

4. Integrating environmental issues within party manifestos: exploring trends across European welfare states

Judith Derndorfer, Roman Hoffmann and Hendrik Theine

INTRODUCTION

Climate change challenges the existing structures of the economy, welfare states and societies in general in various ways. Among others, it might contribute to widening national and global social inequalities and create new risks for societies. While narratives in the past often focused on trade-offs between environmental issues and social and economic interests, increasingly there is a recognition of the need to think about the different policy domains together (e.g., Jakobsson et al., 2018). Yet, although governments across Europe have recognized their responsibility to act against climate change (see Chapter 10), the implementation is slow and in many cases environmental issues have not yet been sufficiently linked to other policy fields (Gough, 2016).

Political parties are one of the main pillars of political decision-making processes in modern democratic welfare states. In their diversity, they reflect and shape the public opinion and political debates. In the context of climate change, political parties are key actors in the struggle for legitimacy of environmental policies and the connection of environmental issues with other policy fields (Carter, 2014; Carter and Jacobs, 2014; Farstad, 2018). Party programmes express parties' positions and preferences across different policy areas. What the enacted policies eventually look like depends on a range of factors, including the relative power of the different parties and the whole policymaking process in the country.

This chapter studies whether and to what extent environmental issues are addressed in party manifestos across welfare states in Europe and analyzes their integration with other policy domains, in particular, welfare and social issues. We use the comparative Manifesto Project Database (Volkens et al., 2019), which contains information on more than 1000 parties since 1945 from

all over the world. The data set offers unique insights on political positions and dynamics of societal change. We explore the long-term trends in the prominence of different issues in the manifestos and employ network analytical tools to study the degree of integration of the environmental and social policy domain.

Our findings show a trend towards an increasing importance of environmental issues in party manifestos, which is mostly driven by ecological parties. Major differences across Europe exist with parties in some countries putting systematically more weight on environmental aspects than others. The network analysis confirms that environmental issues take a central position, especially in the party programmes of ecological parties. On the other hand, the environmental focus is substantially weaker for Conservative, Nationalist, and Socialist and Social Democratic parties. Among all parties, ecological parties across Europe are also the ones which connect environmental and social issues most strongly, followed by parties in Social Democratic welfare states (irrespective of the party family).

The chapter is structured as follows. The next section discusses our theoretical framework and presents previous empirical findings on the topic. The third section introduces the Manifesto data. The fourth section discusses our research design and the methods employed in the study. We present our results on the prioritization and integration of environmental topics over time and across countries. The final section discusses our findings in the light of the recent literature and concludes with an outlook and some final remarks.

RELATED LITERATURE

Political Parties and Climate Change

Political parties are one of the central actors in the design and formulation of public policy in democratic countries. They play a fundamental role for the selection of certain policies over others as well as the definition and struggle over adequateness and legitimacy of such policies. In the context of climate policy, political parties influence the ‘content’ of climate policies and their intersection with social policy questions and/or market-based notions. At the same time, it is important to stress that political parties are not in the capacity to determine public policy solely, as there are, for instance, certain conditions and structures they operate under, which restrain their capacity (see, e.g., Leiren and Reimer, 2018 on the case of the German renewable energy policy).

Despite their significant role in the political process, research on the ways political parties address climate policy so far remains scarce and is limited in its scope and comprehensiveness (Carter et al., 2018). Political parties and the politicization between them have been found to play a vital role in the degree

to which different policy areas are integrated – in the present case defined as the integration of environmental objectives into non-environmental policy sectors (Lafferty and Hovden, 2003). In particular, the political orientation of governments has a major effect: For example, in Germany, new centre-left governments, such as the coalitions under Brandt in the early 1970s or the red–green coalition after 1998, pushed for the integration of environmental policies, by declaring environmental policy as a cross-sectoral policy objective (Jordan and Lenschow, 2010; Wurzel, 2008). In other countries, such as Norway and Sweden, there was a dramatic shift away from integrated policy solutions after a change in the political leadership (Jordan and Lenschow, 2010; Lafferty et al., 2008). At the same time, party affiliation does not always determine party preferences and decisions due to the conditions and structures political parties operate in (Leiren, 2015).

A comparative study on political parties in the European Union suggests that countries with environment-friendly parties in the government were more likely to achieve their Kyoto emission reduction targets (Jensen and Spoon, 2011). These findings suggest that if the environment becomes the subject of party competition, where major parties compete to be the ‘greenest’ party and show a willingness to work with green parties, this results in more environmental policy measures and better environmental outcomes. However, many mainstream parties have found it difficult to integrate environmental concerns into their programmes, which has contributed to the view that the issue leads to a ‘new politics’ conflict that cuts across traditional left/right partisan alignments (Farstad, 2018). However, Neumayer (2004) suggests that left-libertarian and ‘traditional’ left-wing parties lean more towards pro-environmental policies than other parties.

Such studies provide important first insights into the role of political parties addressing climate policy, including that green parties and other parties when in office might be able to substantially push climate policies. Yet, they are also limited in the way that research on climate policies is operationalized. A perspective that is relatively poorly developed in current research is how far climate policies are connected and interrelated to other policy domains such as social and welfare policies on the level of parties’ political programmes (but see, e.g., Chapter 3 in this volume for a contribution that complements our perspective).

Approaches that explore the integration of environmental topics in all policy fields are referred to as ‘environmental policy integration’, ‘environment in all policies’ (Browne and Rutherford, 2017), ‘environmental mainstreaming’ (Adelle and Russel, 2013) or ‘environmental or sectoral integration’ (Lafferty and Hovden, 2003). Here, the integration of environmental policies in other policy fields such as education and health to economic and agricultural development is analyzed (Lafferty and Hovden, 2003). Likewise, literatures in the

field of welfare analysis have taken up the idea of stronger linkages between policy domains, which is reflected in recent terminologies and concepts, such as ‘eco-welfare’ (Koch and Fritz, 2014) or ‘green economy’ (Gough, 2011).

Across such approaches, we find two interrelated arguments. First, environmental challenges have a widespread impact on various aspects of human life (wellbeing, social and economic institutions, etc.). Second, policies that do not have an immediate or obvious environmental connection may still have long-term, unknown or unintended environmental consequences. It follows that environmental policies cannot be viewed in a compartmentalized manner, but rather need to be analyzed in conjunction with other aspects of human life, political organization and economic provisioning.

Recently, the idea of ‘environmental policy integration’ (EPI) has received stronger political backing in the European Union. Yet, several case studies on different countries suggest that implementation is not convincing in all cases and that environmental policies are still competing with other policy priorities. Even in countries that are considered environmental pioneers, EPI is far from being fully implemented. EPI instruments, for instance green budgeting, often fail to resolve the long-standing tensions between economic and environmental objectives (see Jordan and Lenschow, 2010 or Nunan et al., 2012 for extensive overviews). In part, the lack of convincing implementation relates to ‘mainstreaming’ of environmental policies which does not necessarily involve actual policy integration (see Chapter 8 on the United Kingdom).

