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and Environmental Attitudes
across European Welfare State Regimes“

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1. Introduction

The human impact on climate change is rather undisputed amongst scientists. The calls for action – in whatever form – have reached the public agenda, inspiring protests, pledges and/or defensive reactions throughout society. Nonetheless, the debate as to how the consequences of a looming climate crisis can be mitigated is far from reaching a consensus. As Allen et al. (2019: 22) point out: “Public acceptability depends on the individual’s evaluation of expected policy consequences, the perceived fairness of the distribution of these consequences and perceived fairness of decision procedures (*high confidence*).” Public acceptance of environmental policies might benefit from concerns about climate change and environmental topics gaining relevance constantly over the last years. By doing so, it has surpassed other issues that have long been high-ranking concerns among citizens. Figure 1 depicts the proportion of respondents in Austria, who think climate change, energy supply and the environment are the most important problems for the country as opposed to migration, which has dominated the discourse in this country at least since the refugee movement in 2015. While the latter topic declined steadily, in June 2019 almost 30 % of the sample of Austrian inhabitants mention climate change, the environment or energy supply as the most pressing issue.

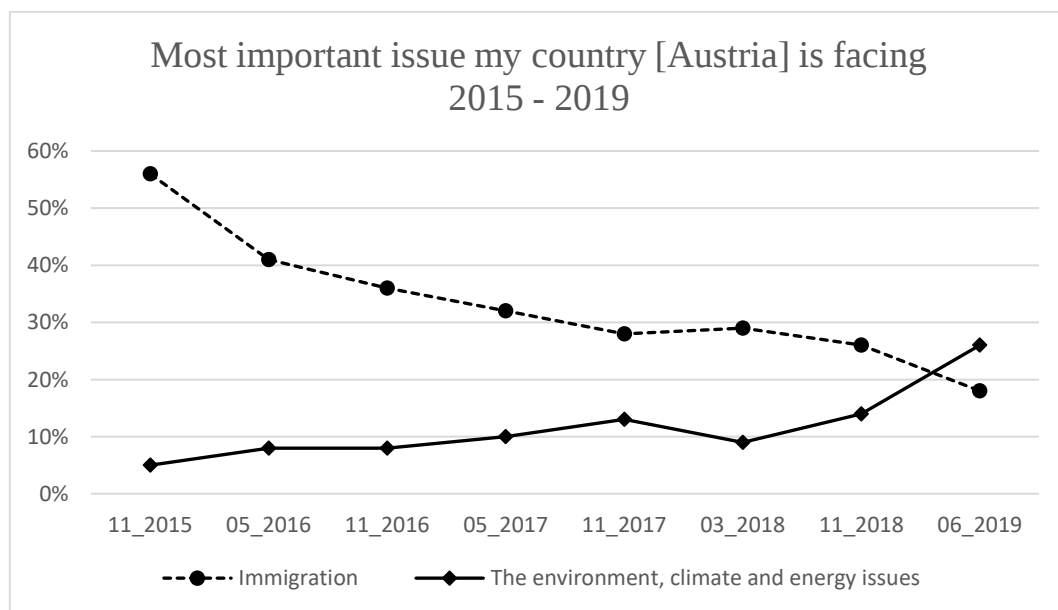


Figure 1 - Development of most important issues in Austria 11.2015 – 06.2019; Data provided by the European Commission (Eurobarometer) selected rounds between 84.3 and 91.5;

These categories, however, remain very broadly defined and do not allow for an assessment as to how the problems arising in the wake of climate change should be dealt with by the political system. Environmental attitudes have inspired a wide range of theories about the reasons for differences in those attitudes (for an overview see Marquart-Pyatt 2012). Among those reasons,

economic characteristics play an important role to explain differences across nations globally (Inglehart 2007; Brechin 1999; Dunlop/York 2008) and, more specifically, across welfare state regimes in the developed world (Marquart-Pyatt et al. 2019). Importantly, environmental attitudes are no longer considered to be one-dimensional, but rather consist of various characteristics, which differ across members of society (Dunlap/York 2008). As Marquart-Pyatt (2012) finds, socio-economic and demographic factors such as age, income, education, or gender shape the concerns about environmental issues to a large extent on an individual level. McCright et al. (2016) find an effect of political ideology on climate change views, which, additionally, differs across European regions. Marquart-Pyatt et al. (2019) then assess the influence of such characteristics on concrete environmental policy preferences and energy efficient behaviour and find multiple dimensions across welfare regimes, which differ with regard to individual-level characteristics. Two key takeaways from this literature are, first, the multidimensionality of environmental policy preferences and secondly, the contextual influence of states and welfare regimes. What remains a blind spot is the question of how existing policy regimes affect environmental attitudes. In other words, do citizens' environmental attitudes differ with regard to their welfare preferences?

This may seem a long shot but taking a step back and assessing the origins of the welfare state regime theory developed by Esping-Andersen (1990) may shed light on some of the mechanisms at work. With respect to social policy he writes:

“The extension of social rights has always been regarded as the essence of social policy. Inspired by the contributions of Karl Polanyi, we choose to view social rights in terms of their capacity for ‘de-commodification’. The outstanding criterion for social rights must be the degree to which they permit people to make their living standard independent of pure market forces. It is in this sense that social rights diminish citizens’ status as ‘commodities’.” (Esping-Andersen 1990: 3)

The notion of citizens as commodities and the necessity of decommodification of the very same goes back to the concept of fictitious goods subject to capitalist societies developed by Polanyi (1944). Among these goods are – apart from labour – money and nature. The former is of less concern to the present project. The category of nature is key in understanding welfare states’ responses to climate change related policies. To extend this rationale, addressing environmental policies is, at least in (post-)industrial nations, only comprehensive when taking existing welfare regimes into account. Environmental policy regimes, rendered necessary by the same conception of fictitious goods as social policy regimes, thus aim at a decommodification of nature through state intervention (for an overview on this relationship see Gough 2016; Gough et al. 2008). As cited at the beginning of this chapter, the perception of such policies is very much

dependent on individual preferences. These preferences are rooted in existing policy regimes and have the potential to affect the distribution of resources therein. Thereby, it may seem that environmental policies are no complement to welfare policies, but rather a supplement. And this supplement may significantly influence and/or deteriorate the perception of the former as it adds another perspective to a multidimensional conception of welfare state policies (Bonoli/Natali 2012a; 2012c; Häusermann 2012).

Research on welfare regimes and social policies implemented therein is extensive. Fossati/Häusermann (2014), for example, identified two spheres of social policy. Namely, one consists of short-term redistributive policies and the other of long-term social investment policies (see also Garritzmann et al. 2018; Neundorf/Soroka 2018). Preferences across such dimensions vary to a large degree as has been further argued by Häusermann et al. (2019a, 2019b) leading to new coalition potentials across parties and new class coalitions in the electorates of European societies. Such coalitions and their members are characterized by distinct views about certain areas of social policies. If the exposure to social risks (Armingeon/Bonoli 2006; Bonoli 2006) and in a next step the preferences about social policies are pronounced enough, they might affect other areas of state intervention, for instance, in the realm of environmental policy. Spies-Butcher/Stebbing (2016) address this question for Australia and test the importance of environmental concern with respect to welfare attitudes, demographic characteristics (as described above), political identification and “post-materialist” values (for the discussion of the latter see Inglehart 2007; Brechin 1999; Dunlop/York 2008). However, they neither take the multidimensionality of social policy into account nor the one of environmental policy. That is, Spies-Butcher/Stebbing (2016) include the effect of social policy spending and redistribution in general in their analysis and assess the probability of voters prioritizing climate change as a one-dimensional issue. This one-dimensionality is the gap this thesis seeks to fill. Based on the research presented above the guiding research question is as follows:

How do different dimensions of social policy preferences influence different dimensions of environmental attitudes across welfare state regimes in Western Europe?

To assess this question it is necessary to, first, elaborate in more detail on the mechanisms behind environmental attitudes, which will be the content of the next section. In a second step, it is paramount to work on the potential dynamics of welfare state regimes and environmental attitudes and how an interaction between these two policy fields might play out – whether in conflict or in harmony. Next on the agenda is the description of social policy preferences and their dimensions. This includes a description of individual characteristics associated with a

specific type of social policies. I will derive hypotheses after each section respectively. In the subsequent chapter I will describe the data and methods applied to test the described hypotheses. In line with research on social and environmental policy preferences, exploratory factor analysis (EFA) (see Fossati/Häusermann 2014; Costello/Osborne 2005; Marquart-Pyatt 2008) and OLS regression analysis will be applied in order to assess the multidimensionality of environmental policy as well as test influences on the dimensions discovered here (Marquart-Pyatt et al. 2019). In doing so, data of the European Social Survey (ESS) Round 8 from 2016 will be used, as this dataset includes items on welfare attitudes as well as environmental policy and energy consumption preferences. This is followed by a presentation of the results across welfare regimes. The penultimate chapter reconnects the findings to the literature and theory assessed previously only to draw conclusions the work conducted in this project in the last chapter.

2. Theoretical Framework

The subsequent section is divided into three main parts. First, environmental attitudes will be put under scrutiny. Here, two keywords are at the centre of attention, namely multidimensionality and confounders. By assessing the latter aspect, I identify influential factors on an individual level as well as on a societal level. This is the baseline for the analysis of the former, namely the multidimensionality of environmental policy preferences. In a second part, it is necessary to take a step back and assess the origins of welfare states as the macro-level basis for the analysis conducted thereafter. The aim is to establish a chronologically dependent mechanism for the interaction between welfare states and their so-far-neglected environmental policy dimension. In a third step, social policy and developments in this field will be analysed in order to draw conclusions on how these preferences can influence environmental policy preferences in the context of established welfare state regimes. Based on these three parts, hypotheses are derived, which are subject to empirical analysis further below.

2.1 Multidimensional Environmental Attitudes

This subsection will take a closer look at environmental attitudes and the potential for multidimensionality in this policy field. For this purpose, the discussion will be launched at a macro-level addressing contextual factors and assessing the insights gained from “post-materialist values” (Inglehart 2007; Brechin 1999; Dunlop/York 2008) for the analysis in this paper. In other words, is there more to the emergence of environmental attitudes than just the socio-economic status? Following this assessment, environmental attitudes will be discussed with regard to both, factors influencing the latter as well as different dimensions environmental attitudes can

manifest themselves in (Marquart-Pyatt 2008; 2012; McCright et al. 2016). Lastly, a description of the dimensions for the analysis conducted in this paper is given.

2.1.1. Contextual Factors of Environmental Attitudes

In the context of developed societies, the notion of postmaterialist values (Inglehart, 2007) is one way of explaining how differences in individual priorities towards non-subsistence related aspects are of relevance. Overall, it highlights the dichotomy of materialist and postmaterialist values. The former consist of preferences regarding policies, which aim at reducing basic material needs and guarantee a level of resources sufficient to fulfil human needs. The latter are preferences, which go beyond such material needs and include “gender equality, tolerance of outgroups political activism, environmental activism, interpersonal trust, and a number of additional orientations that have been labelled ‘self-expression values,’” (ibid.: 230). Inglehart (2007: 238) offers three lines of analysis for the dichotomy of materialist and postmaterialist values, namely “comparisons of rich and poor countries”, “generational comparisons”, and “time-series evidence”. The first comparison highlights the need for sufficient resources for individuals and the advantage richer countries offer their inhabitants in this respect. When scarcity is no longer a dominating factor, materialist values make way for postmaterialist ones (ibid.: 233 f.). The second argument of intergenerational differences is supported by cohort study data and emphasizes an individuals’ context of socialization. Such differences persist if generations experienced different levels of socio-economic welfare while growing up, thereby refuting arguments of life-cycle effects (ibid.: 226 ff).¹² Both arguments are supported by the last approach to the analysis, which leads to Inglehart’s conclusion in favour of generational change as opposed to life-cycle effects with respect to the prevalence of post-materialist values in the developed world (versus developing world).

The question now is, whether post-materialist values are a sufficient explanation for environmental activism, which are part of these values, and if empirical evidence supports this claim. If there is more to environmental activism (and thereby attitudes) than intergenerational and socio-economic differences, attitudes are shaped by more than the dichotomy of materialist and postmaterialist values. Dunlap/York (2008) assess this question by comparing developed and developing nations on a global level. By focussing on environmental attitudes, the authors

¹ A similar rationale is applied by Neundorff/Soroka (2018) when assessing the popularity of the welfare state and, more specifically, redistributive preferences, which both will be discussed in further detail below.

² Life-cycle effects here refer to changing preferences due to age. That is, an individual’s preferences at a young age differ from the same person’s interests at old age. Generational effects, on the other hand, refer to entire birth cohorts, which differ in certain attitudes throughout their lives. This means, that postmaterialist values are no characteristic of the young, but rather of younger cohorts (see also Inglehart 2007).

attempt to (de-)validate common explanations for the establishment of environmentalism as a politicised factor. Dunlap/York's (2008) critique of Inglehart's approach is based on its evolution to a "objective problems – subjective values" approach (OPSV) (Brechin 1999: 795). The latter has to be explained in a bit more detail.

By comparing environmental attitudes in rich as well as poor countries, Brechin (1999) lays bare the shortcomings of Inglehart's notion of environmentalism being only part of postmaterialist values. Two particularly interesting findings are striking. First, there appears to be no statistically significant differences in attitudes towards global environmental problems across those countries (*ibid.*: 802). Thus, the "Subjective Values" part of the OPSV-approach is not reserved for affluent countries. Second, respondents in low-income countries differ significantly with respect to their attitudes towards local environmental problems from those in high-income countries (*ibid.*: 800). This is the "Objective Problems" part of this approach, which is more prevalent in poor countries. Brechin's (1999) main argument is that environmental concerns are more nuanced and can hardly be reduced to neither the materialist-postmaterialist dichotomy nor the OPSV approach. Adversely, being confronted with risks triggered by environmental changes, leads citizens to develop significantly different perceptions of these problems.

This is where Dunlap/York's (2008) critique steps in. By analysing several waves of the world values survey (WVS) in poor and rich income countries they attempt to clarify the OPSV thesis. Applying correlational analysis, they find differences in several dimensions of environmentalism. Among these dimensions, making personal sacrifices (corresponds to willingness to pay, see below and Marquart-Pyatt 2008; 2012) is negatively correlated to the affluence of the respondents' countries (measured as GDP per capita). Moreover, evaluations of the perceived seriousness of environmental problems (corresponds to threat awareness, see below and Marquart-Pyatt 2008; 2012) scores higher in high income countries. Lastly, respondents' approval of ecological movements correlates, again, negatively with GDP per capita in the respective countries (Dunlap/York 2008: 541 f.). The findings are partly corroborated by subsequent survey waves, especially with respect to sacrificing personal benefit for environmental protection, while measures such as green consumerism and environmental activism appear to be more prevalent in high-income countries (*ibid.* 543 ff.). Lastly, the aspect of personal sacrifices is negatively correlated to the affluence of a respondent's country, being the only significant difference observed throughout all three waves analysed by Dunlap/York (2008: 547 ff.).

