and Camilla Adelle. Routledge.

Delwit, Pascal. 2002. Electoral Participation and the European Poll. A limited legitimacy. In Perrineau, Pascal, Gérard Grunberg, and Colette Ysmal, eds. *Europe at the Polls: The European Elections of 1999*. Springer.

Dennison, James. 2019. "A review of public issue salience: Concepts, determinants and effects on voting." *Political Studies Review* 17, no. 4 (November): 436-446.

EES (European Election Study) Trend File.

Ehin, Piret, and Liisa Talving. 2020. "Second-order effects or ideational rifts? Explaining outcomes of European elections in an era of populist politics." *Italian Political Science Review/Rivista Italiana Di Scienza Politica* 50, no. 3 (November): 350-367.

Eugster, Beatrice, Carlos Jalali, Michaela Maier, Severin Bathelt, Melanie Leidecker-Sandmann, Silke Adam, Ralph Negrine, and Nicolas Demertzis. 2020. "When do European election campaigns become about Europe?." *West European Politics* (June): 1-25.

European Commission and European Parliament. 2019. Eurobarometer 91.5. GESIS Data Archive, Cologne. ZA7576 Data file Version 1.0.0, <https://doi.org/10.4232/1.13393>.

European Commission and European Parliament. 2021. Special Eurobarometer 517 "Future of Europe". Fieldwork: October – November 2021.

European Commission. 1993. Eurobarometer. Public opinion in the European Union. Number 40. Fieldwork: October – November 1993.

European Commission. 1999. Eurobarometer. Public opinion in the European Union. Report Number 50. Fieldwork: October – November 1998.

European Commission. 2010. Standard Eurobarometer 70. Public opinion in the European Union. Fieldwork: October- November 2008.

European Commission. 2014. Special Eurobarometer 415. Europeans in 2014. Fieldwork: March 2014.

European Commission. 2017. Special Eurobarometer 468. Attitudes of European citizens towards the environment. Fieldwork: September-October 2017.

European Commission. 2019a. Special Eurobarometer 486. Europeans in 2019. Fieldwork: March 2019.

European Commission. 2019b. Standard Eurobarometer 91. Public opinion in the European Union. Fieldwork: June 2019.

European Commission. 2020a. Standard Eurobarometer 92. Public opinion in the European Union. Fieldwork: November 2019.

European Commission. 2020b. Special Eurobarometer 501. Attitudes of European citizens towards the environment. Fieldwork: December 2019.

European Commission. 2020c. Standard Eurobarometer 93. Public opinion in the European Union. Fieldwork: July-August 2020.

European Commission. 2022. Standard Eurobarometer 96. Public opinion in the European Union. Fieldwork: January-February 2022.

European Environment Agency. 2019. The European environment —state and outlook 2020. Knowledge for transition to a sustainable Europe. Luxembourg: Publications Office of the European Union. Available at: <https://www.eea.europa.eu/publications/soer-2020>

European Parliament. 1999. ACTIVITY REPORT. 1 November 1993 to 30 April 1999 (4th parliamentary term). From entry into force of the Treaty of Maastricht to entry into force of the Treaty of Amsterdam.

European Parliament. 2004. ACTIVITY REPORT. 1 May 1999 to 30 April 2004 (5th parliamentary term).

European Parliament. 2009. ACTIVITY REPORT. 1 May 2004 to 13 July 2009 (6th parliamentary term).

European Parliament. 2014. ACTIVITY REPORT on Codecision and Conciliation. 14 July 2009-30 June 2014 (7th parliamentary term).

European Parliament. 2019a. ACTIVITY REPORT. Developments and trends of the Ordinary Legislative Procedure. 1st July 2014-1st July 2019 (8th parliamentary term).

European Parliament. 2019b. Parlemeter 2019 Heeding the call beyond the vote a stronger parliament to listen to citizens voices. Eurobarometer Survey 92.2 of the European Parliament. A Public Opinion Monitoring Study. Fieldwork: October 2019. Brussels: European Parliament.

Ezrow, Lawrence, Catherine De Vries, Marco Steenbergen, and Erica Edwards. 2011. "Mean voter representation and partisan constituency representation: Do parties respond to the mean voter position or to their supporters?." *Party Politics* 17, no. 3 (May): 275-301.

Facchini, François, Giuseppe Lucio Gaeta, and Benjamin Michallet. 2017. "Who cares about the environment? An empirical analysis of the evolution of political parties' environmental concern in European countries (1970–2008)." *Land Use Policy*:64 (May): 200-211.