Integration of Environmental Policies over Time

Policy measures to address climate change and its effects (in the following also referred to as ‘climate policy’) have gone through considerable change in many developed as well as developing countries in the past decades, both in terms of the academic debate as well as the practical implementation (Meadowcroft, 2005). At the heart of the debate is the role of the state, which has been one central focus throughout the modern environmental debate, that is, since the 1960s (Røpke, 2004; Spash, 1999).

In some countries, climate policy used to have a strong foothold in regulatory or ‘command and control’ measures. For instance, German environmental legislation in the 1970s and early 1980s has been decisively influenced by the precautionary principle (*Vorsorgeprinzip*), the best available technology principle and, to a lesser extent by eco-taxes. Especially the former two are examples of direct regulation, that is, governments’ active stance in environmental legislation specifying technical instructions and detailed implementations (Wurzel et al., 2003). Since the late 1980s, the use of ‘new’ environmental policy instruments (NEPIs), namely, market-based instruments, voluntary agreements and informational devices such as eco-labels, has grown, also

because of their promotion by the Organisation for Economic Co-operation and Development (OECD) and the European Environment Agency (EEA) (Wurzel et al., 2003).

NEPIs, in contrast to direct government regulation and ‘command and control’ measures, rely on cooperation between governments and the emitting bodies (households, companies, etc.) as well as the principle of incentivizing instead of regulating. Particularly market-based instruments have been criticized on the grounds that they go along with privatization and commodification of the atmosphere (Brunnengräber, 2009; Bumpus and Liverman, 2008; Spaargaren and Mol, 2013; Taylor Aiken et al., 2017). More specifically, processes of commodification are put in practice through the creation of cap-and-trade or offset markets around carbon emissions, compared with the EU ETS or ‘voluntary’ offset systems. Both types of policies are market-based approaches to carbon emissions reductions either introduced and monitored by national and supranational governments (cap-and-trade) or based on voluntary agreements (offsets). Both types of markets have expanded enormously since the early 2000s, first in high-income countries and then all around the world (Spash, 2010; Spash and Theine, 2018). In political economy terms, such carbon markets have been described as the ‘latest incarnation of an ongoing process of commodification and capitalist expansion’ (Böhm et al., 2012: 1630).

However, referring to climate policy as ‘the neoliberalization of the atmosphere’ tends to over-simplify real world climate policies as they are in practice more nuanced and multifaceted. For instance, MacNeil and Paterson (2012) refer to a variety of neoliberalisms. Recent contributions also stress that climate change is very likely to have highly differentiated effects for various social groups. According to this logic, climate change contributes to an aggravation of existing social challenges due to two main channels: (1) increasing nationwide and global social inequalities as low-income groups will be more severely affected as they lack adaptation resources and suffer more from mitigation policies and (2) increasing trade-offs between climate change mitigation and traditional social policy goals (Büchs et al., 2011; Gough, 2013a, 2013b; Gough and Meadowcroft, 2012).

These implications create a need for stronger integration of environmental and welfare state policies, which are not sufficiently linked across policy areas today (Gough, 2016). There are different reasons for this gap. Partly, it is due to an inherent tension between social and environmental issues and policies. While the former are mainly driven by domestic forces, the latter depend on global processes and are characterized by strong international dependencies (Gough, 2016; Meadowcroft, 2005). Environmental threats, most notably climate change, are phenomena of great complexity, which make them politically less salient than other threats to human welfare. In comparison to

social risks resulting from (early) industrialization, which directly impacted on people, such environmental threats tend to give a much weaker basis for collective organization. At the same time, many perceive investments in the environment as competing with and hence potentially harmful for social welfare, raising the question about how the ‘pie should be divided’ to achieve a balance and synergy between social and environmental policies (Jakobsson et al., 2018: 314).

In recent years, researchers have increasingly criticized the lack of awareness and integration of environmental and welfare policies. They have called for the establishment of an eco-social or environmental welfare state, which fully recognizes environmental issues and their risks for societies in policy-making (for conceptual arguments, see, e.g., Gough and Meadowcroft, 2012). Koch and Fritz (2014) analyze the ‘environmental’ and ‘welfare’ performance of different welfare state regimes (Liberal, Conservative, Social Democratic, Eastern and Mediterranean) and show that synergy effects, that is, tackling ecological issues while simultaneously granting citizens a high degree of welfare, are relatively uncommon: only two countries (Sweden and Austria) with advanced welfare states also perform relatively well ecologically (both display above average values on the welfare as well as the ecology dimension). In other countries trade-offs between ecological issues and welfare dimensions prevail.

Beyond some comparative case studies, there is limited empirical research which has systematically explored patterns in environmental policy integration across Europe. As of now, we know little about the extent to which environmental issues have entered other policy fields and how social welfare and environmental issues have been connected.

DATA

We analyze data on electoral programmes which was collected as part of the Manifesto Project (Krause et al., 2018; Volkens et al., 2019). The raw data represents a digital annotated corpus of text material containing longitudinal information on more than 4000 electoral programmes since 1945 from over 50 countries from all over the world.¹ The Manifesto Project was established by the Manifesto Research Group (MRG) and dates to the late 1970s. The manifestos were digitized and converted into machine-readable format in 2009.

The electoral programmes are split into quasi-sentences and coded by native-language speakers. Each quasi-sentence is assigned a policy category or code to which the quasi-sentence refers to, such as ‘Foreign Special Relationships’ or ‘Environmental Protection’. Captions of chapters and sub-chapters are not considered in the coding. In addition to the annotated text, meta-data is available for each electoral programme. The meta-data con-

tains information on the parties, for instance the party family and vote share in the respective elections, and outcomes of the respective elections. We use the party family groups provided by the Manifesto Project, but group together Social Democratic and Socialist parties, as well as Christian Democratic parties and Conservative parties for our analysis.

Based on the initial annotation, we categorized the 56 codes into 13 major policy domains that offer a more comprehensive picture for our analysis. For example, codes related to ‘Military’, ‘Anti-imperialism’ and ‘Peace’ were combined in the policy domain ‘Military and Peace’. Please note that both codes with a positive and negative connotation (e.g., Foreign Special Relationships: Positive (cmp_code 101) and Negative (cmp_code 102)) were subsumed under the same policy domain. Table 4.1 provides an overview of the original coding scheme (cmp_codes) and the new policy domains created by us.²

For the first part of our analysis, we use the aggregated data for 30 European countries. For each manifesto, the share of quasi-sentence of a specific code is provided (e.g., 5 per cent of all quasi-sentences in a manifesto were coded as 501 environmental protection) since 1945. For Eastern European countries data is only provided for the years after 1989 (the exact years for each country can be found in Table 4.A1 in the appendix). For the second part, we make use of the machine-readable manifestos provided by the Manifesto Project to get a better understanding of how different policy fields are interconnected. Since not all manifestos since 1945 are digitally coded yet, we narrow our analysis to the years 2000–18.