This global comparison adds some important details to the postmaterialism as well as the OPSV theses insofar as the former lacks a multidimensional understanding of environmentalism. The latter is somewhat contradictive with respect to personal sacrifices. That is, individuals in poorer countries appear to be more willing to give up some of their income in order to protect the environment. Or as Dunlap/York put it: “To conceptualize environmental quality as something that only the wealthy can afford, and that is of little concern to the poor, does violate the facts.” (ibid.: 550). Adversely, it appears that environmental preferences are more than just subject to differences across rich and poor or old and young, even though both aspects play a significant role in the analysis of these attitudes.

In this context environmental concerns are suspected to drive preferences in the field of environmental policy. Marquart-Pyatt (2008) puts these concerns under scrutiny by assessing them across industrialized nations. Environmental concern is thereby defined according to problem awareness, attitudes towards efforts to contain effects, and the willingness to contribute personally (Marquart-Pyatt 2008: 1314). Picking up on the dimensions introduced by Dunlap/York (2008), Marquart-Pyatt (2008) conceptualizes multiple dimensions of environmental concern. One aim is to create consistency of these dimensions and how to measure them across industrialized nations. The first of the two dimensions is “General Environmental Attitudes” (ibid.: 1318). It deals with the evaluation of threats, the role of human behaviour in environmental damage, the value of present action for economic or other policy fields as opposed to the future value of adequate environmental action and, lastly, a common good dilemma (own action only if others contribute) (ibid. 1318). The second dimension is labelled “Pro-Environmental Behavioural Intention” (ibid.: 1318) and includes individual sacrifices for action against environmental damage, such as willingness to pay higher prices or taxes, cuts in standard of living and the value of the environment above other areas of life (ibid.: 1318). Socio-economic and demographic factors influencing the dimensions described are captured by gender, age, education, income, knowledge about scientific research and awareness of human influence on the climate. Marquart-Pyatt’s (2008) analysis shows consistent results across industrialized nations supporting the reliability of the measurement approach for the two environmental concern dimensions, however, with interesting differences across groups of states for example with respect to a post-communist heritage indicating possible contextual differences. Such differences might result from fewer resources or less knowledge (awareness) of environmental problems (Marquart Pyatt 2008: 1323 ff.).

The baseline of this subsection is twofold. First, affluence plays a role in acknowledging the environment generally as a political field. However, it does not say anything about multiple

dimensions of environmental concern. This is the second takeaway. Being confronted with a problem (“Objective Problem” (Brechin 1999), affects the concern about the environment in addition to a country’s socio economic status. However, environmental concern is multi-layered and individual-level aspects might as well play a role in the formation of a person’s attitudes.

2.1.2. Individual Level Aspects of Environmental Attitudes

In a more nuanced analysis, Marquart-Pyatt (2012) addresses the question of underlying mechanisms for environmental concerns with respect to individual-level as well as country-level factors.³ Marquart-Pyatt (2012: 1089 ff.) constructs three dimensions of environmental concern. The first dimension, “environmental threat awareness” includes respondents’ concern of pollution (air and water), agricultural use of pesticide and/or chemicals and the greenhouse effect (ibid.: 1089). The dimension on “environmental efficacy” includes evaluations how effective respondents think their own actions will be, of other concerns more important than the environment and the trust in technological advances as well as scientific research (ibid.: 1090). The last dimension “willingness to pay” as measured by items dealing with cuts in income and standard of living, increase in taxes, and the necessity of spending regardless of the amount (ibid.: 1090). These three dimensions are a first indicator for the multidimensionality of environmental attitudes.

The results show interesting similarities and differences across socio-economic indicators in all three dimensions. Economic prosperity does, for example, decrease threat awareness and increase the feeling of environmental efficacy. However, it has no effect on the willingness to pay. Individual-level indicators included in this analysis offer, too, only partial explanations for differences across dimensions. Education and income both enhance environmental efficacy and the willingness to pay but show now significant influence on the dimension of threat awareness. Better educated, more affluent individuals thus evaluate their own action’s impact to be stronger and are ready to make economic sacrifices for the environment. Age decreases threat awareness and environmental efficacy, thereby partly supporting Inglehart’s (2007) thesis of intergenerational change. However, it has no effect on the willingness to pay. As for gender differences, identifying as female fosters threat awareness and environmental efficacy but cannot explain the dimension of willingness to pay (see Marquart-Pyatt 2012: 1993).

³ Channeling the macro-level factors described above Marquart-Pyatt (2012: 1091) includes GDP per capita, democracy scores, level of industrialization and integration in the world polity. A number of environmental measures is included to assess the influence of environmental conditions on the dimensions of environmental concern.

What the discussion thus far suggests is that there is more to environmental concern than just postmaterialist values founded in intergenerational differences as well as socio-economic indicators. Moreover, multiple dimensions of environmental concern appear to be shaped by thus far unknown confounders. McCright et al. (2016) address this gap by introducing political ideology into the debate of environmental attitudes, that is views about climate change. Specifically, McCright et al.'s (2016) analyse ideological differences with regard to climate change views between party supporters in the USA and in Europe. Climate change views are assessed via attitudes towards the human influence on climate change, threat awareness, action against climate change, willingness to pay and support for emission reduction policies. McCright et al. (2016: 349) find a left-right divide for all of the assessed aspects, but only in countries without a state socialist past. That is, climate change or environmental policies more broadly, appear to be politized on a left-right cleavage in Western Europe, but not so in former state socialist countries.

Marquart-Pyatt et al. (2019) shed light on these contextual factors by introducing the notion of welfare state regimes (Esping-Andersen 1990) into the debate about climate change preferences and energy policy preferences.⁴ Their goal is to identify consistent measures across these regimes. In this framework, Marquart-Pyatt et al. (2019: 8) assess green energy policy preferences consisting of various items. The first deals with the approval of higher subsidies for renewable energy sources, higher taxes for fossil fuels, and sales bans of inefficient household commodities. The second dimension under scrutiny is “energy-efficient behavioural intention” (ibid.: 8) and consists of only one item which tries to assess the probability of an individual's energy efficient behaviour in future.

Explanatory variables are in part similar to those used in the research described above, that is gender, age, education, income as well as political ideology. In addition to these factors, Marquart-Pyatt et al. (2019: 8 f.) introduce several latent constructs as explanatory variables. These are attitudes towards renewable energy, preoccupation with energy supply with regard to both governmental actions (cuts in supply, dependencies on foreign powers, or fossil fuel sources) and external shocks (natural catastrophes, terrorist attacks, or technological failures). Similar to Marquart-Pyatt (2012) a measure for personal efficacy is included, measuring an individual's assessment of the impact of her own action on climate change (Marquart-Pyatt et al. 2019: 9).

⁴ As these regime types will be analysed in more detail further below, it suffices to say at this point that they are the result of several cluster analyses whose subject of analysis were macro-level indicators of welfare state spending and the degree to which these spending levels succeed in reducing individuals' economic risk exposure.

While the authors find significant effects for almost all explanatory variables on the dimensions of environmental attitudes, they do not assess the significance of the differences across welfare regimes, opening up room for further analysis. In other words, they do not address the statistical significance of possible differences in environmental policy preferences depending on the regime type an individual lives in, as they aim to find a consistent measure for the dimensions of interest across such states.

While multidimensionality of environmental concern is an important aspect for the analysis of general attitudes in this field, this is also a valid claim for distinct policy measurements. Such a more specialized view is offered by Gverrek/Uyduranoglu (2014), who investigate how details of concrete environmental policies affect the public's attitudes towards that. Specifically, they assess the design of a carbon tax in Turkey with respect to economic as well as framing aspects. What they find is that progressive taxes are preferred over regressive taxes and that private cost associated with a policy negatively affects the approval towards said policy. Intuitively, if individuals fear to be negatively affected by additional taxes, they neglect these taxes. However, framing matters. Policies designed to raise awareness for climate change as well as enhance redistributive and environmental politics in general, positively affect the public attitude towards carbon taxes (Gverrek/Uyduranoglu 2014: 193).

Aasen/Vatn (2018) compare this individual perspective to a social responsibility framework and conduct a survey experiment in Norway. In more detail, they assess attitudes of car owners towards car reduction policies framed either as individual responsibility or as social responsibility. Aasen/Vatn (2018: 110) find that the individual responsibility framework induces higher approval of policies aimed at reducing space for cars and enhancing the use of public transport, but no significant effects for higher taxes. However, individuals with a strong feeling of social responsibility favour an increase of petrol taxes and a reduction of space for cars, while no effect is found for more public transport. For individualists, on the other hand, the results do not change, and the results are similar to the ones described above (*ibid.*: 110 f.). Although very context specific, these results suggest more than just plain approval or disapproval for environmental policies. Adversely, cultural as well as economic factors seem to be decisive for public support of environmental policies. Additionally, and as suggested by Gverrek/Uyduranoglu (2014), the socio-economic cost associated with such policies might alter approval towards the very same significantly, allowing for the conclusion that individuals, who are subject to financial constraints might react differently from those who are more affluent.

However, such cost might be greatly mitigated by welfare states and thereby affect attitudes towards environmental policy. Spies-Butcher/Stebbing (2016) address this question for the case of Australia. By analysing the interaction of welfare policy and environmental policy attitudes the authors attempt to disentangle potential interdependencies between these policy fields with respect to voters' priorities. Spies-Butcher/Stebbing (2016: 752) find mixed support for the interactions between welfare attitudes and environmental attitudes. While being in favour of increased spending over tax cuts is associated with higher probability of prioritizing environmental policy, this is not the case with redistributive politics (as a general category; e.g. unemployment benefits), especially so when controlling for party affiliation. Coming back to Inglehart's (2007) post-materialism approach, Spies-Butcher/Stebbing (2016: 752) find that the effect of preferences towards higher spending as opposed to higher taxes remains significant when including postmaterialist values in the equation. These findings suggest that there is an interdependency between social and environmental policy. However, it is not clear as to how this interdependency works. This remains unclear, partly because Spies-Butcher/Stebbing (2016) do not take into account the multidimensionality of both, the environmental as well as the social policy sphere (see section 2.3).

As far as individual-level factors for environmental attitudes are concerned, this section has delivered some clarity. Socio-economic, demographic as well as political factors all play a role in shaping these attitudes. In the next section, I will summarize the argument of this section and derive the first hypothesis.

2.1.3. Reassessing Multidimensional Environmental Attitudes

The aim of this section has been to get to the roots of environmental attitudes. Starting from a comparison of macro-level indicators via the analysis of Inglehart's (2007, Brechin 1999) post-materialism framework it has been shown that higher socio-economic status is not the only reason for environmental concerns. Instead, such concerns are widely present without significant differences across groups of different levels of affluence (Dunlop/York 2008). Extending this analysis to the micro-level, a multidimensionality of environmental attitudes has been shown (Marquart-Pyatt 2008) and potentially influential aspects have been pointed out on both the macro- and the micro-level (Marquart-Pyatt 2012; McCright et al. 2016). Including the socio-economic context into the analysis (Marquart-Pyatt et al. 2019) has helped to point out the interdependencies of economic and environmental indicators. Following from here, environmental attitudes in this thesis are understood as results from environmental concerns as well as preferences towards policy actions to address these concerns.

Environmental attitudes do not only consist of more than one dimension, (i.e. “willingness to pay”, “environmental efficacy”, and “threat awareness” (Marquart-Pyatt 2012), “personal efficacy” (Marquart-Pyatt et al. 2019: 9)); the attitudes towards these dimensions differ with respect to an individual’s affluence (income as well as education), gender, age or political orientation (Marquart-Pyatt 2008; 2012; Marquart-Pyatt et al. 2019; McCright et al. 2016). The main arguments for the emergence of these dimensions of environmental attitudes are first, that post-materialist values are drivers of the latter and, secondly, that their prevalence increases with increasing affluence on an individual level (Marquart-Pyatt 2012; Inglehart 2007). Thereby, differences across dimensions can be identified. While willingness to pay and environmental efficacy increase with increasing affluence, this is not the case for environmental threat awareness (Marquart-Pyatt 2012). Personal efficacy measures an individual’s feeling of responsibility and feasible action towards climate change (Marquart-Pyatt et al. 2019). All of the dimensions found in the research discussed above should be generally observable due to their roots in socio-economic characteristics as well as observation of constantly progressing climate change as also claimed in the OPSV-thesis (Brechin 1999). This is why the first hypothesis essentially deals with reassessing these indicators with the data at hand:

H1: Environmental attitudes are multidimensional due to socio-economic as well as political concerns of individuals.

Evidence from very specialized contexts such as a carbon tax in Turkey (Gvervek/Uyduranoglu 2014) and car traffic policy measurements in Norway (Aasen/Vatn 2018) has shed light on the range of multidimensionality, which comprises not only general attitudes but is also visible within specific policies. Furthermore, personal costs or benefits associated with environmental policy actions greatly influence the approval of such measurements. Spies-Butcher/Stebbing (2016) find mixed support for the interdependencies of prioritizing environmental policy with regard to social policy preferences, however not taking the multidimensionality of both policy fields into account. The latter interdependency is subject to the next part of the theoretical section. How can the interaction of social and environmental policy be conceptualized in the sphere of the welfare state?

2.2 Fictitious Goods, Social Risks, and Multidimensionality in Welfare State Regimes

The previous section has helped to clarify the notion of environmental attitudes and identify potential influential aspects on the macro- as well as the micro-level. This section serves to

conceptualize the relationship of environmental attitudes and social policy in a welfare state setting. Relying on Polanyi's notion of "fictitious goods" (Polanyi 1944, *transl. by the author*) and the implementation of the very same in Esping-Andersen's seminal work on welfare state regime types (1990), I assume that climate change belongs to the class of social risks (Allen et al. 2019; Armingeon/Bonoli 2006). Addressing these risks requires adaption of welfare states to new contexts, which has consequences for the design of policy measurements therein (Bonoli/Natali 2012a; 2012c) and the space for bargaining (Häusermann 2012).