- Farstad, Fay M. 2018. "What explains variation in parties' climate change salience?." *Party Politics* 24, no. 6 (November): 698-707.
- Fazekas, Z., Popa, S. A., Schmitt, H., Pablo, B., and Theocharis, Y. 2015. When to talk about Europe? Selective Europeanization of the 2014 EP elections. In 5th Annual General Conference of the European Political Science Association, 25.-27. June 2015.
- Ferrara, Federico, and J. Timo Weishaupt. 2004. "Get your act together: Party performance in European Parliament elections." *European Union Politics* 5, no. 3 (September): 283-306.
- Finch, W. Holmes, Jocelyn E. Bolin, and Ken Kelley. 2019. *Multilevel modeling using R*. Crc Press.
- Fiorino, Nadia, Nicola Pontarollo, and Roberto Ricciuti. 2019. "Supranational, national and local dimensions of voter turnout in European Parliament elections." *JCMS: Journal of Common Market Studies* 57, no. 4 (July): 877-893.
- Flickinger, Richard S., and Donley T. Studlar. 2007. "One Europe, many electorates? Models of turnout in European Parliament elections after 2004." *Comparative Political Studies* 40, no. 4 (April): 383-404.
- Follesdal, Andreas, and Simon Hix. 2006. "Why there is a democratic deficit in the EU: A response to Majone and Moravcsik." *JCMS: Journal of Common Market Studies* 44, no. 3 (September): 533-562.
- Fraile, Marta and Enrique Hernández. 2019. Spain: The endless election sequence. De Sio, Lorenzo, Russo Luana, and Mark N. Franklin. 2019. Explaining the outcome. Second-order factors still matter, but with an exceptional turnout increase. In *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.
- Franklin, Mark N. 2001. "How structural factors cause turnout variations at European Parliament elections." *European Union Politics* 2, no. 3 (October): 309-328.
- Franklin, Mark N., and Cees Van der Eijk. 1996. The problem: Representation and democracy in the European Union. In *Choosing Europe? The European electorate and national politics in the face of union*, eds. Cees Van der Eijk and Mark N. Franklin. Ann Arbor: The University of Michigan Press.
- Franklin, Mark N., Cees Van der Eijk, and Erik Oppenhuis. 1996. The institutional context: turnout. In *Choosing Europe? The European electorate and national politics in the face of union*, eds. Cees Van der Eijk and Mark N. Franklin. Ann Arbor: The University of Michigan Press.
- Franklin, Mark N., Cees Van der Eijk, and Michael Marsh. 1996. Conclusions: The electoral connection and the democratic deficit. In *Choosing Europe? The European electorate and national politics in the face of union*, eds. Cees Van der Eijk and Mark N. Franklin. Ann Arbor: The University of Michigan Press.
- Franzen, Axel, and Dominikus Vogl. 2013. "Two decades of measuring environmental attitudes: A comparative analysis of 33 countries." *Global Environmental Change* 23, no. 5 (October): 1001-1008.

- Giebler, Heiko, and Andreas M. Wüst. 2011. "Campaigning on an upper level? Individual campaigning in the 2009 European Parliament elections in its determinants." *Electoral Studies* 30, no. 1 (March): 53-66.
- Giebler, Heiko, Elmar Haus and Bernhard Wessels. 2010. 2009 European Election Candidate Study- Codebook (Advanced Release, V2). Social Science Research Center Berlin (WZB).
- Giebler, Heiko, Sylvia Kritzing, Georgios Xezonakis, and Susan Banducci. 2017. "Priming Europe: Media effects on loyalty, voice and exit in European Parliament elections." *Acta Politica* 52 (January): 110-132.
- Giebler, Heiko. 2019. Germany: Second order but still groundbreaking? 2019. In *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.
- Górecki, Maciej A., Carolina Plescia and Marta Żerkowska-Balas. 2020. The 2019 EP Election in Poland: In the shadow of extreme polarization. In *Kritzing, Sylvia, Carolina Plescia, Kolja Raube, James Wilhelm, and Jan Wouters, eds. Assessing the 2019 European Parliament Elections*. Abingdon, Oxon; New York, NY: Routledge.
- Grant, Zack P., and James Tilley. 2019. "Fertile soil: explaining variation in the success of Green parties." *West European Politics* 42, no. 3 (April): 495-516.
- Greenwell, Matthew P., and Thomas F. Johnson. 2022. "Is it all talk: Do politicians that promote environmental messages on social media actually vote-in environmental policy?." *Energy, Ecology and Environment* (October): 1-11.
- Grilli, Leonardo, and Carla Rampichini. 2015. "Specification of random effects in multilevel models: a review." *Quality and Quantity* 49 (May): 967-976.
- Grimmer, Justin, and Brandon M. Stewart. 2013. "Text as data: The promise and pitfalls of automatic content analysis methods for political texts." *Political analysis* 21, no. 3: 267-297.
- Grouverman, Ana, Bence Kollanyi, Phil Howard, Vlad Barash, and Thomas Lederer. 2018. "Climate change consensus and skepticism: mapping climate change dialogue on Twitter and Facebook." *COMPROM DATA MEMO* 2018.6 / 28 NOV 2018.
- Han, JeongHun, and Daniel Finke. 2022. "Voting Green in European Parliament elections: issue voting in an electoral context." *Journal of European Public Policy* (September): 1-22.
- Hase, Valerie, Daniela Mahl, Mike S. Schäfer, and Tobias R. Keller. 2021 "Climate change in news media across the globe: An automated analysis of issue attention and themes in climate change coverage in 10 countries (2006–2018)." *Global Environmental Change* 70 (September): 102353.
- Henceroth, Nathan, and Rafael Oganessian. 2019. "The effect that structural and investment funds have on voter behaviour in European parliamentary elections." *JCMS: Journal of Common Market Studies* 57, no. 3 (May): 599-615.