For our analysis, countries are categorized into six different welfare state regimes, which are primarily based on the three worlds of welfare capitalism first established by Esping-Andersen (1990). Since not all the countries in our sample were studied by Esping-Andersen (1990), we incorporate findings from Fenger (2007), Eikemo et al. (2008), Aristei and Perugini (2010) and Häusermann (2010). We emphasize that these welfare state regimes are generalized constructions which describe some countries better than others. In addition, some welfare states are sometimes described as hybrid models (e.g., the Netherlands and Switzerland, see Arts and Gelissen, 2002) and lie between two regimes. Table 4.2 shows the classification used for our analysis. We distinguish between Liberal, Conservative, Social Democratic, Post-Communist, Mediterranean, and Baltic welfare states. The distinction of countries and their parties allows us to test for differences in the integration of environmental issues not only across countries, but also across welfare regimes.

Table 4.1 Overview of policy domains and manifesto coding

No.	Policy Domains	Original CMP Code(s)
1	External relations	101 & 102 Foreign Special Relationships, 107 & 109 Internationalism
2	Military and peace	103 Anti-Imperialism, 104 & 105 Military, 106 Peace
3	EU Community	108 & 110 European Community/Union
4	Freedom and Democracy	201 Freedom and Human Rights, 202 Democracy, 203 & 204 Constitutionalism
5	Political System	301 Decentralization, 302 Centralization, 303 Governmental and Administrative Efficiency, 304 Political Corruption, 305 Political Authority
6	Economics	401 Free Market Economy, 402 Incentives, 403 Market Regulation, 404 Economic Planning, 405 Corporatism/Mixed Economy, 406 & 407 Protectionism, 408 Economic Goals, 409 Keynesian Demand Management, 410 Economic Growth, 412 Controlled Economy, 413 Nationalisation, 414 Economic Orthodoxy, 415 Marxist Analysis
7	Technology	411 Technology and Infrastructure
8	Environment	416 Anti-Growth Economy: Positive, 501 Environmental Protection
9	Progressive culture/values	502 Culture: Positive, 602 National Way of Life: Negative, 604 Traditional Morality: Negative, 606 Civic Mindedness: Positive, 607 Multiculturalism: Positive
10	Welfare	503 Equality, 504 Welfare State Expansion, 505 Welfare State Limitation
11	Education	506 Education Expansion, 507 Education Limitation
12	Conservative culture/values	601 National Way of Life: Positive, 603 Traditional Morality: Positive, 605 Law and Order: Positive, 608 Multiculturalism: Negative
13	Social groups	701 Labour Groups: Positive, 702 Labour Groups: Negative, 703 Agriculture and Farmers: Positive, 704 Middle Class and Professional Groups, 705 Underprivileged Minority Groups, 706 Non-economic Demographic Groups

Source: Own elaboration based on Volkens et al. (2019).

RESEARCH DESIGN AND METHODS

We use text mining and social network analysis in order to illustrate and analyze connections between policy fields (Aggarwal, 2011; Aggarwal and Zhai, 2013; Wasserman and Faust, 1994). In particular, the use of social network analysis to explore connections between policy fields represents an innovative approach in welfare state analysis that has, to the best of our

Table 4.2 Overview of welfare state regimes and classification of countries

#	Welfare State Regimes	Countries
1	Liberal (L)	Ireland, United Kingdom
2	Conservative (C)	Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland
3	Social Democratic (SD)	Denmark, Finland, Iceland, Norway, Sweden
4	Post-Communist (PC)	Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovenia, Slovakia
5	Mediterranean (M)	Cyprus, Greece, Italy, Portugal, Spain
6	Baltic (B)	Estonia, Latvia, Lithuania

Source: Own elaboration.

knowledge, not been used in previous research. Following concepts used in social network analysis (Jackson, 2008; Wasserman and Faust, 1994), we conceptualize the connection between text-based policy domains as a network, which consists of nodes, that is, the policy domains, and links or edges, which connect the policy domains with each other. Every time a quasi-sentence is followed by a quasi-sentence belonging to a different policy domain, a link is established. The network links are thus based on the proximity of different subjects in the text material. This social network analytical approach offers several advantages for our analysis. It allows us to assess whether and how strongly environmental issues relate to other policy domains within manifestos and to compute network measures for the relative importance or centrality of the topics in the network.

In the first descriptive part of our analysis, we consider the share of quasi-sentences per manifesto that relate to different policy domains. A particular focus here is placed on environmental, welfare and economic-specific policy domains, which are the most relevant for the topic at hand. The first analytical step allows us to study general patterns of political prioritization over time and across party families in Europe. The classification of party families is based on the classification used in the Manifesto Database.

In the second part of the analysis, we shift the focus to the network of policy domains and study links between different issues within manifestos (see appendix for a detailed explanation on how these links are established). We use these network data to compute different measures of integration and connectedness. First, the links between different policy domains are counted. Based on this, we calculate the share of links between the environmental and welfare domain relative to the total number of links in the network as a measure of connectedness. Both measures range from 0 to 1. The normalization allows the

comparison across networks of different sizes and densities providing a comprehensive measure for policy integration across electoral programmes. The approach provides information about the relative importance of environmental issues in the policy network and about its interconnectedness with welfare issues.

RESULTS

Exploring Patterns over Time

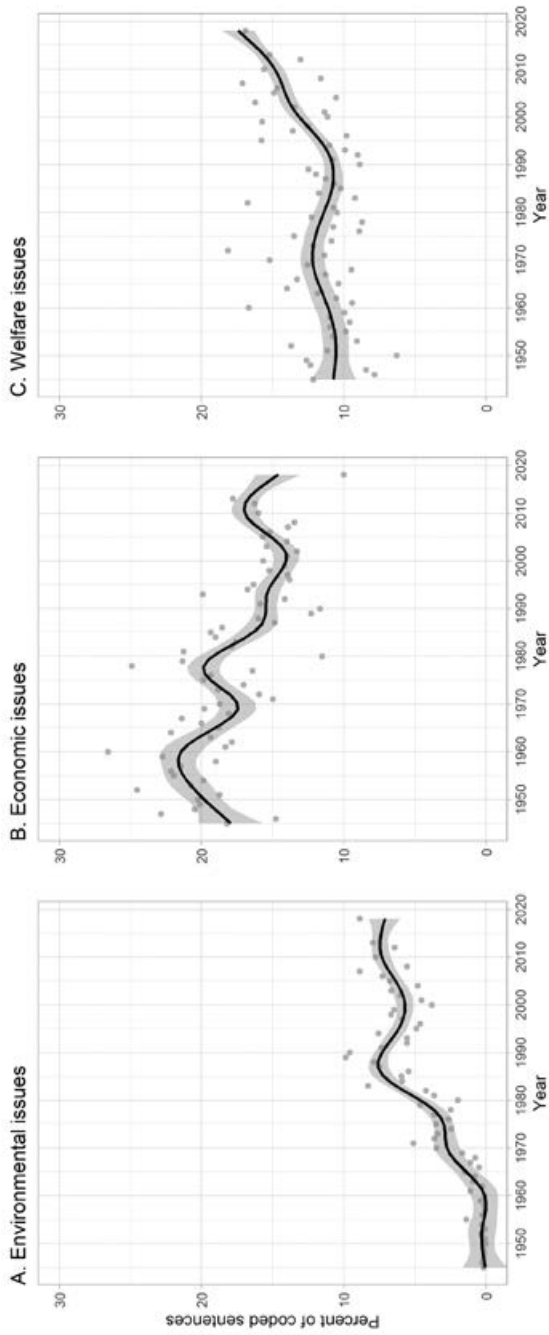
In a first step, on the aggregate level, we explore patterns in the electoral programmes over time. We study trends and changes in the importance of different policy domains with a focus on environmental, economic and welfare issues. Figure 4.1 shows the relative share of quasi-sentences for each of the three domains over time. The depicted trends reflect the relative importance of the domains in the manifestos.