2.2.1. Nature, Society, and the State

Polanyi's (1944) assessment of transformations of societies and their consequences for different groups in these societies are very much determined by the developments and adaptations of states in the course of the industrial revolution. Central to the necessity of action in such transformative contexts, however, is the notion of "fictitious goods". These are labour, nature and money. Polanyi expresses their interdependency as follows: "While markets for labour, soil, and money were functioning individually and separately, the dangers for societies evolving from them were not always clearly distinguishable" (Polanyi 1944: 224, *transl. by the author*). The focus of this thesis rests on the former two fictitious goods, namely labour and nature, which is why money will be neglected in the analysis below.

According to Polanyi (1944: 224 ff.), the relationships of labour markets are determined by the assumption that an employment relationship leads into an exploitation relationship. By assessing labour as a commodity, the logic of the lowest price can be established to determine the position of employees on the labour market. In this environment, the commodity labour is not one of negotiation but rather of coercion in which workers have no voice (*ibid.*: 242). Movements such as "Owenism" (*ibid.*: 229 ff) or "Chartism" (*ibid.*: 237 ff.) have aimed at the reversal of this logic by acknowledging more than just basic needs as necessary components of the functioning labour market. Only "Owenism" is characterized by a distinct organisation of labour in a protected economic environment. Nonetheless, both movements have exerted strong political pressure in order to implement changes they deemed necessary on a political level, that is in state-wide legislature. The long-lasting effect of these efforts is still visible. In Polanyi's words:

"If one were to claim that social laws, factory laws, unemployment insurance, and above all trade unions had not interfered in the mobility of workers and the flexibility of wages, one would say that these institutions had completely failed in fulfilling their purpose. This purpose is exactly this sort of interference in laws of supply and

demand with respect to human labour in addition to the exclusion of the very same from market mechanisms.” (ibid.: 243; *transl. by the author*)

What Polanyi highlights here is that political movements aiming at the reduction of the degree of commodification of labour have not relied upon the sphere of the economy for their purposes. Rather, they have brought these objectives to the political sphere of society to achieve a certain degree of decommodification by relaxing harsh market mechanisms. This claim of decommodification is central to the transformative logic in Polanyi’s assessment of the interplay of societies and their economies. Esping-Andersen (1990) takes up this notion and rests his typology of welfare state regimes on the degree of decommodification on the one hand. On the other hand, the degree of universality of services is central to his assessment of welfare states, and both will be subject of further analysis below.

Nature, or soil, as the second of the fictitious goods included in Polanyi’s analysis (Polanyi 1944: 243 ff.) is defined as “piece of nature which is inseparable connected with the living circumstances of humans” (ibid.: 243; *transl. by the author*). Similar to the aspect of labour, Polanyi describes nature as a necessary institution of humanity. In the course of economic transformations this institution has been subjugated to the mechanisms of the market. This commodification of nature, the process of separating labour from land thereby enhancing tradability of the latter and its products, has been accompanied by severe consequences for those parts of society. Especially for those, who have still depended on agriculture for maintaining a level of subsistence, and more generally, for the nourishment of whole societies (ibid.: 249). The basic misconception of nature as mere commodity determined by market mechanisms has led to the neglect of the territorial consequences of the exploitation of nature as an institution of humanity. This comprises “even the climate of the country, which can be impaired by deforestation, by erosion or by sand drifts.” (ibid.: 251; *transl. by the author*). Central to Polanyi’s analysis of the influence of market mechanisms on the fictitious good nature is the political reaction it triggered across different societies. The link between the commodification of labour and nature lies in the responses which societies came up with in order to mitigate the effects of both. In Polanyi’s words:

“The dangers for humanity and nature cannot be separated thoroughly. The reactions of the working class as well as the peasantry led to protectionism, for the former mainly in form of social and factory laws, for the latter in the form of agricultural laws and tariffs on soil. Nonetheless, there was one important difference: in the case of a crisis, European peasants defended the market system, which was threatened by the politics of the working class. The crisis of the instable system was triggered by both protectionist movements. However, those parts of society more strongly connected to soil tended to reach a compromise with the market system, while the broad working class did not refrain from breaking its rules and challenge it directly.” (ibid.: 260; *transl. by the author*)

What Polanyi addresses here is the potential conflict arising from societal transformation in multiple dimensions. While labour-market-oriented efforts towards decommodification might have broad range of support in one sphere of society, this does not have to be the case for others, for example, those more concerned with agricultural interests. The simultaneous action in multiple dimensions can make compromises more difficult to reach, however, it might also entail unexpected reform coalitions (Häusermann 2012). Figure 2 is the attempt of a depiction of this multidimensional political space and the actors involved based on the arguments of Polanyi (1944) and the assessment of multidimensionality in welfare state politics by Häusermann (2012). The latter will be described in more detail further below. For now, it suffices to say that the emergence of more than one dimension of social policy preferences establishes a multidimensional political space, in which actors can find themselves in the vicinity of unexpected potential coalition partners. This can, eventually, lead to a more nuanced conflict about the implementation of specific policies in combination or at the cost of another one (2012: 117).

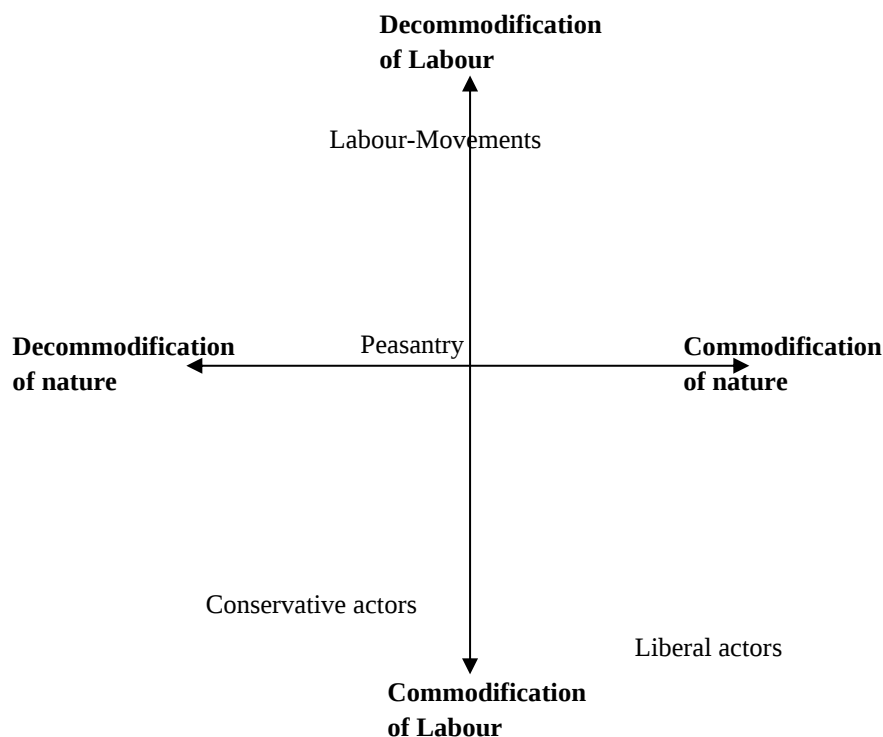


Figure 2 - Actors in a multidimensional political space of commodification. The horizontal axis depicts the degree of commodification of nature preferred by actors in this space. The vertical axis depicts the degree of commodification of labour preferred by actors in this space. The positions of actors in this space is indicative and based on Polanyi (1944) not on strict data analysis. It therefore serves as tentative illustration.

In this setting, labour-movements have a high interest in decommodification of labour. Yet, their interest in decommodification of nature might be limited simply because of a lack of exposure to the consequences of this process. This argument can be turned upside down with regard to the peasantry, although the preferred degree of decommodification of nature might not be as pronounced as the counterpart for the labour-movement. Conservative actors on the

other hand might have a strong interest in the commodification of labour because of cheaper production cost. Their interest in commodification of nature is limited due to their feudalist roots. Lastly, liberal forces pursue commodification of both spheres as it is central to the assumptions guiding this political ideology. Before digging deeper into the difficulty of bargaining in a multidimensional political space, it is necessary to further develop the interdependencies of nature and labour in a more pressing context: climate change as a transformation in a Polanyian sense. Allen et al.'s (2019) summary of global research on climate change and the consequences of different levels of global warming on the situation of the planet addresses these developments in the context of sustainable development. They point out that action to avoid severe consequences of global warming are necessary as the alternatives would yield to disastrous developments. All actions necessary to avoid these disasters have to take the existing context into account:

“Adaption options that reduce the vulnerability of human and natural systems have many synergies with sustainable development, if well managed, such as ensuring food and water security, reducing disaster risks, improving health conditions, maintaining ecosystem services and reducing poverty and inequality (*high confidence*). Increasing investment in physical and social infrastructure is a key enabling condition to enhance the resilience and the adaptive capacities of societies. These benefits can occur in most regions with adaption to 1.5°C of global warming (*high confidence*).” (Allen et al. 2019: 19)

Several aspects need to be unpacked. First, there is a multitude of contexts, which all require different adoption strategies. One possible way of grouping countries in a way that enables the evaluation of similar actions in these categories are economic criteria, for example welfare state regimes. Second, the multitude of risks addresses a wide range of policy areas. These areas have to be addressed not only with respect to the future “physical and social infrastructure” (ibid.: 19) but also with respect to the one already in place. Lastly and closely related to the previous argument, this wide range of policy fields, which have to undergo adoption in the face of climate change imply the involvement of an array of actors. These actors may all well differ with respect to personal interests and interests of principals they represent. As has been pointed out by Polanyi (1944), the reactions of these actors in the face of a transformation entail different assessments of the situation, the consequences of action and inaction. In other words: “Public acceptability depends on the individual’s evaluation of expected policy consequences, the perceived fairness of the distribution of the consequences, and perceived fairness of decision procedures (*high confidence*).” (Allen et al. 1994: 22).

Let’s briefly summarize the above. Fictitious goods such as labour and nature as introduced by Polanyi (1944) and the commodification of the very same trigger different reactions by a wide

range of actors across different societies. In a multidimensional political space, actors thereby might find themselves in vicinity of other actors, which otherwise would not be considered allies. Extending this logic to the present context of climate change policies means acknowledging the multidimensional space, in which these policies have to be negotiated. This implies a multiplicity of actors, who might not be reconcilable in a unidimensional political space. In other words, choosing between two alternatives in a unidimensional space is more exclusive than building coalitions and achieving compromises in a multidimensional space. More than one dimension, thus, opens space for bargaining among otherwise very different actors and/or interests. In the present context, this means that environmental policies can only be adopted in the context of existing policy regimes. Moreover, in the sphere of social policy, a lot of individuals may rely to a bigger or smaller extent on these regimes. These individuals' attitudes towards new, potentially conflicting policy fields might be influenced by the degree to which they depend on social policies already in place. To extend this logic it is necessary to describe mechanisms within the context of welfare state politics and their transformations in more depth.

2.2.2. Welfare States' Origins

Esping-Andersen's (1990) assessment of welfare state regimes relies predominantly on two aspects, the first of which is decommodification. While it has been only vaguely described in the discussion of Polanyi's (1944) work, Esping-Andersen's definition of decommodification is clearer and more intuitive. Commodification of labour is the result of certain processes. As Esping-Andersen (1990) puts it:

"Stripping society of the institutional layers that guaranteed social reproduction outside the labor contract meant that people were commodified. In turn, the introduction of modern social rights implies a loosening of the pure commodity status. De-commodification occurs when a service is rendered as a matter of right, and when a person can maintain a livelihood without reliance on the market." (Esping-Andersen (1990: 21 f.)

This is what the relaxation of market mechanisms described above is about in the context of the welfare state. Decommodification as the establishment of social rights thus is one key aspect of welfare states. However, the degree and specificity of policies limiting the markets' pressure on individuals is an aspect, in which societies differ. Moreover, it is a primary source of differences across welfare state regimes. In other words, risks of commodification are palliated differently in these regimes.

Another association highlighted by Esping-Andersen (1990) is concerned with the intervention of the institution welfare state in the composition of societies in terms of class. However, "the welfare state is not just a mechanism that intervenes in, and possibly corrects the structure of

inequality; it is, in its own right, a system of stratification. It is an active force in the ordering of social relation.” (ibid.: 23). Naturally, this ordering is subject to political forces and thereby varies across states and welfare regimes. This boils down to the second aspect of this assessment of welfare states, namely the degree of universalism of services provided in a given welfare state. Taken together, the analysis of these two aspects, decommodification and universality of policy regimes across a wide range of states results in more or less distinct welfare state regime types.

Esping-Andersen (1990) identifies three distinct types (ibid.: 26 ff.). One is the liberal model, “in which means-tested assistance, modest universal transfers, or modest social-insurance plans dominate” (ibid.: 25). The corporatist-statist type is characterised by occupational as well as class based social policy schemes aiming at perpetuating existing social stratification. Lastly, the social democratic regime types, where “equality of the highest standard” (ibid.: 27) is the main objective achieved by “highly de-commodifying and universalistic programs” (ibid.: 28).

The degree of decommodification achieved by social policies is analysed with respect to “eligibility rules and restrictions on entitlements”, “levels of income replacement” as well as “the range of entitlements” (ibid.: 47 f.). In sum, these three aspects analyse the conditions under which benefits are granted and cut, the levels of these benefits as compared to income as well as the reasons such benefits are provided for. By constructing a decommodification score based on indicators such as, among others, minimum pensions, benefit replacement rates for unemployment and/or sickness during the first 26 weeks, countries are classified (ibid.: 54). Decommodification itself consists of two aspects. The first comprises social stratification enhanced or reduced by policies in the respective states. This refers to the degree to which existing (class) structures in a society are maintained by social policy programs (ibid.: 55 ff.). The second, the relation of states and markets, is assessed in the sphere of pensions in order to address the relationship of pension benefits (palliating the risk of old age). Specifically, the ratio of private and public pension benefits is utilized as an indicator for decommodification in this sphere (ibid.: 78 ff.).

All in all, this attempt of a welfare state categorization results in three different clusters. The liberal state comprises countries like the USA or the UK and relies, in this typology, on the market to the biggest extent. The corporatist statist regime consists of continental European states like France, Germany or Austria and has a class-based social-security structure. Lastly, the social-democratic regime type includes mainly the Nordic countries, attempting to provide decommodification for all individuals, with few market interferences. However, as Esping-

Andersen (1990: 28) acknowledges, “there is no single pure case”, meaning that all regime types share characteristics of their counterparts. Nonetheless, one might suspect that, due to the differences in provisions of welfare state benefits, different degrees of risk exposure might persist across these regimes. These risks analysed in Esping-Andersen’s work are mainly unemployment, sickness and old age or “Old Social Risks” (OSR) as analysed by Bonoli (2006). As such, they will remain part of the analysis, however, in the context of more recent transformations of the welfare state and the policy regimes therein.