- Hernández, Enrique, and Hanspeter Kriesi. 2016. "Turning your back on the EU. The role of Eurosceptic parties in the 2014 European Parliament elections." *Electoral Studies* 44 (December): 515-524.
- Hix, Simon and Bjorn Høyland. 2011. *The Political System of the European Union* (3rd Edition). Palgrave Macmillan.
- Hix, Simon, Abdul Noury, and Gerard Roland. 2006. "Dimensions of politics in the European Parliament." *American Journal of Political Science* 50, no. 2 (April): 494-520.
- Hix, Simon, Abdul Noury, and Gerard Roland. 2019. "Changing political cleavages in advanced democracies: evidence from the European Parliament." *Work. Pap., London Sch. Econ. Political Sci* (January).
- Hix, Simon, and Abdul Noury. 2009. "After enlargement: Voting patterns in the sixth European Parliament." *Legislative Studies Quarterly* 34, no. 2 (May): 159-174.
- Hix, Simon, and Michael Marsh. 2007. "Punishment or protest? Understanding European parliament elections." *The Journal of Politics* 69, no. 2 (May): 495-510.
- Hix, Simon, and Michael Marsh. 2011. "Second-order effects plus pan-European political swings: An analysis of European Parliament elections across time." *Electoral Studies* 30, no. 1 (March): 4-15.
- Hix, Simon. 2002. "Parliamentary behavior with two principals: Preferences, parties, and voting in the European Parliament." *American Journal of Political Science* (July): 688-698.
- Hix, Simon. 2004. "Electoral institutions and legislative behavior: Explaining voting defection in the European Parliament." *World politics* 56, no. 2 (January): 194-223.
- Hix, Simon., Doru Frantescu and Sara Hagemann. 2022. *VoteWatch Europe European Parliament and EU Council Voting Data, September 2022*. Available at: <https://cadmus.eui.eu/handle/1814/74918>
- Hobolt, Sara B. 2015. "The 2014 European Parliament elections: divided in unity." *J. Common Mkt. Stud.* 53: 6.
- Hobolt, Sara B., and Catherine De Vries. 2016. "Turning against the Union? The impact of the crisis on the Eurosceptic vote in the 2014 European Parliament elections." *Electoral Studies* 44 (December): 504-514.
- Hobolt, Sara B., and Jae-Jae Spoon. 2012. "Motivating the European voter: Parties, issues and campaigns in European Parliament elections." *European Journal of Political Research* 51, no. 6 (October): 701-727.
- Hobolt, Sara B., and James Tilley. 2014. "Who's in charge? How voters attribute responsibility in the European Union." *Comparative Political Studies* 47, no. 6 (May): 795-819.
- Hobolt, Sara B., Jae-Jae Spoon, and James Tilley. 2009. "A vote against Europe? Explaining defection at the 1999 and 2004 European Parliament elections." *British journal of political science* 39, no. 1 (January): 93-115.

- Holtz-Bacha, Christina. 2019. The European election in Germany. The Greta effect? In *Euroflections: Leading academics on the European Elections 2019*, eds. Niklas Bolin, Kajsa Falasca, Marie Grusell, and Lars Nord. Mid Sweden University, Demicom.
- Hong, Geeyoung. 2015. "Explaining vote switching to niche parties in the 2009 European Parliament elections." *European Union Politics* 16, no. 4 (December): 514-535.
- Hooghe, Liesbet, and Gary Marks. 2001. *Multi-level governance and European integration*. Rowman & Littlefield.
- Hoon, Louise. 2019. Belgium: Least salient, but very European. n *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.
- Jadot, Clément, and Camille Kelbel. 2017. "Same, same, but different." *Politique européenne* 55, no. 1: 60-85.
- 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* 75 (February).
- Jungherr, Andreas. 2016. "Twitter use in election campaigns: A systematic literature review." *Journal of information technology and politics* 13, no. 1 (January): 72-91.
- Kantar. 2019. The 2019 post-electoral survey. Have European elections entered a new dimension? Eurobarometer Survey 91.5 of the European Parliament. A Public Opinion Monitoring Study. Brussels: European Parliament.
- Karp, Jeffrey A., Shaun Bowler, and Susan A. Banducci. 2003. "Electoral systems, party mobilization and turnout: Evidence from the European parliamentary elections." *British Elections & Parties Review* 13, no. 1 (January): 210-225.
- Kenny, John. 2019. "Economic conditions and support for the prioritisation of environmental protection during the Great Recession." *Environmental Politics* 29, no. 6 (September): 937-958.
- Klüver, Heike, and Iñaki Sagarzazu. 2016. "Setting the agenda or responding to voters? Political parties, voters and issue attention." *West European Politics* 39, no.2 (March): 380-398.
- Klüver, Heike, and Jae-Jae Spoon. 2014. "Who responds? Voters, parties and issue attention." *British Journal of Political Science* 46, no.3 (July): 633-654.
- Klüver, Heike, and Jae-Jae Spoon. 2015. "Bringing salience back in: Explaining voting defection in the European Parliament." *Party Politics* 21, no.4 (July): 553-564.
- Knill, Christoph and Duncan Liefferink. 2013. "The Establishment of EU environmental policy". In *Environmental policy in the EU: actors, institutions and processes (3rd Edition)*, eds. Andrew Jordan and Camilla Adelle. Routledge.
- Kritzinger, Sylvia, Carolina Plescia, Kolja Raube, James Wilhelm, and Jan Wouters. 2020. *Assessing the 2019 European Parliament Elections*. Abingdon, Oxon; New York, NY: Routledge.