In the middle of the 20th century, environmental issues were almost absent from party manifestos across Europe, while issues related to the welfare and economic domain were more frequently cited. The environmental policy domain first appeared in party manifestos towards the beginning of the 1960s with a peak in the 1980s. Over the course of the years, substantial fluctuations in the prominence of the topics are observable with social welfare topics becoming more important especially since the early 1990s. The importance of economic issues in manifestos, on the other hand, has steadily decreased in the past decades. Yet, they are still more prominently represented in electoral programmes in comparison to environmental issues.

Importance of Environmental Topics across Party Families

Figure 4.2 shows changes in the importance of the environmental policy domain separately for different party families. The increased focus on environmental issues over time has been mainly driven by parties belonging to the Ecological party family and to a lesser extent by parties from the Agrarian family. Parties belonging to other party families, for instance, Social Democratic/Socialist or Conservative/Christian Democratic parties, also put a stronger emphasis on the environmental domain over time, but to a much smaller extent.

At the beginning of the 21st century, around 5 per cent of the quasi-sentences in manifestos were related to environmental issues on average. While the Ecological party family devoted around 20 per cent of its manifestos to ecological issues, this value ranged from only 5 per cent to 10 per cent for the other party families. Overall, the environmental policy domain can be expected to



Note: Points show the average percentage of coded sentences for each of the three categories across all party manifestos for one year.
Source: Manifesto data, electoral programmes for all coded European manifestos since 1945.

Figure 4.1 Relative importance of selected policy domains over time in party manifestos

become more important in party manifestos in the future with climate change becoming one of the dominating topics in international discourse.

Taking a closer look at the Ecological party family reveals major differences in the importance given to environmental issues in the manifestos over time. The grey area in the graphs shows the 95 per cent confidence intervals, which reflect the uncertainty in the estimation. While environmental issues take up around 30 per cent to 40 per cent in some manifestos, it is only about 15 per cent in others. These large differences show that also within the Ecological party family a wide heterogeneity prevails.

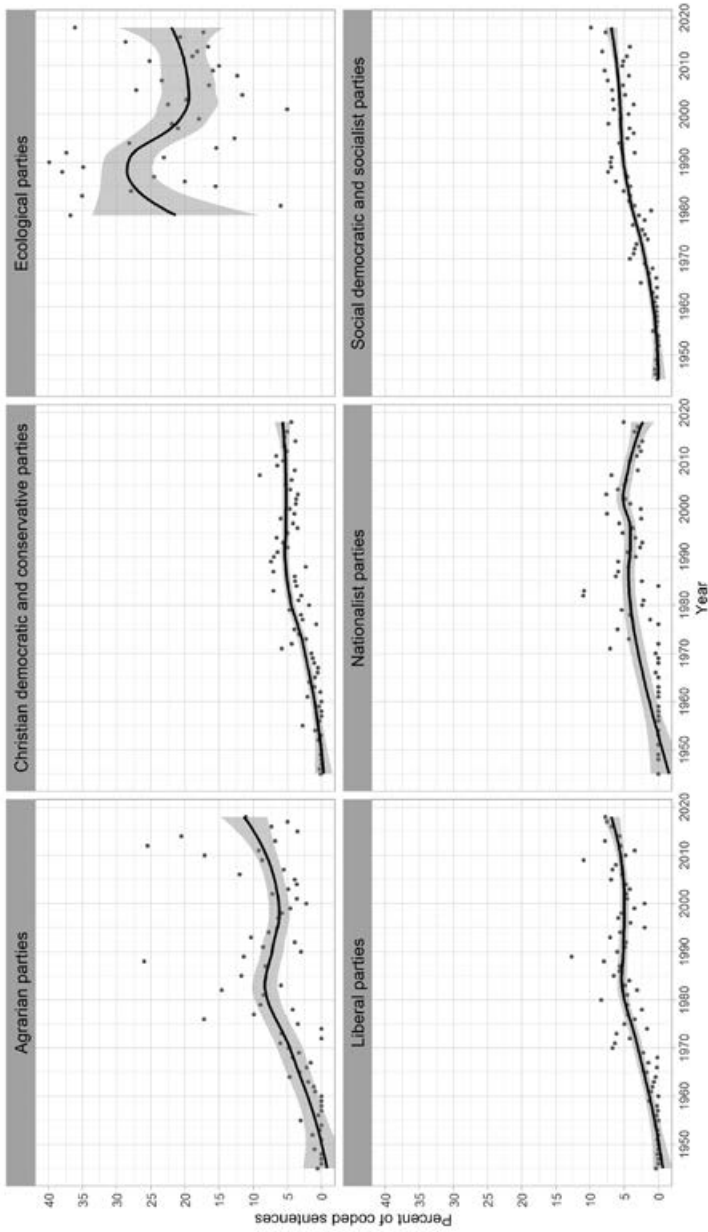
Political Priorities across European Countries

Turning to the relative importance of different policy domains across European countries, Figure 4.3 shows the mean salience of environmental, economic and welfare policy domains per country for the most recent party manifestos (2000–18). The mean is weighted by the percentage of votes gained by each party in the respective election year to account for the parties' relevance and potential influence. The countries in Figure 4.3 are ranked by descending order according to joint salience of environment and welfare issues. The cross-country perspective reveals large disparities between countries. In Sweden and Finland, environmental and welfare issues on average are twice as salient as in Bulgaria and Romania.

The weighted mean share of quasi-sentences dedicated to the environment range from 9 per cent in Switzerland to 2 per cent in Poland. Overall, we see that environmental issues play a rather negligible role in Eastern Europe, but are very prominent in Scandinavian and Central European countries. In the majority of countries (17), economic issues play on average a more important role than welfare issues. In contrast, in all countries the environmental domain is less salient than the economic and the welfare policy domain.