The overarching assumption, however, is that the structural differences of risk prevention in these regimes have effects on an individual level. More precisely, welfare states employ more or less resources to palliate risks for individuals. The degree to which such resources can be reallocated differs with regard to the size of the respective welfare state. This can create competition about resources when new risks arise and render “strong” welfare states less flexible when adapting to such new risks. Ultimately, this will increase individual risk exposure, which in turn affects their support for policies aiming at palliating those new risks. Subsequently, I will elaborate on the notion of (new) social risks and how they transform welfare states in more depth.

2.2.3. Welfare States’ Transformations

Esping-Andersen’s (1990) conception of welfare states is predominantly concerned with the effects of old social risks (OSR), namely unemployment, sickness or old age. While this focus might have been sufficient for the early stages of welfare state development, it does not take new developments or transformations into account. Therefore, Bonoli (2006) introduces the notion of “new social risks” (NSR) to the debate, which is the result of transformations in society and adds to the already existing “old social risks” (OSR). NSR are the result of constant economic and societal change. This risk group comprises, among others, “reconciling work and family life, single parenthood, having a frail relative, possessing low or obsolete skills and insufficient social security coverage” (Bonoli 2006: 6 ff.).

Huber/Stephens (2006) define NSR narrowly in the sense of poverty and point out that OSR and NSR in this sense are interdependent. This means, that being affected by one kind of social risk might enhance the negative effects of another. They assess this interdependence in the context of existing welfare state regimes and find differences across these regimes with respect to the effects of policy measurements aiming at reducing risk exposure. Central to the developments within these regimes are power constellations (e.g. the governing party), existing institutions, and external factors such as immigration (Huber/Stephens 2006: 154 ff.). These

findings imply that actions addressing existing risks necessarily need to take into account the potential effects these actions have on other areas. Such actions can affect the institutions designed to palliate these risks, for instance, with respect to possible coalitions aiming at reforms. Moreover, individuals exposed to a variety of risks may anticipate a competition about resources available for additional policies. This, in turn, might reduce the support for new actions. It is the latter aspect, which is at the centre of this thesis, namely that the competition about resources might result in an interdependency of preferences towards new policies. Capturing climate change as an additional social risk is essential for this rationale as social risks are shown to influence political preferences in a way that is strongly determined by socio-economic status (Kitschelt/Rehm 2006).

Bonoli/Natali (2012b) reassess the notion of social risks in European welfare states in the context of transformations under permanent austerity. Thereby, they extend the logic of social risks to contextual factors in welfare state regimes. Bonoli/Natali (2012b) highlight the change welfare states have undergone in recent years with respect to the services provided and the context, which made these adaptations necessary. In other words, recent transformations have affected both the policies provided and the groups these policies are aimed at. Among these changes activation policies for unemployed people, income supplements for “working poor”, services for families and elderly people as well as investment in human capital and protection of precarious or atypical employment are identified (Bonoli/Natali 2012b: 5 f.). These are examples for newly designed social policies, which are a result of ongoing societal change. Additionally, such policy adaptations highlight, how new risk groups enter the sphere of social policy and the resources available therein. Here, a brief discussion of structures of welfare state transformations on a structural level is necessary.

Departing from the aspects of commodification and universality highlighted by Esping-Andersen (1990) and above, Bonoli/Natali (2012c) define three new areas of adaptations in welfare states. These adaptations are the result of ongoing transformations in societies, which create new risk groups with new needs and preferences. The first area deals with the “level of protection”, the second with “pro-employment orientation”, and the third with the “encompassing character” of new policies (Bonoli/Natali 2012c: 293 f.). The details of these new spheres will be subject to analysis in the next part of the theoretical section. However, Häusermann (2012) very profoundly highlights the consequences of this multidimensionality of (social) policies for the actors involved in the bargaining process. Multidimensionality hereby is a result of policies aiming at both, OSR and NSR and vary with respect to the areas of welfare state activity reiterated above. As has been already touched upon with the discussion of Polanyi (1944),

multidimensionality opens room for bargaining and more or less expected reform coalitions. What Häusermann (2012) emphasizes is the manifestation of “new social policies” among which she identifies “activation/social investment policies” and “needs-based social protection policies” as opposed to “old social policies” which basically are “income and job protection policies” (Häusermann 2012: 115). The transformation of the welfare state eventually leads to the incorporation of the new social policies into a system of old social policies. Thereby, individuals from different risk groups depend on the design of these policies.

While the specifics of these policies are, for now, secondary, the political space they open up is not. Häusermann (2012: 115 ff.) conceptualizes a two-dimensional political space. On its horizontal poles she identifies the dichotomy between expansion and retrenchment of old social policies. On the vertical axis this rationale is extended to new social policies. Within this space, four types of welfare state reform strategies evolve. A strategy aiming at increasing services for old and new policies is an “expansion” and the opposite is labelled “retrenchment” (ibid.: 116 f.). Those areas in this two-dimensional space, which combine the mechanisms of old and new social policies, are, on the one hand, “flexicurity and welfare readjustment”, where “governments cut back on existing levels of old benefits, while at the same time expanding new social policies.” (ibid.: 117). On the other hand, there is “welfare protectionism”, which “denotes reforms that shield the privileges of old beneficiaries against the claims, needs and demands of new risk groups.” (ibid.: 118).

Here is where the notion of “new social risks” (Armingeon/Bonoli 2006) and the potential social consequences of climate change and the resulting adaption policies (Allen et al. 2019) re-enter the discussion. In this evolving space of social policies, a new dimension of climate change adaption policies is added to the existing portfolio in order to deal with the social dimension of climate change. Beneficiaries of already existing policies might find themselves competing about resources with yet another category of social policies. How this competition is assessed may hinge on two aspects, which are related with the macro- and individual- level aspects of environmental attitudes described above. First, the risk of climate change of a society as a whole may affect preferences towards new policies. Second, such preferences be predetermined by risk exposure already covered in part by the welfare state. In other words, an individual with already distinct preferences for social policy in an existing welfare state might evaluate additional policies in light of the already existing social mechanisms. To concretize this, an individual dependent on redistributive social policies might not be willing to accept cuts in this sphere in order to palliate the new risk of climate change (for a more general and macro-level discussion of environmental and social policy regimes see Gough 2016; Gough et al. 2008).

2.2.4. Effects of Risk Exposure

The aim of this section was manifold. First, the origins of welfare state policies in the context of societal transformations have been summarized with the discussion of Polanyi (1944). This discussion focused on two fictitious goods, namely on labour and nature and how a multidimensional conceptualization of the decommodification of these two goods might result in an unexpected political bargaining space. In a second step, climate change was introduced under the assumption of being a Polanyian transformation. The key element in this discussion is that adaption policies have, on the one hand, to take into account existing social infrastructure. On the other hand, political feasibility in terms of coalition potential and public acceptance of policies is a major concern (Allen et al. 2019). A third part was to shed light on this existing social infrastructure by ways of a discussion of welfare state regimes and the developments they have undergone. Esping-Andersen's (1990) starting point of decommodification and universalism of services provides a fruitful baseline for comparison. However, social risks and the emergence of new ones are key drivers in the adaption of welfare state to changing circumstances (Armingeon/Bonoli 2006; Bonoli 2006). Thereby, the consideration of possible interactions between old and new social risks across different types of welfare states is paramount in order to capture the mechanism driving policy developments (Huber/Stephens 2006).

Extending the rationale of social risks to a broader context of welfare state transformations helps in identifying multiple dimensions of policy adaptations to developments such as precarious work, reconciliation of family and work or the formation of human capital (Bonoli/Natali 2012a; 2012b; 2012c). Ultimately, climate change adds yet another transformative power to welfare state policies, which in turn extends the risks welfare states have to address. Bargaining about policies then hinges on public support and political coalition building in this transformed context (Häusermann 2012). Public support itself might be influenced by individuals' exposure to already covered risks. This in turn might influence the preferences towards policies which aim at palliating newly emerging risks. These preferences (or attitudes) towards a new policy field have thus to be conceived in a given infrastructure.

In other words, environmental attitudes, as described above, do not exist in a vacuum but are formed in the existing (social) infrastructure (Allen et al. 2019) and add another aspect to the constantly growing assembly of social risks in transforming welfare states (Armingeon/Bonoli 2006; Bonoli/Natali 2012). These social risks, or some of these, are the main reason for existence of welfare states, as it is the objective of the latter to reduce social risk exposure of individuals. Welfare states belonging to certain regime types achieve this aim with a variety of

policies and to a different degree of success (Esping-Andersen 1990). Social risks themselves can be indicators for other political preferences (Kitschelt/Rehm 2006), especially in the field of social policy. If an individual is already exposed to a set of social risks, like unemployment, sickness, precarious employment or having low skills, it might experience a greater shock from the emergence of another risk in the form of climate change – with respect to the perception of the risk as well as the willingness to do something about it. However, this might differ with respect to the welfare state regime and its success of palliating these risks. In other words, a given social infrastructure takes care of social risks, depending on its design and adaptability. Adding a new social risk to the equation might challenge the capabilities of the existing infrastructure, that is a welfare state. Here, already extensive welfare state regimes might experience bigger adaption problems than smaller, potentially more flexible ones. This, eventually, may lead to individuals with an already high level of risk exposure experience new social risks to be more threatening. Additionally, the lack of resources when being exposed to existing social risks might inhibit the support for costly policies simply because of scarcity reasons. The arguments above motivate the following set of hypotheses:

H2a: Social risk exposure increases awareness towards new risks differently across welfare state regimes.

H2b: Social risk exposure decreases the support for costly policies differently across welfare state regimes.

The next part of the theoretical section tries to answer questions about the multidimensionality of social policy preferences, the characteristics of individuals with distinct social policy preferences and the possible interdependence of concrete social policy preferences and environmental policy preferences. Ultimately, it is an attempt to clarify whether social policy preferences, when analysed in the context of social risks, might serve not only as outcomes of specific socio-economic indicators, but also as predictor for other policy preferences.

2.3 Social Policy Preferences as Individual Characteristics

In this section, first, the multidimensionality of social policy preferences will be put under scrutiny with respect to a redistributive and a social investment dimension (Häusermann 2012; Jensen 2012; Garritzmann et al. 2018; Neundorf/Soroka 2018) and with respect to their predictive power as characteristics of individuals (Fossati/Häusermann 2014). Subsequently, the characteristics of individuals having preferences towards the one or the other dimension of social policy will be analysed and compared to the ones affecting the environmental attitudes

described above. Then, I will assess the coalition potentials for welfare state reform policies across socio-economic characteristics, in order to establish a link between social policy preferences as additional influential factors for other policy fields (Häusermann et al. 2019a; Häusermann et al. 2019b). In a last step, hypotheses about the interdependencies of environmental and social policy preferences across welfare state regimes will be developed based on the theoretical analysis conducted before.

2.3.1. Dimensions of Social Policy Preferences

As has been indicated above, a more detailed description of old and new social policies is necessary in order to assess preferences in this policy field. Häusermann (2012) scrutinizes the transformation of welfare states in changing environments with respect to the policies as well as the actors involved and affected by these transformative reforms. By drawing a distinction between old and new social policy instruments, Häusermann (2012, 113 ff.) underlines differences, which are implicit in the design of said policies. As has already mentioned above, old social policies – in this framework – consist of income and job protection policies. Among these a strong focus on transfers in form of family support, compensation for lost income, or cash transfers for people at the risk of poverty (see *ibid.*: 115) are identified. In essence “old social policies” are “those which deal with the welfare coverage of the typical risks of income and job loss that were prevalent in the industrial era. Income loss by the male breadwinner due to old age, unemployment, sickness or disability are key in this respect.” (*ibid.*: 113).

This assessment of old social risks is very similar to the overview provided by Bonoli (2006), as is the notion of the reasons for new social policies in post-industrial societies: “atypical employment, long-term unemployment, working poverty, family instability and lacking opportunities for labour market participation (due to care obligations or obsolete skills).” (Häusermann 2012: 113). New social policies, however, differ from old social policies with respect to two aspects. First, a social investment perspective departs from mere cash transfers and puts focus on, among others, care services for children and elderly people, active labour market policies or human capital development (*ibid.*: 115). Second, a needs-based approach identifies new risk groups, which have emerged in the course of societal transformation and contains social policy measurements such as subsidized childcare and/or income supplements for employed people, who still are at the verge of poverty or needs-based income for unemployed people (*ibid.*: 115). Thus, old and new social policies differ with regard to many things, but most importantly they imply a distinction of short-term redistributive and long-term investing strategies to palliate social risks in (post-) industrial societies.

As the bargaining space resulting from this multidimensionality has already been touched upon in the previous chapter, the focus is now on the specific dimensions. Redistributive social policies have their origins in the early years of the welfare state. Neundorff/Soroka (2018) assess this dimension of social policy in light of intergenerational differences in support of redistributive policies. The basic rationale here is that support for redistributive policies is higher for people born in the context of a welfare state regime, which grants said services. Moreover, they find evidence that welfare regimes or, more generally, economic conditions, during those years in which major decisions about education and occupation are being taken, matter with respect to the approval of redistributive policies (Neundorff/Soroka 2018: 429). Redistributive policies in this approach consist of policies that comprise questions about income inequalities, the situation of the poor, the level of taxes and its effect on the level of services as well as the general “fair” level of redistribution (ibid.: 407). What is evident from this research is the lasting effect of a welfare state, although observed only in the context of the UK. Individuals growing up in the social policy regime of a welfare state, value such policies higher than others. However, not distinguishing between different dimensions of social policy preferences might neglect important details of individuals preferences. That is, individuals relying more on redistributive policies than on social investment policies might differ in their assessment of such policies.

Garritzmann et al. (2018) offer a more nuanced approach in their assessment of individual preferences towards social policies with a focus on social investment policies. More specifically, this research addresses possible differences in approval of one social policy dimension over another. The results indeed suggest the described multidimensionality as they identify the dimensions of social investment, activation and passive transfers. They find a positive effect on the approval of social investment policies of education and a generally negative effect of people on the right of a cultural and economic left-right scale. Women, elderly people and those with culturally conservative views prefer passive transfers. Higher education as well as income and an economically right ideology leads to disapproval of social policies aimed at passive transfers. Lastly, labour market activation policies, which are in the sphere of social investment policies, are supported by high earners and those on the right of both cleavage dimensions. A takeaway from this assessment is that individuals’ preferences differ with regard to socio-economic aspects as well as political ideology. However, no assessment of risk exposure, as described above, is included in this analysis in order to identify the preferences of individuals actually depending on social policies. In other words, no assessment of whether social policy preferences differ for individuals who rely, for example on unemployment benefits, child-care services or other social insurance schemes is conducted. This, however, is a crucial aspect for this

thesis, as social risks affect political preferences (Kitschelt/Rehm 2006). If risk exposure is considered to be an indicator for the current reliance on existing social infrastructure, it may alter the perception of newly added policies covering new social risks.