- Lachat, Romain. 2019. France: Setting the stage for 2022. In *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.
- Leinaweaver, Justin, and Robert Thomson. 2016. "Greener governments: Partisan ideologies, executive institutions, and environmental policies." *Environmental Politics* 25, no. 4 (July): 633-660.
- Lisi, Marco. 2019. Portugal: Defeat for the right, challenges for the left. In *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.
- Lundquist, Sanna. 2022. "Do Parties Matter for Environmental Policy Stringency? Exploring the Program-to-Policy Link for Environmental Issues in 28 Countries 1990–2015." *Political Studies*: 00323217221132072.
- Maarek, Philippe. 2019. France: A confirmation of the 2017 reshuffling of french politics. In *Euroreflections: Leading academics on the European Elections 2019*, eds. Niklas Bolin, Kajsa Falasca, Marie Grusell, and Lars Nord. Mid Sweden University, Demicom.
- Maggini, Nicola, Lorenzo De Sio, Garzia Diego, and Alexander H. Trechsel. 2019. Impact of issues on party performance. In *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.
- Magni-Berton, Raul, and Sophie Panel. 2018. "Manifestos and public opinion: testing the relevance of spatial models to explain salience choices." *Comparative European Politics* 16 (September): 783-804.
- Maier, Michaela, Carlos Jalali, Jürgen Maier, Alessandro Nai, and Sebastian Stier. 2012. "When do parties put Europe in the centre? Evidence from the 2019 European Parliament election campaign." *Politics* 41, no. 4 (November): 433-450.
- Maier, Michaela, Jürgen Maier, Anna Baumert, Nico Jahn, Stefan Krause, and Silke Adam. 2015. "Measuring citizens' implicit and explicit attitudes towards the European Union." *European Union Politics* 16, no. 3 (September): 369-385.
- Maier, Michaela, Silke Adam, and Jürgen Maier. 2012. "The impact of identity and economic cues on citizens' EU support: An experimental study on the effects of party communication in the run-up to the 2009 European Parliament elections." *European Union Politics* 13, no.4 (December): 580-603.
- Marsh, Michael, and Pippa Norris. 1997. "Political representation in the European Parliament." *European Journal of Political Research* 32 (December): 153-164.
- Marsh, Michael, and Slava Mikhaylov. 2010. "European Parliament elections and EU governance." *Living Reviews in European Governance*, 5, no 4.
- Marsh, Michael. 1998. "Testing the second-order election model after four European elections." *British journal of political science* 28, no. 4 (October): 591-607.

Marsh, Michael. 2009. "Vote switching in European Parliament elections: evidence from June 2004." *European Integration* 31, no. 5 (September): 627-644.

Marsh, Michael. 2019. Ireland: Something for almost everyone. In *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.

Marsh, Michael. 2020. European Parliament Elections as Second Order National Elections. In Kritzinger, Sylvia, Carolina Plescia, Kolja Raube, James Wilhelm, and Jan Wouters, eds. *Assessing the 2019 European Parliament Elections*. Abingdon, Oxon; New York, NY: Routledge.

Mattila, Mikko. 2003. "Why bother? Determinants of turnout in the European elections." *Electoral studies* 22, no. 3 (September): 449-468.

McCright, Aaron M., Riley E. Dunlap, and Sandra T. Marquart-Pyatt. 2016. "Political ideology and views about climate change in the European Union." *Environmental Politics* 25, no. 2 (March): 338-358.

McElroy, Gail, and Kenneth Benoit. 2012. "Policy positioning in the European Parliament." *European Union Politics* 13, no. 1 (March): 150-167.

McEvoy, Caroline. 2012. "Unequal representation in the EU: A multi-level analysis of voter-party congruence in EP elections." *Representation* 48, no. 1 (April): 83-99.

Nardis, Yioryos. 2015. "News, trust in the European Parliament, and EP election voting: Moderated-mediation model investigating voting in established and new member states." *The International Journal of Press/Politics* 20, no. 1 (January): 45-66.

Nielsen, Julie Hassing. 2019. Denmark: The surprising success of pro-European mainstream parties. In *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.

Norris, Pipa. 1997. "Representation and the democratic deficit." *European Journal of Political Research* 32, no. 2 (October): 273-282.

Novelli, Edoardo, and Bengt Johansson, eds. 2019. "European Elections campaign: Images, topics and media in the 28 member states". Brussels: The European Parliament.

Novelli, Edoardo. 2017. "Themes, styles, and tendencies of the European political poster. Analysis of the 2009 and 2014 European election campaigns." In *Election posters around the globe*, eds. Christina Holtz-Bacha and Bengt Johansson. Springer: 91-114.

Nulty, Paul, Yannis Theocharis, Sebastian Adrian Popa, Olivier Parnet, and Kenneth Benoit. 2016. "Social media and political communication in the 2014 elections to the European Parliament." *Electoral studies* 44 (December): 429-444.