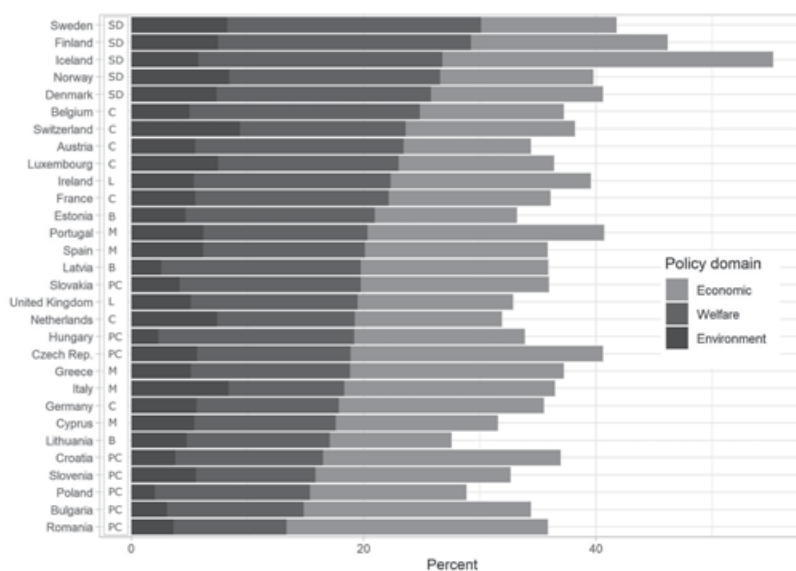
Turning to the countries studied in greater detail in this book (Germany, Italy, Norway and the United Kingdom), we can observe interesting differences with regard to the importance of economic, welfare and environmental policy issues. Norway and Italy show the largest share of environmental policy issues in party manifestos. For the other two countries, the United Kingdom gives higher importance to environmental issues than Germany does during the period 2000–18. Chapters 5–8 examine the development towards eco-social policies in the four countries in greater detail, including the ways in which similarities and differences between them relate to legacies and institutional characteristics.

When considering differences in terms of welfare state regimes (Table 4.3), further interesting observations arise. First, we can observe that environmental and welfare issues taken together are most salient in the Social Democratic



Note: Points show the average percentage of coded sentences across all party manifestos for one year.
 Source: Manifesto data, electoral programmes for all coded European manifestos since 1945.

Figure 4.2 Relative importance of the environmental domain over time in party manifestos of different party families



Note: Results weighted by percentage of votes gained by each party.

Source: Manifesto data 2000–18.

Figure 4.3 *The relative importance of economic, welfare and environmental policy domains across European countries*

welfare regime, followed by the Conservative welfare state regime. Conversely, these two policy domains are least salient in the Post-Communist welfare state regime. This also holds true when only considering the environmental issues. Turning to the welfare policy domain, we observe that this domain is most salient in the Social Democratic welfare state regime, followed by the Liberal and the Conservative welfare state regimes. Welfare policy is least salient in manifestos in the Post-Communist and Mediterranean welfare state regimes.

Second, we also see differences concerning the salience of issues within welfare state regimes. For instance, the mean salience of welfare and environmental issues taken together is relatively low in Germany compared to the remaining Conservative countries. Moreover, we observe that Hungary and the Czech Republic place a higher value on welfare and environmental issues than some other countries belonging to the Mediterranean, Conservative and Baltic welfare state regimes, as well as the other remaining countries also belonging to the Post-Communist welfare state regime (Figure 4.3). Therefore it is important to bear in mind that country differences also exist within the same welfare state regime.

Table 4.3 *The relative importance of economic, welfare and environmental policy domains across welfare state regimes*

Welfare State Regimes	Economic	Welfare	Environment
Liberal (L)	15.3	15.7	5.2
Conservative (C)	13.7	15.5	6.5
Social Democratic (SD)	17.0	20.3	7.4
Post-Communist (PC)	18.2	13.0	3.8
Mediterranean (M)	17.3	12.8	6.3
Baltic (B)	13.0	15.3	4.0

Note: Results weighted by percentage of votes gained by each party.

Source: Manifesto data 2000–18.

Social Network Analysis: Linking Policy Domains in Party Manifestos

In the next step, we analyze the links between the 13 policy domains (see Table 4.1). We illustrate the different levels of integration of environmental concerns by drawing networks for Agrarian, Socialist and Social Democratic (Social Democratic thereafter), Christian Democratic and Conservative (Conservative thereafter), Liberal, Nationalist and Ecological parties. Table 4.4 gives an overview of the number of manifestos used for this analysis. The number of links per party family varies not only due to the number of manifestos but also due to the varying lengths of electoral programmes.

For the networks, we first calculate for each manifesto the links between different domains. To account for varying lengths of the programmes, we normalize the links. First, we exclude any self-referential links (i.e., links between the same policy domain). Then, we normalize the number of links for each possible link. For instance, we find 30 links between the category *Economics* and *Environment*. Overall, we established 300 links in the whole manifesto. Therefore, we adjust for the manifesto size by dividing 30 by 300. Last, we take the mean of the normalized links for each party family and draw a network. The size of the node depends on average importance of policy topic for each party family.

The social network analysis provides insights on how prominent different policy domains are and which issues are well interlinked within manifestos of party families. Figures 4.4a–c show the networks of policy domains for different party families. Concerning the integration of environmental issues with other policy areas, we observe interesting patterns. First, by looking at the size of the nodes we see that environmental issues are unsurprisingly more prominent within manifestos of Ecological and Agrarian parties and least for Nationalist parties. Second, by examining the links we find that in every party family, environmental concerns are most often linked with economics,

Table 4.4 Number of manifestos and links per party family

Party family	Manifestos	Links
Agrarian	35	23.264
Conservative	173	165.457
Ecological	61	70.235
Liberal	116	101.702
Nationalist	78	41.230
Social Democratic	209	194.715
Total	672	596.603

Source: Manifesto data 2000–18.

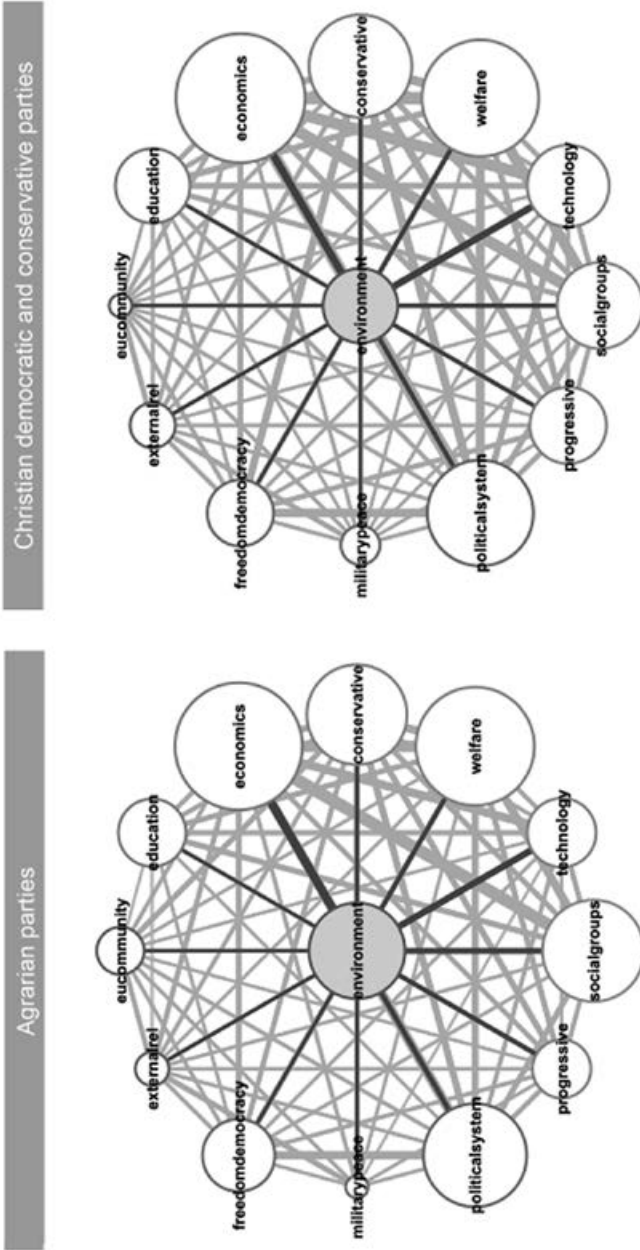
followed by technology. The technology domain includes scientific and technological developments, research, infrastructure and methods of transport.