Jenson (2012) offers another comparative assessment of social investment policy across welfare regimes. A qualitative analysis of the shift of old welfare state paradigms towards new, social-investment-oriented policies, allows for conclusions about differences and similarities of the regime types. First, ahead of the reforms in the 1990s and 2000s somewhat distinct logics determined the politics of welfare state regimes (see also Esping-Andersen 1990 and above).⁵ Competing ideas about the design and purpose of welfare state policies, however, have led to a reconceptualization of these policies with the common denominator “social investment”. Nonetheless, the justifications for the reorientation to a social investment strategy differed across regime types. The social democratic states have emphasized a perspective of lifelong learning in order to maintain a high standard of living and the necessary tax revenue for high welfare state spending. The liberal regime, on the other hand, fostered the human capital perspective with a strong bias towards the future. Investments now, to summarize the discourse, help reduce the risk of poverty of individuals, especially children, at risk of slipping into it at later stages in their lives. Lastly, corporatist-statist regimes emphasized the advantages for the whole society when pursuing social investment policies (Jenson 2012: 27 ff.). A takeaway from this research for the present analysis is that framing differences with regard to social policies affect the preferences towards these policies, depending on the welfare regime.

2.3.2. Effects of Social Policy Preferences

What has been pointed out so far is that social policy preferences consist of distinct dimensions oriented grossly across the dichotomy of old and new social policies (Häusermann 2012). These dimensions are empirically traceable (Garritzmann et al. 2018; Neundorf/Sokora 2018) and have their roots in historical transformative processes of welfare regimes, which might affect the preferences towards concrete social policy measures (Jenson 2012). Now it is necessary to shed light on social policy preferences as predictors for political choices such as vote choice. Fossati/Häusermann (2014) try to answer this question with respect to party choice in the Swiss elections in 2011. One key predictor in their analysis is social policy preferences, or more precisely, preferences towards redistributive and social investment policies. The former category

⁵ Jenson (2012: 26 f.) highlights three key variations. The liberal regime was dominated by a market-oriented approach without much interference of the state, while the social democratic regime type emphasized de-commodification of labour as its dominant strategy. States belonging to the corporatist-statist type, then, pursued policies allowing for the perpetuation of existing societal structures with regard to class and occupation.

comprises the evaluation of higher benefit levels for individuals in low wage groups as well as questions about the role of the state when it comes to balancing income inequality. Social investment, as the second dimension, is included in the analysis via preferences towards, for example, the financing of education (Fossati/Häusermann 2014: 595 f.). The findings suggest that accounting for the multidimensionality of social policy preferences helps indeed in uncovering motivations of the electorate when casting their vote. More specifically, the centre-left party experiences support from people approving of both social policies, while the green party supporters favour social investment only. Supporters of the right side of the political spectrum disregard both dimensions of social policy preferences (ibid.: 600 ff.).

Benefitting from the “Welfare Priorities”-research (Häusermann et al. 2018), Häusermann et al. (2019a) address the question of class and social policy in the current manifestation of welfare states. Central to this research is the question of differences between classes when approving or disapproving of social investment policies. More precisely, it is not only about approval but rather about prioritizing social investment over other policy measurements, particularly in light of an evaluation of future possibilities (Häusermann et al. 2019a: 9).⁶ The results suggest that overall support for social investment and consumption policies is high and differences between classes are negligible (ibid.: 17). However, when assessing priorities, clear differences emerge in all areas of social policy analysed. Middle class respondents clearly favour social investment policies over consumption policies and thereby differ significantly from working class respondents (ibid.: 18 ff.). These findings highlight differences in individual support for social policy preferences with respect to socio-economic status. Still, they do not address the implications of such distinct preferences for other political positions of individuals such as their party affiliation.

Häusermann et al. (2019b) shed light on this relationship by comparing social policy preferences (support and priorities) to political positions of individuals. Relying on the same framework as described above they assess the effect of distinct preferences towards social investment and consumption on party identification. A first result is a clear dimensional divide of respondents belonging to different classes with – very simplified – traditional blue-collar workers supporting social consumption policies and white-collar jobs and SMEs supporting social investment policies (Häusermann et al. 2019b: 15). Besides supporting the results summarized above,

⁶ Similarly to Garritzmann et al. (2018), Häusermann et al. (2019a) capture social policy preferences not in abstract evaluations, but in concrete statements about for example pension benefits, childcare provisions or family support (ibid.: 10 f.). Additionally, the relative importance of specific policy proposals is assessed by a trade-off question, that is, benefits in one area result in cuts in benefits in another (ibid.: 12 f.).

these findings translate to the sphere of party identification, however, not as clearly. While far left and far right party electorates favour consumption policies, voters in the centre disapprove of such an approach (with significant differences across party families). This picture is reversed for social investment policies for all party supporters except the social democrats, who appear to be somewhat “‘lost’ in the middle” (ibid.: 6). What these findings suggest is first, that social class determines, to a certain extent, which social policies are determined. Controlling for class, then Häusermann et al. (2019b: 21) find social policy preferences to be distinct predictors of party identification.

This section has aimed at pointing out two things. First, the multidimensionality of social policy preferences has been highlighted. Thus, a clear distinction between social investment and redistributive (consumption) policies can be made and empirically supported (Häusermann 2012). Moreover, individuals supporting one dimension over another have specific characteristics with respect to socio-economic as well as political variables (Neundorf/Soroka 2018; Garritzmann et al. 2018, Häusermann et al. 2019a). Secondly, social policy preferences are not only a result of socio-economic conditions, they also serve as predictors for other political indicators such as party choice and identification (Fossati/Häusermann 2014; Häusermann et al. 2019b). The extent to which this is true for other policy fields, specifically environmental policy preferences is still up for debate. In the next subsection, I elaborate on the link between social policy preferences and environmental attitudes in order to determine how a possible mechanism of influence might look like.

2.3.3. Social policy hypotheses

So far, social risk exposure has been conceptualized as an indicator for attitudes towards newly emerging social risks. However, in addition to simply adding a new social risk to the agenda of a welfare state, such additions have to be analysed in the concrete policy framework in place. As has been indicated with old and new social risks, the inclusion of another social risk into the already existing social infrastructure manifests in diverging preferences towards old and new social policies (Häusermann et al. 2012; Fossati/Häusermann 2014; Garritzmann et al. 2018). That is, individuals more dependent on one set of old social policies evaluate new social policies differently from other risk groups and vice versa. This divergence can be seen in light of a class divide with more affluent individuals preferring social investment-oriented policies over redistributive ones, aiming at the long-term perspective. Vice versa, less affluent individuals depend more on immediate compensations in the short-run and therefore favour redistributive social policies (Häusermann et al. 2019a; 2019b). To close the circle to environmental policy

preferences, the possible mechanism between the two policy fields described has to be highlighted. Spies-Stebbing/Butcher (2016) offer a first approach to do so by opposing postmaterialist values, as described by Inglehart (2007), to materialist values embodied by welfare state policies. Spies-Stebbing/Butcher's (2016: 751) results suggest that "[left-wing partisans] who favour social spending are even more likely to prioritise the environment than are their fellow partisans who do not." Two things are important here. First, postmaterialism is not the only predictor for environmental attitudes as has been argued by Inglehart (2007; see Dunlop/York 2008). Second, nothing is being said about individuals' preferences with respect to different dimensions of social policies.

Again, the social investment dimension is characterised by a long-term perspective and supported by individuals belonging to the middle class, the redistributive dimension is more appealing to blue-collar individuals and has a short-term orientation (Jenson 2012; Häusermann 2012; Häusermann 2019b). Extending this long-term – short-term rationale to the context of environmental attitudes, some possible mechanisms appear to be plausible. First, individuals favouring a long-term strategy to palliate social risks, thus not being dependent on short-term compensations, don't fear immediate disadvantages resulting from climate change adaption policies. This aspect might enhance the willingness to accept costly policies among these individuals. Secondly, individuals in favour of short-term risk prevention may be well aware of environmental threats (see also H2a above), however, might not be willing to accept cuts in existing standards of living in order to confront these threats. Social investment policies aiming at long-term risk palliation affect an individual's assessment of long-term investment in climate change policies. This is because such individuals are, in the short run, less dependent on compensations by the welfare state and prefer a secure perspective for the future. Individuals relying on short-term compensation by the welfare state, on the other hand, might evaluate additional policies in light of competition about resources. In this respect, costly policies to avoid future damages are less attractive than immediate palliation of risks already clearly visible. In sum, a long-term – short-term divergence of individuals preferences towards existing social policy instruments might translate to a similar logic with regard to the willingness to accept costly actions in the sphere of climate change policies:

H3a: Social investment policy preferences increase the acceptance of costly policies to avoid climate change related risks.

H3b: Redistributive policy preferences decrease the acceptance of costly policies to avoid climate change related risks.

The theoretical section of this thesis has served to highlight potential mechanisms subject to the empirical analysis in the subsequent chapters of this thesis. In essence, it comprises, first, a replication of the assumption of multidimensionality of environmental attitudes. Second, I assume a macro-level mechanism of the interplay of existing social risks and welfare states with newly emerging risks such as climate change. Lastly, I hypothesize a long-term – short term rationale for social policy preferences and their impact on environmental attitudes, which will have both, a costly short-term and a beneficial long-term effect. The next section is dedicated to a description of the data used and the operationalization applied in order to assess the hypotheses stated here.

3. Data and Operationalization

To assess the hypotheses stated above, I use data from the European Social Survey Round 8 2016 (ESS 2016). This dataset includes questions on respondents' attitudes towards welfare state policies as well as climate change and is therefore suitable for the analysis in this thesis. The use of this dataset can have advantages and disadvantages. First, due to the timing, that is 2016, the salience of the issue of climate change and therefore environmental policy preferences might not yet have been as pronounced. However, this does not necessarily have to be a disadvantage. The lack of salience of the topic of climate change in 2016 might eliminate a social acceptability bias of answers in this field, which essentially results in more truthful answers. Survey data in itself is subject to some restrictions such as the lack of incentives for truthful answers or, as indicated above, social acceptability bias. The solution of these issues is no objective of this thesis. However, one possible way of approaching this is by ways of a "Bayesian Truth Serum" for survey data (see Prelec 2004).⁷

Overall, this dataset consists of answers from 44,387 respondents from 23 countries. Due to feasibility and comparability, some restrictions are necessary. First, as politicization of the environment is only at the beginning in former Central and Eastern European countries (Marquart-Pyatt 2008; McCright et al. 2016) these countries are excluded from the analysis. As pointed out above, Esping-Andersen's (1990) welfare state regime classification will serve as a baseline for the analysis on a macro-level. Thereby an adoption of the operationalization of Marquart-Pyatt et al. (2019: 7) will be applied with the only difference being the case of Austria coded as

⁷ According to Prelec (2004: 306) this approach is "a scoring method for eliciting truthful subjective data in situations where objective truth is unknowable. The method assigns high scores not to the most common answers but to the answers that are more common than collectively predicted, with predictions drawn from the same population."

corporatist-statist welfare state instead of social democratic (see Esping-Andersen 1990). The resulting liberal regime type contains three countries, namely Iceland, Ireland, and Great Britain with 5,596 respondents. The social democratic regime type includes the countries Belgium, Netherlands, Norway, and Sweden (Denmark would probably be included here but did not participate in the 2016 round 8 of the ESS) and contains the data of 6,543 respondents. Lastly, the corporatist-statist regime type consists of five countries, Austria, Germany, Finland, Switzerland and France, with 10,382 respondents. The final sample thus consists of twelve countries with 22,521 respondents. Table 1 reports both the baseline characteristics of respondents in the full sample and across the three regime types included in the analysis. It reports the means and standard deviation of gender, age in years, education in years, and the income deciles of the samples as well as the overall sample size.

Table 1: Baseline characteristics of individuals across welfare state regimes

Variables	Gender	Age in years	Education in years	Income deciles
Full Sample				
Mean	0.511	49.717	13.581	5.406
Standard Deviation	0.500	18.622	3.785	2.740
N	22,514	22,425	22,423	19,604
Social Democratic Regime				
Mean	0.504	49.163	13.737	5.824
Standard Deviation	0.500	18.997	3.802	2.701
N	6,542	6,539	6,526	6,072
Liberal Regime				
Mean	0.525	50.354	14.382	4.860
Standard Deviation	0.499	18.267	3.804	2.759
N	5,590	5,523	5,546	4,512
Corporatist-Statist Regime				
Mean	0.508	49.726	13.053	5.397
Standard Deviation	0.500	18.560	3.680	2.708
N	10,382	10,363	10,351	9,020

Notes: Gender is a binary variable with 1 for woman, age in years and education in years are continuous variables, income is a ten-level scale indicator with 1 indicating a belonging to the lowest income decile. The full sample consists of twelve states and 22,521 respondents. The social democratic regime consists of four states and 6,543 respondents; the liberal regime comprises three countries and 5,596 respondents; the corporatist-statist regime type includes five countries and 10,382 respondents.

3.1 Environmental Attitudes

As has been highlighted above, research on environmental attitudes suggests the existence of distinct dimensions of environmental attitudes. Most of this research, however, applies confirmatory factor analysis in order to identify these dimensions (i.e. Marquart-Pyatt 2012). In this thesis I will diverge from this approach and apply exploratory factor analysis (EFA) (Costello/Osborne 2005) in order to evaluate these dimensions from another perspective. The items included in the assessment of the multidimensionality are similar to the ones chosen in the

research presented above. A first set of questions assess the acceptance of a set of costly adaptation policies and includes the answers to three questions about personal and general cuts in utility to reduce the impact of climate change. More precisely the ESS (2016b: 37) asked “To what extent are you in favour or against the following policies in [country] to reduce climate change” with the policies “Increasing taxes on fossil fuels, such as oil, gas and coal”, “Using public money to subsidise renewable energy such as wind and solar power.” and “A law banning the sale of the least efficient household appliances.” The answers to these questions range from 1 “strongly in favour” to 5 “strongly against”. All items are recoded so that high values represent high willingness accept such costly preferences.