O'Grady, Tom, and Tarik Abou-Chadi. 2019 "Not so responsive after all: European parties do not respond to public opinion shifts across multiple issue dimensions." *Research and Politics* 6, no. 4 (December).

Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard.

Oppenhuis, Erik, Cees Van Der Eijk, and Mark Franklin. 1996. The party context: Outcomes. In *Choosing Europe? The European electorate and national politics in the face of union*, eds. Cees Van der Eijk and Mark N. Franklin. Ann Arbor: The University of Michigan Press.

Ostrom, Elinor. 2010. "Polycentric systems for coping with collective action and global environmental change." *Global environmental change*, 20(4), 550-557.

Papp, Zsófia. 2022. "Environmental attitudes, environmental problems and party choice. A large-N comparative study." *Political Geography* 97 (August).

Partheymüller, Julia, Bernd Schlipphak and Oliver Treib. 2020. Between Migration and the Climate Crisis: The 2019 EP election in Germany. In *Kritzinger, Sylvia, Carolina Plescia, Kolja Raube, James Wilhelm, and Jan Wouters, eds. Assessing the 2019 European Parliament Elections*. Abingdon, Oxon; New York, NY: Routledge.

Pearson, Mitya, and Wolfgang Rüdig. 2020. "The Greens in the 2019 European elections." *Environmental Politics* (January): 1-8.

Peter, Jochen, Edmund Lauf, and Holli A. Semetko. 2004. "Television coverage of the 1999 European parliamentary elections." *Political Communication* 21, no. 4 (October): 415-433.

Pilař, Ladislav, Lucie Kvasničková Stanislavská, Jana Pitrová, Igor Krejčí, Ivana Tichá, and Martina Chalupová. 2019. "Twitter analysis of global communication in the field of sustainability." *Sustainability* 11, no. 24 (December): 6958.

Plescia, Carolina, James Wilhelm, and Sylvia Kritzinger. 2020. First-order breakthrough or still second-order?. In *Kritzinger, Sylvia, Carolina Plescia, Kolja Raube, James Wilhelm, and Jan Wouters, eds. Assessing the 2019 European Parliament Elections*. Abingdon, Oxon; New York, NY: Routledge.

Polk, Jonathan, Jan Rovny, Ryan Bakker, Erica Edwards, Liesbet Hooghe, Seth Jolly, Jelle Koedam, Filip Kostelka, Gary Marks, Gijs Schumacher, Marco Steenbergen, Milada Anna Vachudova and Marko Zilovic. 2017. "Explaining the salience of anti-elitism and reducing political corruption for political parties in Europe with the 2014 Chapel Hill Expert Survey data," *Research and Politics* (January-March): 1-9.

Ramstetter, Lena, and Fabian Habersack. 2020. "Do women make a difference? Analysing environmental attitudes and actions of Members of the European Parliament." *Environmental Politics* 29, no. 6 (September): 1063-1084.

Raunio, Tapio. 2019. "Finland: European elections in the shadow of national politics". In *Euroreflections: Leading academics on the European Elections 2019*, eds. Niklas Bolin, Kajsa Falasca, Marie Grusell, and Lars Nord. Mid Sweden University, Demicom.

- Reber, Ueli. 2019. "Overcoming language barriers: Assessing the potential of machine translation and topic modeling for the comparative analysis of multilingual text corpora." *Communication methods and measures* 13, no. 2 (April): 102-125.
- Reif, Karlheinz, and Hermann Schmitt. 1980. "Nine second-order national elections—a conceptual framework for the analysis of European Election results." *European journal of political research* 8, no. 1 (March): 3-44.
- Reif, Karlheinz. 1984. "National electoral cycles and European elections 1979 and 1984". *Electoral studies* 3, no. 3(December): 244-255.
- Reif, Karlheinz. 1997. "Reflections: European elections as member state second-order elections revisited". *European Journal of Political Research* 31: 109- 124.
- Roginsky, Sandrine, and Barbara De Cock. 2015. "Faire campagne sur Twitter." *Les Cahiers du numérique* 11, no. 4: 119-144.
- Rohrschneider, Robert, and Matthew R. Miles. 2015. "Representation through parties? Environmental attitudes and party stances in Europe in 2013." *Environmental Politics* 24, no. 4 (July): 617-640.
- Rose, Richard, and Gabriela Borz. 2013. "Aggregation and representation in European Parliament party groups." *West European Politics* 36, no. 3 (May): 474-497.
- Rosema, Martin, and Catherine E. De Vries. 2011. "Assessing the quality of European democracy: are voters voting correctly?." *How Democracy Works: Political Representation and Policy Congruence in Modern Societies (Essays in Honour of Jacques Thomassen)*. Amsterdam: Amsterdam University Press/Pallas Publications: 199-219.
- Rüdiger, Wolfgang. 2019. "Green parties and elections to the European Parliament, 1979-2019." In *Greens for a Better Europe: Twenty Years of UK Green Influence in the European Parliament, 1999-2019*, eds. Liam Ward, L. and James Brady. London Publishing Partnership: 3-48.
- Schäfer, Constantin, and Marc Debus. 2018. "No participation without representation: Policy distances and abstention in European Parliament elections." *Journal of European Public Policy* 25, no. 12 (December): 1835-1854.
- Schäfer, Constantin, Sebastian A. Popa, Daniela Braun, and Hermann Schmitt. 2020. "The reshaping of political conflict over Europe: from pre-Maastricht to post-‘Euro crisis’." *West European Politics* 44, no. 3 (December): 531-557.
- Schaffer, Lena Maria, Bianca Oehl, and Thomas Bernauer. 2022. "Are policymakers responsive to public demand in climate politics?." *Journal of Public Policy* 42, no. 1 (March): 136-164.
- Schakel, Arjan H. 2018. "Rethinking European elections: The importance of regional spillover into the European electoral arena." *JCMS: Journal of Common Market Studies* 56, no. 3 (April): 687-705.