Up to this point, the party families are rather similar. Examining the connectedness beyond economics and technology, we discern differences between the party families. Ecological and Social Democratic parties often link environmental issues with the two domains, welfare and social groups, as well as issues related to the political system. Conversely, Liberal and Conservative parties – on average – discuss environmental concerns more often together with the political system or social groups than with welfare. Social groups include labour groups, farmers, middle-class, underprivileged groups as well as non-economic demographic groups.

Overall, we can show that environmental issues are more closely linked to economic matters than to any other policy domain for all party families. Nevertheless, we also see that Ecological and Social Democratic parties also link welfare issues to environmental protection to a greater extent in comparison to other parties.

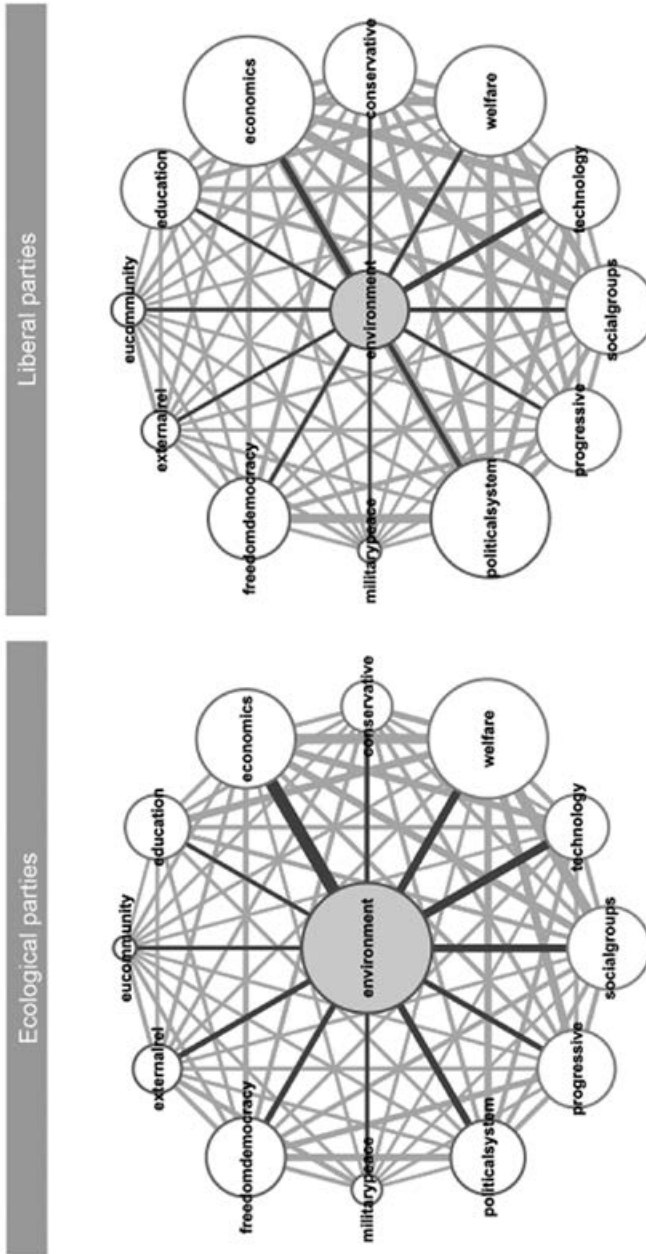
Policy Integration across Party Families and Welfare States

Based on the social network analysis, we calculate integration indicators that measure the connectedness between the environmental and welfare policy domain. The integration score shows how closely environmental and welfare topics are connected to each other in a party manifesto. The degree of integration is the share of links between the two domains relative to all environment and welfare links in the network of policy domains. Higher values on the measure, which range from zero to one, reflect a higher degree of integration or connectedness of the two fields. For example, a party manifesto in which all environmental quasi-sentences are followed by welfare-related quasi-sentences or vice versa would have an integration score of one, whereas



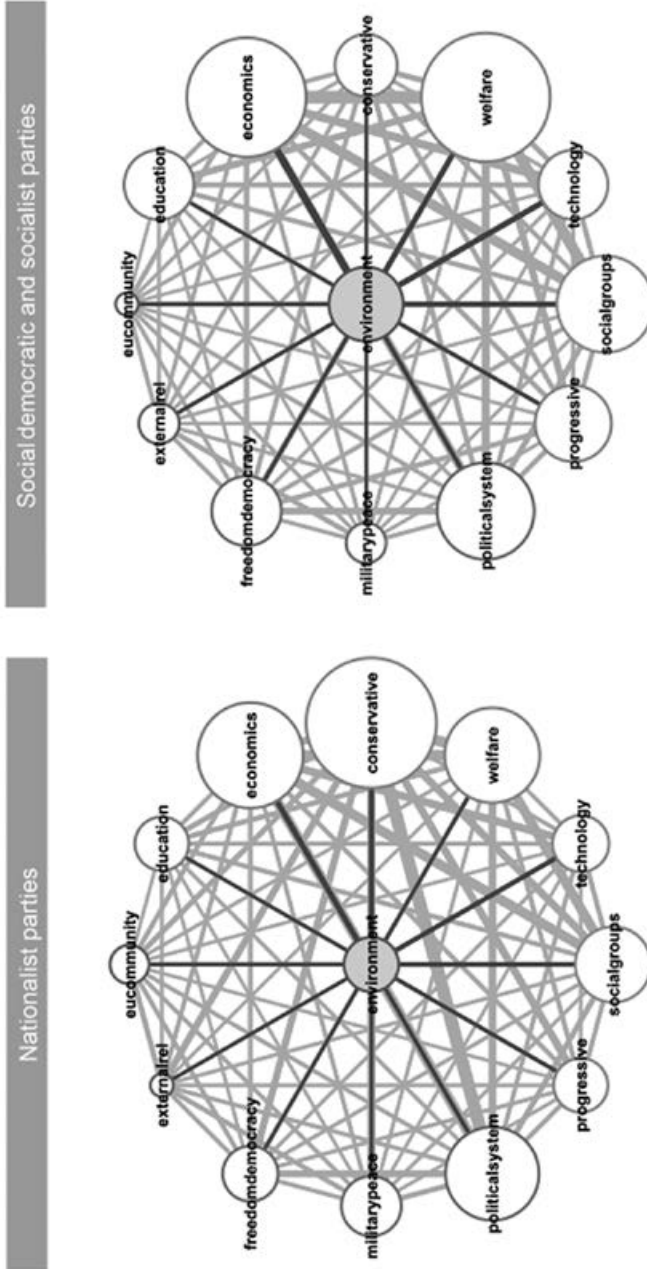
Note: The thickness of the edges represents the strength of the relationship, that is, the number of links between two policy domains.
Source: Manifesto data 2000–18.