Another set of questions deals with both, causes and consequences of climate change and aims at measuring the awareness of climate change as a possible risk. The first of these questions is “How worried are you about climate change” with answers from 1 “Not at all worried” to 5 “Extremely worried” (ibid.: 35). The second question is “How worried are you that energy supplies could be interrupted by natural disasters or extreme weather” with the same five-point scale for answers (ibid.: 33). As this item might tap into a dimension which deals with energy policy preferences, (Marquart-Pyatt et al. 2019) the relationship of this item and the others will be assessed separately. The last question of this set is the question “How good or bad do you think the impact of climate change will be on people across the world?” with a scale ranging from 0 “Extremely bad” to 10 “Extremely good” (ibid.: 36). This item is recoded such that high values indicate a high level of worrying. A possible trade-off is that these items are more general than the ones used by Marquart-Pyatt (2012: 1089) to measure threat awareness, which might affect the replicability of the multidimensionality of environmental attitudes.

A last set of questions aims at measuring an evaluation about individual actions and their impact on climate change. Again, three items are included. The first is the question “How much have you thought about climate change before today” with answers ranging from 1 “Not at all” to 5 “A great deal” (ibid.: 34). This item is still up for debate and EFA will be conducted with and without it as a way of robustness check. The next are “To what extent do you feel a personal responsibility to try to reduce climate change?” with answers from 0 “Not at all” to 10 “A great deal” (ibid.: 35) and lastly “How likely do you think it is that limiting your own energy use would help reduce climate change” (ibid.: 37). The items included here closely resemble the ones used by Marquart-Pyatt et al. (2019: 9) and diverge from those used by Marquart-Pyatt (2012: 1090), thus highlighting an individual assessment of the consequences of one’s actions.

3.2 Social Risk and Social Policy Preferences

In order to assess the second set of hypotheses a measurement of the degree of risk exposure is needed. Therefore, I compute an index of social risk exposure consisting of several old and new social risks mentioned by Häusermann (2012: 113) with the following items: If an individual is not in paid work in the last seven days (ESS 2016: 58 f.), if the answer to “Are you hampered in your daily activities in any way by any longstanding illness, or disability, infirmity or mental health problem?” (ibid.: 19) is yes; if a respondent indicates to work be an unskilled worker (ibid.: 74); if a person has a limited or no work contract at all (ibid.: 60). Following Huber/Stephens (2006), if a person answers with “likely” or “very likely” to the question “And during the next 12 months how likely is it that there will be some periods when you don’t have enough money to cover your household necessities?” (ESS 2016b: 50) is included as a measure of the risk of poverty. I recode all variables as binary variables with 1 indicating risk exposure and 0 otherwise. These items are summarized in an additive index, trying to capture old and new social risks. The higher a respondent scores on this index, the higher her personal risk exposure. The index is standardized such that it ranges from 0 to 1, with 0 indicating no risk exposure at all and 1 indicating exposure to all risks included in the index.

The second set of explanatory variables includes the two dimensions of social policy preferences, for which the operationalization implemented by Fossati/Häusermann (2014: 595 f.) will serve as a guideline. Therefore, the redistributive dimension consists of the item “For a society to be fair, differences in people’s standard of living should be small” with answers ranging from 1 “Agree strongly” to 5 “Disagree strongly” (ESS 2016b: 38). This item will be recoded with high values indicating high approval. The second and third item consist of the questions “The government ensure a reasonable standard of living for the old?”, and “The government should ensure a reasonable standard of living for the unemployed?” with answers ranging from 0 “Should not be governments’ responsibility” to 10 “Should be entirely governments responsibility” (ibid.: 40).

As for the social investment perspective, the following items are included: “The government should ensure sufficient child care services for working parents?” with answers from 0 “Should not be governments’ responsibility” to 10 “Should entirely be governments’ responsibility” (ibid.: 40); “Would you be against or in favour of the government spending more on education and training programs for the unemployed at the cost of reducing unemployment benefit?” and “Would you be against or in favour of the government introducing extra social benefits and services to make it easier for working parents to combine work and family life even if it means much higher taxes for all?” with answers for both of the latter questions ranging from 1 “Strongly against” to 4 “Strongly in favour” (ibid.: 47). Both dimensions will be analysed via

exploratory factor analysis in the next chapter in order to ascertain the validity of the dimensions provided by the data used.

Based on the research reviewed above, I include controls for age, gender and education – as a proxy for class. As the risk exposure index already contains the occupation measure used in the ESS (2016b), it will not be included as an additional proxy for class as it might result in multicollinearity. Furthermore, I will include political ideology as a control variable (McCright et al. 2016). For this purpose, the self-placement on a left-right scale will be used, with the question being “In politics people sometimes talk of “left” and “right”. [...] where would you place yourself on this scale where 0 means the left and 10 means the right?” (ESS 2016b: 11).

The first step of the subsequent analysis consists of computing several EFAs. Correlation between factors will be allowed for when applying an oblique rotation procedure. This is because correlation between related factors cannot easily be entirely excluded in the social sciences (Costello/Osborne 2005: 3; Fossati/Häusermann 2014). This methodology serves to identify the dimensions of environmental attitudes, to test the first hypothesis, and to reassess the dimensions of social policy preferences. In a next step, I apply OLS regression analysis with two of the environmental attitudes as dependent variables, namely “willingness to pay” as well as “environmental threat awareness” and, social risk exposure as well as social policy preferences as explanatory variables. All models will be computed with standardized coefficients with a mean of 0 and a standard deviation of 1 to make results comparable within the sample. Additionally, I compute robust standard errors to account for possible heteroskedasticity in the data.

4. Results

This section serves to present and describe the results obtained from the empirical analysis. In a first step, I present the results from the several factor analyses aiming at identifying dimensions for environmental attitudes as well as social policy preferences. Robustness checks are briefly described, the results of these can be found in the appendix. In a second step, I conduct OLS regression analyses to test Hypotheses two and three.

4.1 Multidimensional Attitudes and Preferences

Hypothesis 1 postulates the existence of multidimensional environmental attitudes. Differing from research conducted in this field, I will apply EFA (Costello/Osborne 2005) to look for such dimensions in an exploratory way instead of applying confirmatory factor analysis (CFA) (Marquart-Pyatt 2008; Marquart-Pyatt et al. 2019). In a second step, the same method will be

applied to social policy preferences in order to reassess the multidimensionality of preferences in this field. The aim is to identify a distinct dimension for redistributive or short-term preferences as well as one dimension for social investment or long-term preferences.

4.1.1. Dimensions of Environmental Attitudes

EFA (Costello/Osborne 2005) is used to explore the first hypothesis about the multidimensionality of environmental attitudes. Cronbach's Alpha serves as a first indicator for item relationship and thus for the establishment of potential dimensions. The selection of the items is informed by the results presented in research on environmental attitudes (Marquart-Pyatt 2012; Marquart-Pyatt 2019). The first set of items aiming at the assessment of costly policy adaptations has an alpha of 0.51 indicating some relationship. Those items measuring the awareness of climate change as a risk results an alpha of only 0.29. Lastly, Cronbach's alpha for the set of items measuring the estimated impact of individual action on climate change is 0.53 indicating again some connection within this set of questions. Table 2 below shows the results of the promax rotated factor analysis for all of the indicators for environmental attitudes described above. These results support two distinct dimensions, where the eigenvalues lie above 1. The factor loadings indicate a dimension for willingness accept costly policy adaptations (loadings between 0.31 and 0.43) and a mixed dimension consisting of items measuring the assessment of climate change as a risk as well as those aiming at an evaluation of the impact of individual action on climate change. Due to the empirical similarity to the dimensions described by Marquart-Pyatt (2012) and Marquart-Pyatt et al. (2019) the selection of items and the resulting dimensions are labelled "Willingness to pay", "Environmental threat awareness" and "Environmental/personal efficacy". This facilitates the presentation and readability of the results. Subsequently only factors with eigenvalues above 1 are reported.

So far, Hypothesis 1 can only partly sustained, as only one clear dimension emerges from the analysis, namely the one of willingness to pay. The computation yields satisfactory loadings only for the items concerned with costly policy proposals. The items aiming at measuring awareness of climate change as a risk and the evaluation of the impact of individual action on climate change yield a somewhat intermingled dimension. The results suggest a certain degree of multidimensionality. The following steps of the analysis seek to test the robustness of the results obtained and presented in Table 2.

Table 2: Promax rotated factor analysis for environmental attitudes

Item	Mixed Dimension	Willingness to pay
Willingness to pay		
Taxes on fossil fuels	0.052	0.413
Subsidies for renewable energy	0.074	0.433
Ban of inefficient household appliances	0.121	0.311
Environmental threat awareness		
General worry about climate change	0.723	-0.041
Worry about disaster	0.313	-0.29
Impact of climate change	0.391	0.133
Environmental/personal efficacy		
Thought about climate change	0.599	0.058
Personal responsibility for reduction of climate change	0.403	0.154
Reduction of own energy use	0.091	0.075
Eigenvalue	1.795	1.166
N	21,050	21,050

Notes: Full-sample computation of factors applying promax rotation. Items on taxes, subsidies and bans of appliances recoded for high values indicating a high support. Item on impact recoded such that high values indicate a negative evaluation. Values above 0.31 are highlighted.

Based on these results I have conducted several rearrangements of single items as a form of robustness check. This results in consequences for both, the operationalization of the dimensions as well as the clarity of multiple dimensions. With regard to the dimension of “willingness to pay”, nothing changes. Put under scrutiny, the dimension of “environmental threat awareness” appears to be different from the original operationalization. As I have indicated above, the item “thought about climate change today” may have been misplaced in the set of items on “environmental/personal efficacy”. Additionally, the item concerned with the preoccupation about power cuts might not fit in the set of questions measuring “environmental threat awareness” and rather tap into an energy policy related question (Marquart-Pyatt et al. 2019). Computing Cronbach’s alpha with this re-specification empirically supports these doubts. Excluding the item “thought about climate change today” from the set of items on “environmental/personal efficacy” increases the alpha value to 0.54. Similarly, excluding the preoccupation with a disaster from the dimension “environmental threat awareness” increases the value to 0.36. Based on the high loadings of both items, worrying about climate change as well as thought about climate change, another re-specification can be suggested. Environmental threat awareness measured by the items of “general worry about climate change” and “thought about climate change” help capturing a general idea of climate change as a risk. The Cronbach alpha of this configuration peaks at 0.67 when testing the relationship of these two items (alpha of 0.51 if item on impact of climate change is included). Motivated by these observations, Table 3 reports

the results of another promax rotated factor analysis. Again, only factors with eigenvalues above 1 are reported.

Table 3: Promax rotated factor analysis of environmental attitudes

Item	Environmental threat awareness	Willingness to pay	Environmental/personal efficacy
Willingness to pay			
Taxes on fossil fuels	0.040	0.410	0.058
Subsidies for renewable energy	0.032	0.484	-0.045
Ban of inefficient household appliances	0.053	0.388	0.051
Environmental threat awareness			
General worry about climate change	0.636	0.005	0.082
Thought about climate change	0.637	0.028	-0.063
Environmental/personal efficacy			
Personal responsibility for reduction of climate change	0.402	0.051	0.338
Reduction of own energy use	0.074	-0.010	0.442
Eigenvalue	1.64	1.366	1.049
N	21,373	21,373	21,373

Notes: Full-sample computation of factors applying promax rotation. Rearrangement of the items based on the results from the empirical analysis above. Items on taxes, subsidies and bans of appliances recoded for high values indicating a high support. Values above 0.31 are highlighted.

The results obtained from this approach offer additional support for Hypothesis 1. First and as before, a clearly distinguishable “willingness to pay” dimension emerges whose factor loadings as well as eigenvalue improved as compared to the first estimation (eigenvalue 1.366, loadings from 0.388 to 0.484) suggesting this dimension to be robust even though respecifications have been made. Secondly, the alternations in the selection of items to measure “environmental threat awareness” have resulted in a high loading factor with an eigenvalue of 1.64 and loadings for the items planned to be in this dimension around 0.63. Lastly, a third dimension loading on items for “environmental/personal efficacy” emerges with an eigenvalue of 1.049 and loadings ranging from 0.338 to 0.442. Although these results support the multidimensionality stated in Hypothesis 1, they have to be treated with caution. All but the “willingness to pay” dimension have proven to be extremely sensitive to respecifications. The dimension of “environmental/personal efficacy” emerges only after reducing and rearranging items, however, not without ambiguities with respect to the item “Personal responsibility for reduction of climate change”. The three dimensions proposed by the results of the CFA conducted by Marquart-Pyatt (2012) and Marquart-Pyatt et al. (2019) cannot be replicated in this thesis. Instead, the results of the EFA conducted here suggest two dimensions, one being of unclear character and the other clearly tapping in the “willingness to pay” dimension already discovered in other research.

In sum, these results suggest that Hypothesis 1 can be confirmed only with caution, as the sole clear dimension emerging from the exploratory factor analysis is the dimension of “willingness

to pay”. The other two dimensions found in previous research remain sensitive to respecifications and are therefore to be analysed in more depth in future. Due to the insecurity resulting from the exploratory factor analysis conducted above, the item “Impact of climate change” will subsequently be used as a proxy for the dimension “environmental threat awareness” as this item captures respondents’ evaluation of possible personal risk associated with climate change. This is more specific than just a general preoccupation with climate change represented by the other two items. This is because it measures an individual’s evaluation of the consequences climate change will have on the life of the respective person instead of “only” general developments resulting from this transformation.⁸

4.1.2. Dimensions of Social Policy Preferences

Next on the agenda is a short assessment of the multidimensionality of social policy as described in section 2.3. Thereby, I follow the approach of Fossati/Häusermann (2014) and apply the operationalization described above. Table 4 reports the results of a comprehensive exploratory factor analysis including all items, which ought to be indicators of the two-dimensional social policy space after promax rotation. The eigenvalues reported in Table 4 indicate two distinct dimensions, however, none of the items loads satisfactory in the second dimension with an eigenvalue of 1.039. Moreover, the results for the first dimension are mixed. Even though two items of the redistributive dimension load high (0.654 for “standard of living of old governments’ responsibility”, 0.572 for “unemployed’s standard of living being governments’ responsibility”), so does the item “Childcare governments’ responsibility” (0.483), which is said to belong to the social investment perspective. Analysing the dimensions separately reveals sobering results. Though the Cornbach’s alpha for the original specification of the redistributive dimension lies at 0.544, it increases to 0.62 when excluding the less policy focused item on the reduction of differences in standards of living. Additionally, given the results in Table 4, an exclusion of the item “differences in standard of living should be small” from the factor analysis seems appropriate. As for the social investment dimension, the original specification yields an alpha value of only 0.171. An analysis of the correlation between these items reveals that hardly any relationship exists between “childcare governments’ responsibility” and “more education instead of unemployment benefits” (pairwise correlation of -0.034). Excluding the former item from the computation of Cronbach’s alpha increases this value to a mere 0.265 (excluding the

⁸ Several robustness checks have been conducted, some of which can be found in the Appendix. What is interesting, though not immediately relevant, is possible differences of the multidimensionality of environmental attitudes across welfare regimes with varying loadings of individual items across three dimensions. However, the three dimensions reported in Table 3 persist across welfare state regimes (Tables A1 – A3).

other yields an alpha of 0.233). Excluding the items included in the factor analysis according to the assessment above and the results given in Table 4 do not provide clear evidence of multidimensionality of social investment policies (some results can be found in the Appendix). These findings tap into the criticism brought forward by Nolan (2013) and discussed by Fossati/Häusermann (2014: 593) about the conceptually and empirically blurry distinction between the dimensions of redistributive and social investment social policies. Nonetheless, there is strong evidence that the dimensions described in the theoretical section and analysed here are present in the field of social policy (Fossati/Häusermann 2014; Garritzmman et al. 2018; Häusermann et al 2019a; 2019b).