- Schmitt, Hermann and Van der Eijk, Cees. 2007. Non-voting in European Parliament elections and support for European integration. In *European Elections and Domestic Politics. Lessons from the Past and Scenarios for the Future*, eds. Wouter Van der Brug and Cees Van der Eijk. Notre Dame, ID: University of Notre Dame Press.
- Schmitt, Hermann, Alberto Sanz, Daniela Braun, and Eftichia Teperoglou. 2020. "It all happens at once: Understanding electoral behaviour in second-order elections." *Politics and Governance* 8, no. 1 (February): 6-18.
- Schmitt, Hermann, and Ilke Toygür. 2016. "European parliament elections of May 2014: driven by national politics or EU policy making?." *Politics and Governance* 4, no. 1 (February): 167-181.
- Schmitt, Hermann, and Jacques Thomassen. 1999. "Distinctiveness and cohesion of parties". In Schmitt, Hermann, and Jacques Thomassen, eds. *Political representation and legitimacy in the European Union*. OUP Oxford.
- Schmitt, Hermann, Hobolt, Sara B., Popa, Sebastian A., Teperoglou, Eftichia, and European Parliament, Directorate-General for Communication, Public Monitoring Unit (2016). *European Parliament Election Study 2014, Voter Study, First Post-Election Survey*. GESIS Data Archive, Cologne. ZA5160 Data file Version 4.0.0, <https://doi.org/10.4232/1.12628>.
- Schmitt, Hermann. 2005. "The European Parliament elections of June 2004: still second-order?." *West European Politics* 28, no. 3 (May): 650-679.
- Schoenefeld, Jonas J., and Michèle Knodt. 2020. "Softening the surface but hardening the core? Governing renewable energy in the EU." *West European Politics* (June): 1-23.
- Schuck, Andreas RT, and Claes H. De Vreese. 2011. "Finding Europe: Mapping and explaining antecedents of 'Europeanness' in news about the 2009 European Parliamentary Elections." *SCM Studies in Communication and Media* 2 (November): 265-294.
- Schuck, Andreas RT, Georgios Xezonakis, Matthijs Elenbaas, Susan A. Banducci, and Claes H. De Vreese. 2011. "Party contestation and Europe on the news agenda: The 2009 European Parliamentary Elections." *Electoral Studies* 30, no. 1 (March): 41-52.
- Scully, Roger, and David M. Farrell. 2003. "MEPs as representatives: individual and institutional roles." *JCMS: Journal of Common Market Studies* 41, no. 2 (April): 269-288.
- Seethaler, Josef, and Gabriele Melischek. 2019. "Twitter as a tool for agenda building in election campaigns? The case of Austria." *Journalism* 20, no. 8 (August): 1087-1107.
- Seoane Pérez, Francisco, and Juliet Lodge. 2010. "Framing and Salience of issues in the 2009 European Elections." In *The 2009 Elections to the European Parliament*, ed. Juliet Lodge. London: Palgrave Macmillan: 293-303.
- Sinnott, Richard. 1995. "Policy, subsidiarity, and legitimacy". In *Public opinion and internationalized Governance*, eds. Oskar Niedermayer, and Richard Sinnott: 246-276.