Figure 4.4a Networks of policy domains across party families



Note: The thickness of the edges represents the strength of the relationship, that is, the number of links between two policy domains.
Source: Manifesto data 2000–18.

Figure 4.4b Networks of policy domains across party families



Note: The thickness of the edges represents the strength of the relationship, that is, the number of links between two policy domains. Source: Manifesto data 2000–18.

Figure 4.4c Networks of policy domains across party families

a party manifesto in which only 50 per cent of all environmental or welfare quasi-sentences are followed by a quasi-sentence from the other domain would have an integration score of 0.5.

Figure 4.5 shows the distribution of the integration of environmental and social welfare issues across party families and different welfare state regimes. The party family typology is based on the classification used in the Manifesto Database; for the welfare state typology, see Table 4.2. For each party family and welfare state regime, the boxplots show the median (50th percentile) and interquartile ranges (25th and 75th percentile) of the variable. Black points represent outliers that are larger or smaller than 1.5 times the interquartile range, which is depicted in the graph in the form of black whisker lines. Please note that not all the party families are represented in all types of welfare states. No Agrarian parties exist in Liberal and Mediterranean welfare state regimes and no Nationalist parties exist in Liberal welfare state regimes.

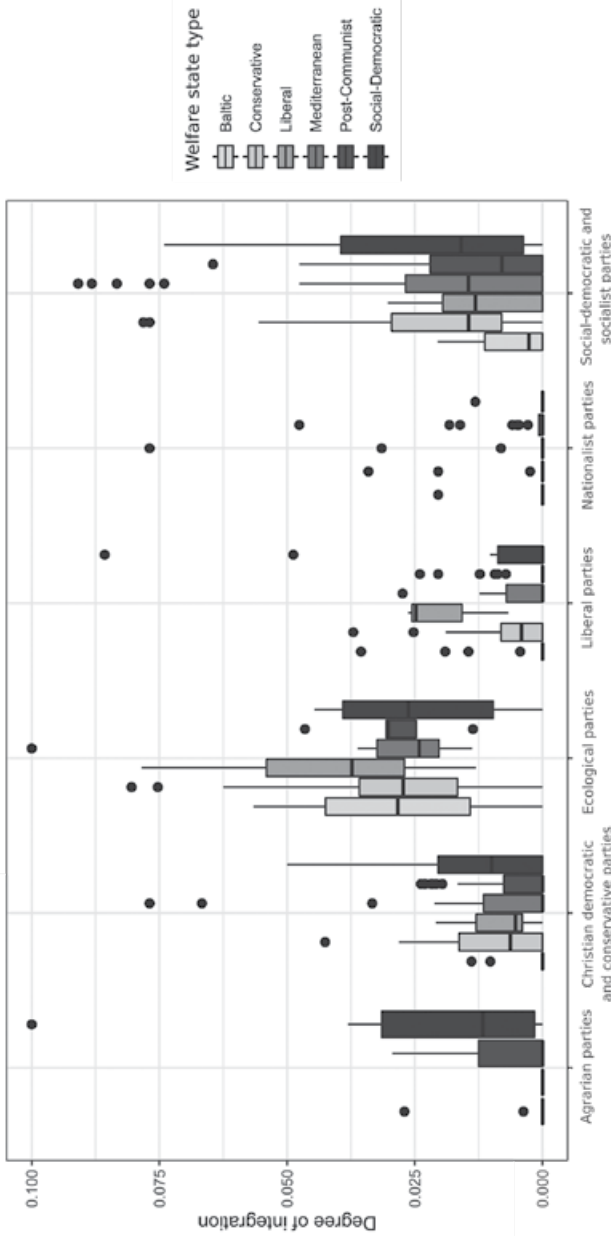
Figure 4.5 gives several interesting insights. Both factors, party family and the welfare state regime, influence the extent to which environmental and welfare issues are connected. The highest integration of the two domains can be found in Ecological parties irrespective of the welfare regime their country belongs to. For example, the level of policy integration of Ecological parties in Liberal welfare regimes is more than ten times higher than that of their Conservative and Christian Democratic counterparts. Comparing Ecological parties across welfare states, Figure 4.5 suggests that ecological parties in liberal welfare states seem to have the highest degree of integration of environmental and welfare topics.

Similarly, we find elevated integration levels of the environmental and welfare policy domain for Social Democratic and Socialist parties. Also, parties based in Social Democratic welfare state regimes show typically a higher environment-welfare connectedness level irrespective of their party family. The Nationalist party family is the only one that consistently shows very low levels of policy integration across all welfare state regimes.

It is worthwhile noting that for all groups, substantial heterogeneities exist, suggesting that parties belonging to the same party family and welfare regime can reveal very different levels and patterns of environmental-welfare integration. Overall, the results suggest that while both party family and welfare state regime play an important role, there seem to be other more idiosyncratic factors on party level that shape the level of policy integration.

DISCUSSION AND CONCLUSION

In this chapter, we have investigated the connection of environmental, social and economic issues in electoral programmes using the comparative Manifesto Project Database. We have explored the relative share of quasi-sentences for



Note: Party manifesto represents one observation (n = 672 manifestos in total). The y-axis shows the degree of integration, which is the share of links between the environment and welfare domain relative to all environment and welfare links in a party manifesto. The graph shows boxplots with distributional information: median (horizontal bars), interquartile ranges (boxes), 1.5x interquartile ranges (whiskers), outliers (points). No Agrarian parties exist in Liberal and Mediterranean welfare state regimes and no National parties exist in Liberal welfare state regimes.
 Source: Manifesto data for 2000–18.

Figure 4.5 Differences in the integration of environmental and welfare topics across party families in Europe

different policy domains over time and show that the environmental policy domain first appeared in party manifestos towards the beginning of the 1960s and has steadily increased since then with a small peak in the 1980s.

Despite the trend towards increasing levels of environmental concerns, economic and welfare issues are still more dominantly represented in electoral programmes in comparison to environmental issues. The increased importance of the latter over time has been mainly driven by parties belonging to the Ecological party family and to a lesser extent by parties from the Agrarian family. Recently, parties belonging to other party families, for instance, Social Democrat/Socialist or Conservative/Christian Democratic parties, also began putting a stronger emphasis on the environmental domain. Still, the difference is quite striking: while the Ecological party family devoted around 20 per cent of its manifestos to ecological issues, this value ranged from only 5 per cent to 10 per cent for the other party families.