Table 4: Promax rotated factor analysis of social policy preferences

Item	Dimension 1	Dimension 2
Redistribution		
Small differences in standard of living	0.050	0.242
Standard of living of old governments' responsibility	0.654	-0.042
Standard of living of unemployed governments' responsibility	0.572	0.051
Social Investment		
Childcare governments' responsibility	0.483	0.010
More education instead of unemployment benefits	-0.071	-0.110
Ease of reconciling family and work	0.020	0.068
Eigenvalue	1.152	1.039
N	20,492	20,492

Notes: Full-sample computation of factors applying promax rotation. Items recoded such that high values correspond to high approval of social policy/governments responsibility. Values above 0.31 are highlighted.

Both, the lack of evidence in the present analysis and the strong support from previous research contain several consequences for the present thesis. First, a key component of the analysis is not empirically detectable; namely the multidimensionality of social policy preferences. This may be weakening the argument of effects of social policy as a predictor for other attitudes and preferences. Second and related, in order for the hypothesized mechanism to be tested, proxies for both dimensions will have to be applied. This means that I use the item “standard of living of the unemployed governments' responsibility” as a proxy for the redistributive dimensions. I assume that it captures one of the old social risks (unemployment) palliated by direct compensations best. The long-term social investment perspective is best captured by the item “more education instead of unemployment benefits”. It indicates, on the one hand, long term benefits of human capital formation. On the other hand, this item introduces a trade-off scenario to current redistributive spending.

While the results presented above cautiously sustain the notion of multidimensional environmental attitudes, a key factor of the analysis cannot be empirically replicated in the present analysis, namely the multidimensionality of social policy. Similar problems of demand-side

preferences have been described by Dolezal et al. (2013). Thus, instead of dimensions, the following analysis will rely on items serving as proxies. The next subsection builds on these findings and attempts to test the hypothesized relationship between environmental attitudes, social risk exposure and social policy preferences mediated by welfare state regimes by way of OLS regression analyses.

4.2 Environmental Policy as Social Policy?

Two basic assumptions about the mechanisms between environmental policy and social policy guide the following analysis and should briefly be recapitulated. First, current risk exposure renders individuals more sensitive to newly emerging risks, both in perception and in resource allocation. In this context, individuals subject to one or more old and/or new social risks perceive the threat of an additional social risk posed by climate change differently than other, less exposed individuals. Risk exposure thereby increases the awareness for an additional risk an individual is in danger to become affected by. Moreover, it decreases the willingness accept costly policies for adaption to an additional risk because of a scarcity of resources. Second, a long-term – short-term perspective of social policy preferences may lead to a varying assessment of policies and attitudes in the field of environmental policy. Preferring short-term benefits provided by redistributive policies may lead to disapproval of immediate cuts and additional expenditures for the adaption to new risks. Adversely, being in favour of social investment policies implies a long-term perspective due to the lack of immediate payoffs. This might translate to an assessment of policies in other fields, especially when these policies imply forgoing immediate returns and focus on future benefits instead. Therefore, individuals supporting the latter sphere of social policies might be willing to pay more for the adaption to climate change as opposed to individuals with preferences towards the former category of social policies. Lastly, both effects might be mediated by existing social infrastructure. Welfare states might interfere with existing social risk exposure in a way, that affects individuals' assessment of newly emerging social risks. Thereby, welfare states with an already high level of spending might find it harder to mobilize additional resources for palliating additional social risks. While these regimes are fit to address current challenges, they might implicitly enhance the competition about resources for policies aiming at reducing new risks. These mechanisms will be subject to the following analysis.

4.2.1. Full Sample Estimation

Table 5 reports the first results of several OLS regression models with standardized coefficients (mean of 0, standard deviation of 1) and heteroskedasticity robust standard errors. The results indicate the effect of social policy preferences on environmental attitudes for the full sample. Specifically, the first column reports the effect of social policy preferences and social risk exposure on the “willingness to pay”. The second model in the second column reports the effects of the same variables on “environmental threat awareness”.

Social risk exposure has a negative effect on the willingness to pay. Specifically, a one standard deviation increase in risk exposure reduces the willingness to pay by 0.048 standard deviations, thus lending support to Hypothesis 2b. The latter states that social risk exposure decreases the willingness to pay for costly climate policies. Control variables imply that willingness to pay is higher among women and respondents with higher education, but lower among elderly respondents. As for the dimension of “environmental threat awareness”, measured by the item “impact of climate change”, I find only a barely significant and negative effect of the variable social risk exposure on the dependent variable, thus not confirming hypothesis 2a. Hypothesis 2a claims that increased risk exposure increases the awareness towards a newly emerging threat. Moreover, results for the full sample indicate mixed support for the hypothesised mechanisms. As for the “willingness to pay” dimension of environmental attitudes I don’t find reasonable support for the long-term – short-term mechanism that lies behind Hypotheses 3a and 3b. Contrary to my assumptions, both items used as a proxy for redistributive and social investment policy preferences point in the same direction. Additionally, redistributive preferences increase the willingness to pay of individuals, which is an argument against the long-term – short-term rationale brought forward above. That is to say, preferences for short-term redistribution by the welfare state do not decrease the willingness to accept costly policies to adapt to climate change. Adversely, it increases this willingness, similarly to preferences towards social investment policies, which aim at long term effects. Instead of the long-term – short-term rationale, it appears that general support for social policies increases the support for costly climate change policies.

However, redistributive preferences appear to significantly increase environmental threat awareness. A one standard deviation increase in the approval of redistributive preferences thereby yields a 0.042 standard deviation increase of environmental threat awareness. Identifying as female decreases the threat awareness slightly as does age. Education on the other hand increases threat awareness corroborating also the results of Marquart-Pyatt (2008; 2012). Additionally, right self-placement indicates significantly lower scores on both dimensions of environmental attitudes (McCright et al. 2016). In other words, individuals on the right of the political spectrum are neither very aware of climate change as a threat, nor do they appear to be

willing to accept costly policies to avoid the threat. This analysis only tells part of the story, as it does not assess the effect of existing “social infrastructure”. That is, the evaluation of the effect of welfare state regimes has yet to be conducted. This is subject to the next subsection.

Table 5: Full sample estimation of social policy preferences and social risk exposure on environmental attitudes

tar attitudes		Full sample		
		Willingness to pay	Environmental threat awareness	
Social policy preferences/risk exposure				
Redistributive preferences	0.098***	(0.003)	0.042***	(0.010)
Social investment preferences	0.034***	(0.010)	-0.009	(0.026)
Social risk exposure	-0.048***	(0.032)	-0.014°	(0.084)
Controls				
Left-right placement (0 = left)	-0.163***	(0.003)	-0.135***	(0.009)
Gender (1=female)	0.055***	(0.013)	-0.023**	(0.034)
Age in years	-0.042***	(0.000)	-0.099***	(0.001)
Education in years	0.151***	(0.002)	0.141***	(0.005)
N	14,474		14,617	
AIC	33033.972		62496.426	
BIC	33094.613		62557.145	
R2	0.083		0.064	

Notes: Standardized beta coefficients; heteroskedasticity robust standard errors in parentheses, ° p<0.1, * p<0.05, ** p<0.01, *** p<0.001;

4.2.2. Estimation Across Welfare State Regimes

The full sample estimation offers only partial support for the hypotheses put forward above. Therefore, I elaborate on regime type differences in this section for a more nuanced picture. Table 6 includes regime type controls in order to assess hypotheses 2a and 2b. Hypothesis 2a states that awareness towards a new environmental risk increases with exposure to existing social risks. Hypotheses 2b, on the other hand, states that the willingness to accept costly climate change policies decreases with increased exposure to existing social risks, due to a lack of resources. Both hypotheses, however, claim that existing social infrastructure may mediate this effect. As I have argued in section 2.2.2, welfare states who already employ a great deal of resources to cover existing risks might find it harder to adjust to newly emerging ones. In other words, states belonging to the extensive social democratic welfare regime might find themselves confronted with a scarcity of resources. Individuals anticipating this scarcity thereby alter their preferences towards new policies, depending on how much they are exposed to social risks. Furthermore, this looming competition about resources might result in higher threat awareness for individuals with already high risk exposure.

Figure 3 helps to disentangle the effects of the models depicted in Table 6. It reveals significant differences between welfare states. The willingness to accept costly climate change adaption policies decreases significantly in liberal welfare state regimes when being exposed to one or more social risks. Social democratic states serve as the reference category in this comparison (left-hand side of Figure 3). This partly supports the hypothesis of decreasing willingness to pay when individuals have a high level of risk exposure, with differences resulting from the existing social infrastructure. However, it contradicts the welfare regime effects described above. Instead of competition about scarce resources in extensive welfare regimes, it seems as if such competition is strongest where only little resources are employed. Additionally, the conservationist nature of the corporatist statist regime appears to increase the willingness to accept costly climate policies.

As for environmental threat awareness, these results change (right-hand side of Figure 3). While the basic coefficients in the model with regime controls do not differ significantly from those in the model estimated above, one difference becomes visible. That is, environmental threat awareness increases significantly in corporatist-statist welfare states, when comparing them to social democratic welfare states. Moreover, corporatist-statist states differ significantly from liberal states, which are not distinguishable from the social democratic ones in the present sample. This lends support to differences of environmental threat awareness across welfare state regimes. Thereby, the conservationist character of the corporatist-statist regime appears to translate to the environmental sphere. I will analyse these results in more detail below.

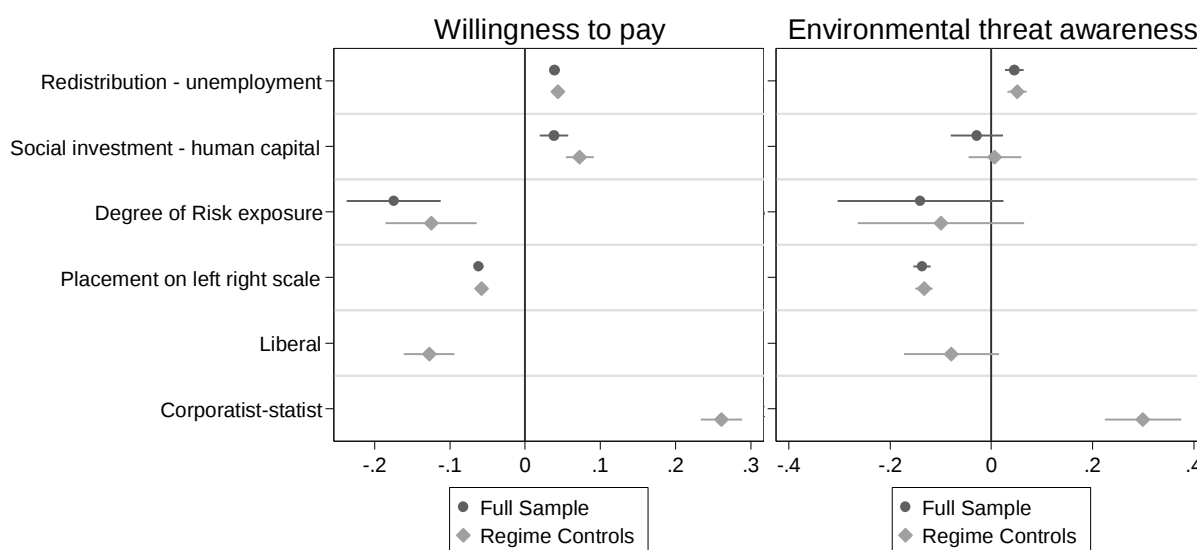


Figure 3 – Comparison of effects of social policy preferences and social risk exposure on “willingness to pay” (left) and “environmental threat awareness” (right). Coefficients are non-standardized, heteroskedasticity robust standard errors; indicate the same results as presented in Tables 5 and 6. 95 % confidence intervals; social democratic welfare state regime serves as reference category

However, Hypothesis 2a about differences in risk exposure across welfare states and its mediated effect on environmental threat awareness cannot only be partly sustained in this analysis.

With respect to social policy preferences, including regime type controls does not change the results obtained and described above. Table 6 reports the results of such model configurations. One standard deviation increase in the approval of social investment policies yields a 0.064 standard deviation increase in the willingness to accept costly policy proposals. However, it has no effect on environmental threat awareness. The results for social policy preferences thus don't change profoundly when including regime type controls. These results lend some support to hypothesis 3a on the positive effect of social investment policy preferences on the willingness to pay for costly climate policies. The positive relationship between social investment preferences and "willingness to pay" support one side of the long-term – short term mechanism proposed. However, they are contradicted by the results for redistributive preferences. Hypothesis 3b proposes a negative relationship between redistributive preferences and the willingness to accept costly policies. The results, however, suggest the opposite, leading to the conclusion that the proposed long-term – short term considerations of individuals are not explaining the mechanism behind this effect. Both items used as proxies for the two common social policy dimensions – redistribution and social investment – appear to increase the willingness to pay for costly climate change policies. This contradicts the assumed effects of short-term compensations and hints at a similar direction of the effect for both dimensions of social policy. I will discuss this result in further detail below.