- Soare, Sorina, and Claudiu Tufis 2019. Romania: Between national politics and European hopes. In *The European Parliament Elections of 2019*, eds. Lorenzo De Sio, Mark N. Franklin, and Russo Luana. Roma: LUISS University Press.
- Somer-Topcu, Zeynep, Margit Tavits, and Markus Baumann. 2020. "Does party rhetoric affect voter perceptions of party positions?." *Electoral Studies* 65 (June).
- Sorace, Miriam. 2018. "The European Union democratic deficit: Substantive representation in the European Parliament at the input stage." *European Union Politics* 19, no. 1 (March): 3-24.
- Sorace, Miriam. 2021. "Productivity-based retrospective voting: Legislative productivity and voting in the 2019 European Parliament elections." *Politics* 41, no. 4 (November): 504-521.
- Sorace, Miriam. 2022. "The ties that unbind: intergovernmental decision rules and the policy-opinion link." *Journal of European Public Policy* (June): 1-24.
- Spoon, Jae-Jae, and Christopher Williams. 2017. "It takes two: How Eurosceptic public opinion and party divisions influence party positions." *West European Politics* 40, no. 4 (July): 741-762.
- Spoon, Jae-Jae, and Heike Klüver. 2014. "Do parties respond? How electoral context influences party responsiveness." *Electoral Studies* 35 (September): 48-60.
- Spoon, Jae-Jae, Sara B. Hobolt, and Catherine E. De Vries. 2014. "Going green: Explaining issue competition on the environment." *European Journal of Political Research* 53, no.2 (May): 363-380.
- Spoon, Jae-Jae. 2012. "How salient is Europe? An analysis of European election manifestos, 1979–2004." *European Union Politics* 13, no. 4 (December): 558-579.
- Steenbergen, Marco R., Erica E. Edwards, and Catherine E. De Vries. 2007. "Who's cueing whom? Mass-elite linkages and the future of European integration." *European Union Politics* 8, no. 1 (March): 13-35.
- Steinbrecher, Markus, and Hans Rattinger. 2012. Explaining turnout in European elections. In Sanders, David, Paolo Bellucci, Gabor Toka, and Mariano Torcal, eds. *The Europeanization of National Politics?: Citizenship and Support in a Post-Enlargement Union*. Oxford University Press.
- Stier, Sebastian, Sebastian A. Popa and Daniela Braun. 2020. Political Campaigning on Twitter During the 2019 European Parliament Election Campaign. GESIS SowiDataNet, Cologne. Data file Version: 1.0.0. Accessible at: <https://data.gesis.org/sharing/#!Detail/10.7802/1.1995> (Accessed January 2021).
- Stimson, James A., Michael B. MacKuen, and Robert S. Erikson. 1995. "Dynamic representation." *American political science review* (September): 543-565.
- Stockemer, Daniel. 2012. "Citizens' support for the European Union and participation in European Parliament elections." *European Union Politics* 13, no. 1 (March): 26-46.

- Stokes, Leah C. 2016. "Electoral backlash against climate policy: A natural experiment on retrospective voting and local resistance to public policy." *American Journal of Political Science* 60, no. 4 (October): 958-974.
- Strömbäck, Jesper, Ralph Negrine, David Nicolas Hopmann, Carlos Jalali, Rosa Berganza, Gilg UH Seeber, Andra Seceleanu et al. 2013. "Sourcing the news: Comparing source use and media framing of the 2009 European parliamentary elections." *Journal of Political Marketing* 12, no. 1 (January): 29-52.
- Studlar, Donley, Richard S. Flickinger, and Stephen Bennett. 2003. "Turnout in European parliament elections: Towards a European-centred model." *British Elections & Parties Review* 13, no. 1 (January): 195-209.
- Sudulich, Laura, and Siim Trumm. 2019. "A comparative study of the effects of electoral institutions on campaigns." *British Journal of Political Science* 49, no. 1 (January): 381-399.
- Thomassen, Jacques, ed. 2009. *The legitimacy of the European Union after enlargement*. OUP Oxford.
- Thomassen, Jacques. 2016. "An ever closer and more democratic Union?." *Electoral studies*, no. 44: 544-551.
- Thomassen, Jacques. and Hermann Schmitt. 1999. "In Conclusion: Political Representation and Legitimacy in the European Union". In Schmitt, Hermann, and Jacques Thomassen, eds. *Political representation and legitimacy in the European Union*. OUP Oxford.
- TNS Opinion. 2014. 2014 post-election survey. EUROPEAN ELECTIONS 2014 ANALYTICAL OVERVIEW.
- Tobin, Paul. 2017 "Leaders and laggards: Climate policy ambition in developed states." *Global Environmental Politics* 17, no. 4 (November): 28-47.
- Treaty on European Union (TEU) (2012/C 326/01). Accessible at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012M%2FTXT>
- Treaty on the Functioning of the European Union (TFEU) (2012/C 326/01). Accessible at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A12012E%2FTXT>
- Trechsel, Alexander, Lorenzo De Sio, and Diego Garzia. 2017. "2014 as the first (truly) European elections?" EUI Working Paper RSCAS 2017/14.
- Van der Brug, Wouter. 2004. "Issue ownership and party choice." *Electoral studies* 23, no. 2 (June): 209-233.
- Van der Eijk, Cees, and Hermann Schmitt. 2009. Legitimacy and electoral abstentions in European Parliament elections. In Thomassen, Jacques, ed. *The legitimacy of the European Union after enlargement*. OUP Oxford.
- Van der Eijk, Cees, and Mark N. Franklin. 1996. *The Research: Studying the elections of 1989 and 1994*. In *Choosing Europe? The European electorate and national politics in the face of union*, eds. Cees Van der Eijk and Mark N. Franklin. Ann Arbor: The University of Michigan Press.
- Van der Eijk, Cees, Mark Franklin, and Michael Marsh. 1996. "What voters teach us about Europe-wide elections: What Europe-wide elections teach us about voters." *Electoral Studies* 15, no. 2 (1996): 149-166.