Also, across European countries, environmental issues are still less prominent in comparison to economic and welfare policy issues in almost all countries. While environmental issues play a greater role in Scandinavian countries (particularly in Sweden and Norway), they are less important in Eastern Europe and Southern Europe.

Concerning the integration of environmental concerns with other policy areas, we observe that in every party family environmental concerns are most often linked with economics, followed by technology. The technology domain includes scientific and technological developments, research, infrastructure and methods of transport. Ecological and Social Democratic parties often link environmental issues with welfare and social groups, followed by the political system. Conversely, Liberal and Christian/Conservative parties discuss environmental concerns on average more often together with the political system or social groups than with welfare.

Exploring further the connectedness between the environmental and the welfare policy domain, we show that the highest integration of the two domains can be found in Ecological parties irrespective of the welfare regime their country belongs to. Also, parties based in Social Democratic welfare state regimes show typically a higher environment-welfare connectedness level irrespective of their party family. The National party family is the only one that consistently shows very low levels of policy integration across all welfare state regimes.

Our study faces different limitations, which are important for the interpretation of our results on the relevance and integration of environmental issues in electoral programmes. First, our evidence is mostly descriptive, and highly aggregated. While our approach is informative, it does not allow us to derive more detailed conclusions about underlying social and political mechanisms that have led to a particular outcome on party level within a specific country.

These processes are highly context dependent and might be influenced by a variety of factors and institutional settings, which we do not control for in our analysis. A further limitation is related to the data used in our analysis. While party manifestos contain information about parties' political direction, they do not reflect the actual policies implemented in a country and hence provide only limited information about the extent to which environmental topics have found their way into political decision-making. Nevertheless, the manifestos provide useful insights to the agendas of political parties as one of the main pillars of political decision-making in modern democratic welfare states. Further research is needed to explore some of the identified trends in our data and to better understand what the underlying drivers of some of the observed processes are. In this regard, qualitative analyses as presented in some of the other chapters of this edited volume are important as they can effectively complement the quantitative findings presented in this chapter and yield additional insights.

NOTES

1. For selected elections in Europe (Sweden, Northern Ireland), data is also available prior to 1945. Due to the small number of manifestos ($n = 17$) between 1921 and 1944, we focus our analysis on elections/manifestos after 1944.
2. A more detailed description of each `cmp_code` can be found in the Manifesto Project Dataset Codebook (Volkens et al., 2019).

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APPENDIX

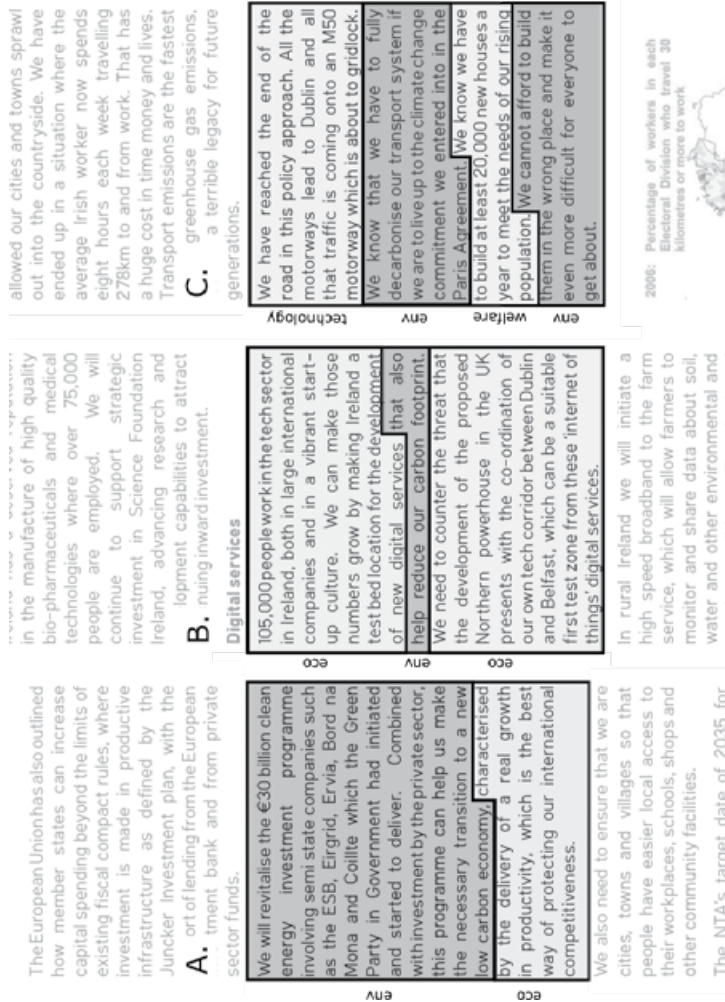
Table 4.A1 Overview of countries included in the sample

First Year in the Manifesto Data	Country
1944	Sweden
1945	Denmark, Finland, Luxembourg, Norway, United Kingdom
1946	Belgium, France, Iceland, Italy, the Netherlands
1947	Switzerland
1948	Ireland
1949	Austria, Germany
1974	Greece
1975	Portugal
1977	Spain
1990	Bulgaria, Croatia, Czech Republic, Hungary, Romania, Slovakia, Slovenia
1991	Poland
1992	Estonia, Lithuania
1993	Latvia
1996	Cyprus

Method Description

To illustrate our approach on how links between different issues are formed, we show three excerpts of the Irish Green Party Manifesto for the general elections held in 2016 in Figure 4.A1. Around one-quarter of all quasi-sentences in the whole manifesto falls into the environmental realm. While this is interesting for examining how salient different issues are to parties and countries, we are interested in which different topics are linked to each other. Figure 4.A1 (A)) shows how a clean energy investment programme combined with other investments by the private sector to foster the transition to a new low carbon economy (coded as *Environment* – cmp_code 501) is linked to productivity growth and the protection of international competitiveness (coded as *Economics* – cmp_code 410). Hence, here we establish an *Environment–Economics* link. Figure 4.A1 (B)) shows another link between *Environment* and *Economics*: here the manifesto deals with the tech sector and digital services (coded as *Economics* – cmp_code 402), while emphasizing that the development of new digital services can help to reduce the carbon footprint (coded as *Environment* – cmp_code 501). This shows that even while discuss-

ing employment in the tech sector, the party relates this issue to the overarching goal of becoming more environmentally sustainable. Lastly, Figure 4.A1 (C)) illustrates the link between *Technology* (and infrastructure), *Environment* and *Welfare*. In the section on their green vision on transport, the Irish Green Party acknowledges the importance of the growing need of housing (coded as *Welfare* – cmp_code 504). Simultaneously, they point out that although it is important to build houses for a growing population, one has to be mindful on where to build them to prevent rising greenhouse gas emissions through commuting. These three examples illustrate how different policy fields can be integrated with each other and are not dealt with in an isolated manner.



Note: Excerpts from pp. 5, 12 and 15, respectively.

Figure 4.A1 Excerpts from the Irish Green Party Manifesto 2016 'Think ahead, act now'