- Van der Eijk, Cees, Mark N. Franklin, and Erik Oppenhuis. 1996. "The strategic context: Party choice." (1996).
- Van der Eijk, Cees, Mark N. Franklin, and Wouter Van der Brug. 1999. Policy preferences and party choice. In Schmitt, Hermann, and Jacques Thomassen, eds. *Political representation and legitimacy in the European Union*. OUP Oxford.
- Van Egmond, Marcel. 2007. European Elections as Counterfactual National Elections. In *European Elections and Domestic Politics. Lessons from the Past and Scenarios for the Future*, eds. Wouter Van der Brug and Cees Van der Eijk. Notre Dame, ID: University of Notre Dame Press.
- Van Spanje, Joost, and Claes De Vreese. 2011. "So what's wrong with the EU? Motivations underlying the Eurosceptic vote in the 2009 European elections." *European Union Politics* 12, no. 3 (September): 405-429.
- Vandeweerdt, Clara, Bart Kerremans, and Avery Cohn. 2016. "Climate voting in the US Congress: the power of public concern." *Environmental Politics* 25, no. 2 (March): 268-288.
- Varini, Francesco S., Jordan Boyd-Graber, Massimiliano Ciaramita, and Markus Leippold. 2021. "ClimaText: A dataset for climate change topic detection." arXiv preprint arXiv:2012.00483.
- Vasilopoulou, Sofia, and Katjana Gattermann. 2013. "Matching policy preferences: the linkage between voters and MEPs." *Journal of European Public Policy* 20, no. 4 (April): 606-625.
- Vihma, Antto, Gunilla Reischl, and Astrid Nonbo Andersen. 2021. "A climate backlash: comparing populist parties' climate policies in Denmark, Finland, and Sweden." *The Journal of Environment and Development* 30, no. 3 (September): 219-239.
- Viola, Donatella M. 2015. European Parliament elections theories. In Viola, Donatella M. (ed.) *Routledge Handbook of European Elections*. Routledge
- Wagner, Markus, and Thomas M. Meyer. 2014. "Which issues do parties emphasise? Salience strategies and party organisation in multiparty systems." *West European Politics* 37, no. 5 (September): 1019-1045.
- Walgrave, Stefaan, Jonas Lefevere, and Anke Daniela Tresch. 2020. "Position, competence, and commitment: Three dimensions of issue voting." *International Journal of Public Opinion Research* 32, no. 1: 165-175.
- Walgrave, Stefaan, Jonas Lefevere, and Anke Tresch. 2012. "The associative dimension of issue ownership." *Public opinion quarterly* 76, no. 4 (January): 771-782.
- Wang, Congcong, and Dan Keith. 2020. "The greening of European radical left parties: red and green politics." *Journal of contemporary European studies* 28, no. 4 (October): 494-513.
- Weber, Till. 2007. "Campaign effects and second-order cycles: A top-down approach to European Parliament elections." *European Union Politics* 8, no. 4 (December): 509-536.
- Wendler, Frank. 2019. "The European Parliament as an arena and agent in the politics of climate change: Comparing the external and internal dimension." *Politics and Governance* 7, no. 3 (September): 327-338.

Wessels, Bernhard, and Mark N. Franklin. 2009. "Turning out or turning off: Do mobilization and attitudes account for turnout differences between new and established member states at the 2004 EP elections?." *European Integration*, 31, no. 5 (September) pp. 609-626.

Williams, Christopher, and Jae-Jae Spoon. 2015. "Differentiated party response: The effect of Euroskeptic public opinion on party positions." *European Union Politics* 16, no. 2 (June): 176-193.

Wilson, Tracy. 2012. "Cross-Pressured Voters: Reconciling Ideologies in European Parliament Elections". ELECDEM closing conference, "Advancing Electoral Research" June 2012, European University Institute, Florence, Italy.

Wrátil, Christopher. 2019. "Territorial representation and the opinion-policy linkage: Evidence from the European Union." *American Journal of Political Science* 63, no. 1 (June): 197-211.

Wurzel, Rüdiger KW, Duncan Liefferink, and Maurizio Di Lullo. 2019. "The European Council, the Council and the Member States: changing environmental leadership dynamics in the European Union." *Environmental Politics* 28, no. 2 (February): 248-270.

Wüst, Andreas M. 2009. "Parties in European parliament elections: Issues, framing, the EU, and the question of supply and demand." *German Politics* 18, no. 3 (September): 426-440.

Wüst, Andreas, and Hermann Schmitt. 2007. Comparing the views of parties and voters in the 1999 election to the European Parliament. In *European Elections and Domestic Politics. Lessons from the Past and Scenarios for the Future*, eds. Wouter Van der Brug and Cees Van der Eijk. Notre Dame, ID: University of Notre Dame Press.

Yu, Chao, Drew B. Margolin, Jennifer R. Fownes, Danielle L. Eiseman, Allison M. Chatrchyan, and Shorna B. Allred. 2021. "Tweeting About Climate: Which Politicians Speak Up and What Do They Speak Up About?." *Social Media+ Society* 7, no. 3 (July): 1-13.

Zapletalová, Veronika, and Magda Komínková. 2020. "Who is fighting against the EU's energy and climate policy in the European Parliament? The contribution of the Visegrad Group." *Energy Policy* 139 (April): 111326.

Zito, A. R., Burns, C., and Lenschow, A. (2019). Is the trajectory of European Union environmental policy less certain? *Environmental Politics*. 28:2, 187-207.