Welfare state regimes appear to significantly influence both dimensions of environmental attitudes. The reference category is the social democratic regime type with a high degree of de-commodification and universalism (Esping-Andersen 1990). Compared to a more market-oriented regime, this has positive effects on "willingness to pay", as the results in Table 6 indicate a lower willingness to pay for climate policies in the liberal regime type. A similar, though only barely significant effect is observable for environmental threat awareness. Corporatist-statist regimes with their orientation towards conservation of existing structures seem to have a positive effect on both dimensions of environmental attitudes when comparing it to social democratic regimes. H2a on the effect of social risk exposure on "environmental threat awareness" receives mixed support. The barely significant (and negative) effect from the full sample estimation is no longer significant when including regime controls. H2b, dealing with a negative effect of social risk exposure on "willingness to pay", can be supported. Furthermore, the regime type significantly influences these results, highlighting again the effect of existing social infrastructure. The liberal regime type significantly reduces "willingness to pay" for individuals

exposed to social risks. The more market-based approach in countries belonging to this regime might entail higher aversion against additional taxes and state intervention in the economy in general. The opposite is true for the corporatist-statist regime type. Here, individuals are significantly more willing to pay for adaptations to climate change than in social democratic regimes. This has already been indicated above. Additionally, respondents in these countries differ significantly from those in liberal states, highlighting the more conservative approach – in a preserving sense – pursued in such states. This conservatism might translate to policy adaptations made necessary by climate change.

Table 6: Full sample estimation of social policy preferences and social risk exposure on environmental attitudes with regime type controls

attitudes with regime type controls		Full sample		
	Willingness to pay		Environmental threat awareness	
Social Policy preferences/risk exposure				
Redistributive preferences	0.109***	(0.003)	0.047***	(0.010)
Social investment preferences	0.064***	(0.010)	0.002	(0.027)
Social risk exposure	-0.034***	(0.031)	-0.010	(0.084)
Controls				
Left-right placement (0 = left)	-0.153***	(0.003)	-0.131***	(0.009)
Gender (1=female)	0.058***	(0.012)	-0.022**	(0.034)
Age in years	-0.035***	(0.000)	-0.097***	(0.001)
Education in years	0.181***	(0.002)	0.152***	(0.005)
Regime type dummy				
Social democratic regime (ref.)_				
Liberal regime	-0.069***	(0.017)	-0.016°	(0.048)
Corporatist-statist regime	0.163***	(0.014)	0.070***	(0.039)
N	14,474		14,617	
AIC	32391.781		62408.087	
BIC	32467.583		62483.986	
R2	0.123		0.07	

Standardized beta coefficients; heteroskedasticity robust standard errors in parentheses; ° p<0.1, * p<0.05, ** p<0.01, *** p<0.001; Social risk exposure by regime type is the interaction coefficient of the index described above with a dummy variable for each regime type.

To assess the robustness of the differences across welfare state regimes analysed above another set of OLS regressions is computed. Thereby, the sample is restricted to respondents from each regime type respectively and coefficients are estimated for the reduced sample size. To provide comparability for the different models, beta standardized coefficients are estimated with heteroskedasticity robust standard errors (detailed estimates can be found in the Appendix).

Figure 4 reports the results for this sort of comparison for both environmental attitudes dimensions estimated by welfare state regimes and indicates significant differences across those regimes. The effect of redistributive policy preferences on the “willingness to pay” dimension appears to be partially driven by respondents from social democratic welfare states, thus states with a high degree of universality and decommodification. For redistributive policies, the difference to corporatist-statist welfare states is somewhat significant. This indicates that individuals in social-democratic regimes who favour redistributive policies have a higher willingness to pay than their counterparts from corporatist-statist regimes. For social investment policy preferences, the results are indistinguishable across welfare states, however, positive and significant. As indicated above, these findings lend support to H3a but not H3b and thus contradict the long-term short-term mechanism assumed behind both hypotheses.

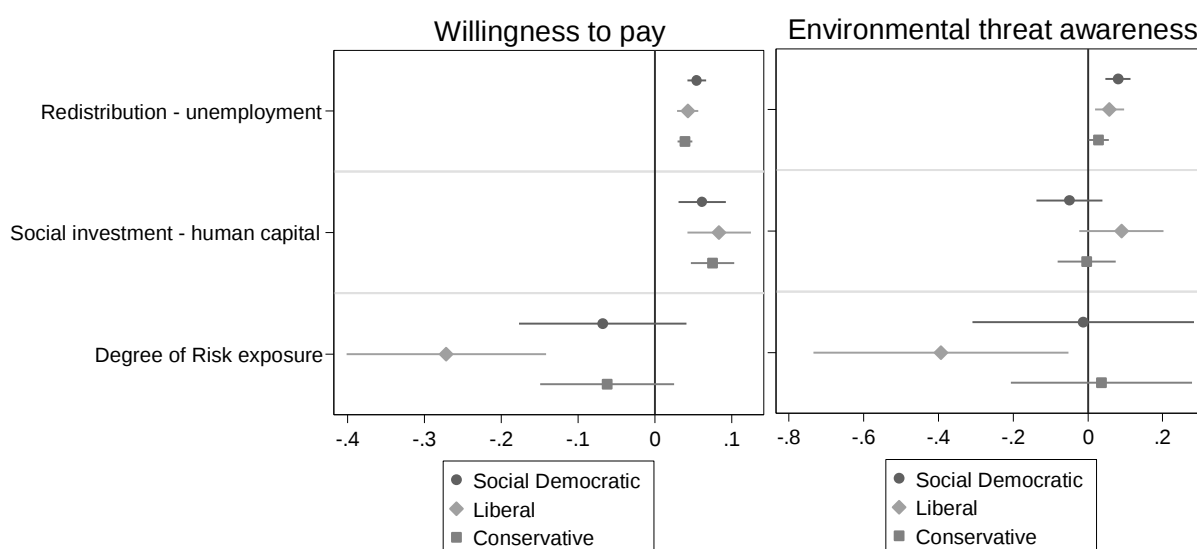


Figure 4 - By type estimation of social policy preferences and social risk exposure on environmental attitudes. Non-standardized coefficients reported, estimated with heteroskedasticity robust standard errors. Table A7 shows the detailed results of the estimation of standardized beta coefficients.

With regard to risk exposure, the findings reported above are replicated indicating a significantly lower willingness to pay for respondents with high risk exposure living in liberal regimes. However, the differences to other welfare state regimes are, if anything, only barely significant and lend only some support to hypothesis 2b, which deals with the decreasing effect of social risk exposure on the willingness to pay for climate policies. A different perspective is offered for “environmental threat awareness”. Respondents from social democratic welfare states, again, differ significantly from respondents from corporatist-statist regimes. Individuals in the former regime are more aware of environmental threats if they prefer redistributive social policies. Moreover, this effect remains positive and significant across welfare state regimes. I do not find any significant effects of social investment policy preferences on environmental

threat awareness across regimes, corroborating the results above. The results for risk exposure resemble the ones obtained before for the willingness to pay dimension. Individuals in states belonging to this regime are significantly less aware of climate change as a threat if they have a higher degree of risk exposure. The effects for the other two regimes, are very close to zero and neither statistically significant nor significantly different from the ones obtained in liberal welfare states.

The results presented in this section provide mixed support for the hypotheses formulated in the theoretical section. While I have found three distinct dimensions of environmental attitudes, two of these dimensions, namely “environmental threat awareness” and “environmental/personal efficacy” (Marquart-Pyatt 2012; Marquart-Pyatt et al. 2019) are highly sensitive to alternating specifications. The only dimensions consistently supported by the data are the “willingness to pay” dimension and a mixed dimension, thus H1 on the multidimensionality of environmental attitudes can be carefully sustained. The replication of distinct social policy dimensions highlighted in previous research (Fossati/Häusermann 2014; Garritzman et al. 2018; Häusermann et al. 2019a; 2019b) failed. This steps into the critique brought forward by Nolan (2013). As a proxy two clearly distinguishable social policy items have been utilized in order to continue with the estimation (Dolezal et al. 2013).

The support for the second set of hypotheses is mixed. Hypothesis 2a assumes that willingness to pay increases with lower degree of risk exposure and does so differently across welfare state regime types. First, differences in the “willingness to pay” dimension are significant across welfare regimes. With respect to risk exposure, this is true only for liberal regimes (as compared to social democratic ones). Here, a higher degree of risk exposure decreases the willingness to pay significantly, when comparing it to respondents in social democratic states. Hypothesis 2b assumes that higher degree of risk exposure increases the awareness for environmental threats. The very large standard errors in the estimation for this proposed connection indicate imprecise coefficients. This might as well have to do with the items chosen and the reduction of the sample when including all variables. However, H2b cannot be supported based on the present analysis. Additionally, the effect of welfare state regimes appears to be different than the one proposed in the theoretical section. Already employing a lot of resources, does not translate to a feeling of increased competition about these resources. Adversely, where only relatively little resources are employed, as in the liberal regime, such competition appears to be most prevalent.

The third set of hypotheses digs into the possible connection of social policy preferences and environmental policy preferences. H3a assumes that the willingness to accept costly climate

change adaption policies is positively affected by respondents who prefer social investment policies. This based on a long-term – short-term rationale. The latter states, on the one hand, that redistributive policies reduce the willingness to pay for climate policies due to the need for immediate compensations. On the other hand, favouring social investment policies is assumed to positively impact this willingness to pay, as both promise long-term benefits. Higher costs today are associated with higher benefits in the future. Although the latter part of this mechanism is supported, especially when controlling for differences across regime types, the mechanism as a whole cannot be sustained. Social investment policies increase the willingness to pay for environmental policies in the full sample, but particularly in social democratic welfare states. H3b, on the other hand, states that redistributive policies have a negative effect on the “willingness to pay”-dimension of environmental attitudes. Based on the results above, this hypothesis has to be rejected. Moreover, redistributive social policy preferences increase the “willingness to pay” significantly and again, very much so in the social democratic regime. This contradicts the long-term – short-term rationale stated above and thus opens up room for further investigation.

I have not made any assumptions about the effect of social policy preferences on environmental threat awareness. However, both dimensions of social policy preferences appear to have a significantly positive effect on the dimension of environmental threat awareness. Therefore, they have to be discussed in more detail. This is the aim of the next section, namely reconnecting the findings to the theoretical framework established above.

5. Discussion

The mixed support for the hypotheses stated above makes it necessary to rethink some of the assumptions, which lie behind them and try to find avenues for further investigation. This section is dedicated to identifying and highlighting the links of the findings above to previous research on environmental attitudes, social risks and social policy preferences.

The macro perspectives on environmental attitudes has been provided by Inglehart (2007) including his assessment of postmaterialist values as drivers of environmental activism. This aspect has already been further developed by Brechin (1999) and Dunlop/York (2008), adding more nuances to this approach. Apart from only being present in developed countries, this research points out, that socio-economic status alone is not sufficient for explaining the emergence of environmental attitudes. Especially for individuals in countries with lower socio-economic standards, the exposure to additional risks is key for concern about these issues. Tapping

into this vein of research and assessing it on the individual level, Marquart-Pyatt (2008; 2012) and Marquart-Pyatt et al. (2019) extend the rationale of environmental concern and identify multiple dimensions in this field, which are subject to individual as well as macro-level indicators. Again, socio-economic development and exposure to risk stemming from environmental change lead to the emergence of three distinct dimensions of environmental attitudes. Possible labels for these dimensions comprise a “willingness to pay” dimension, an “environmental threat awareness” dimension and an “environmental efficacy” dimension (Marquart-Pyatt 2008, 2012). The latter consists of a personal (Marquart-Pyatt et al. 2019) as well as a societal level and is thus somewhat harder to pin down.

Differing from the approach used frequently in this research, namely confirmatory factor analysis, exploratory factor analysis (Costello/Osborne 2005) is used to highlight underlying structures of environmental attitudes. One dimension emerges very clearly when applying this method, that is “willingness to pay”. As for the other dimensions found in research on environmental attitudes, the results are less convincing. Two other dimensions can be identified. They resemble the “environmental threat awareness” and the “personal/environmental efficacy” dimensions described in research on these attitudes. However, they remain highly volatile, which is why H1 aiming at replicating the findings from previous research can only be partially sustained. The items included in a presumed “environmental threat awareness”-dimension is kept in very abstract terms. This might inhibit a more exact computation of this dimension. As for a dimension dealing with “environmental/personal efficacy” the multi-level character of this dimension does pose some difficulties to the approach chosen. This is because the assessment of societal and individual influence might diverge. First, the two influential levels might in themselves be distinct dimensions and have to be assessed individually. Second and closely related, this inability to separate both dimensions from each other might decrease the accuracy and explanatory power of the results. In sum, however, three distinct dimensions emerging from socio-economic status and exposure to environmental risks seem to be partly observable when choosing an exploratory approach.

But what, apart from socio-economic status and exposure to environmental threats, is decisive for the emergence of environmental attitudes and their strength? By taking a closer look at the origins of the welfare state, I have identified another possible indicator. Polanyi’s (1944) assessment of the reactions of societies to profound transformations is very much influenced by his notion of fictitious goods, that is labour, nature and money. These fictitious goods are subject to commodification in ongoing transformations, the process, which causes severe challenges for existing societies (Polanyi 1944: 243 ff.). The state’s task in this context is to reduce

these challenges as far as possible for individuals most affected by the ongoing transformations. As for the social consequences, Esping-Andersen (1990) offers an insightful overview as to how societies respond differently to such challenges. These differences in reactions, eventually, have led to the emergence of distinct welfare state regimes. The primary aim of the latter is the reduction of social risks emerging in transforming socio-economic contexts. This aim is achieved to different degrees by the implementation of various social policies with the ultimate objective of decommodification for a wider or smaller range of individuals.

Future adaptations to new transformations have to build on exactly this existing “social infrastructure” (Allen et al. 2019: 19). This implies that individuals already dependent on such infrastructure might be affected differently by (non)action with respect to climate change and thus have different preferences. Addressing climate change as an additional social risk helps clarify possible consequences from the transformation induced by climate change. Bonoli (2006; Armingeon/Bonoli 2006) describes a variety of old and new social risks. These are the result of a transforming socio-economic environment and have the potential of constant development. Huber/Stephens (2006) highlight how long existing and newly emerged social risks can interact and reinforce each other. Kitschelt/Rehm (2006) point out that social risks are very much influenced by socio-economic status and thereby affect political preferences of individuals. The second set of hypotheses is rooted in this assessment. Individuals who are already subject to one or more social risks, might perceive an additional social risk in the form of climate change differently than people free from such constraints.

The rationale for H2a is such that individuals already exposed to social risks might be more aware of another emerging risk, as it can significantly deteriorate their current standard of living. As for H2b, a lack of resources may then lead to a lower willingness to pay to adapt to additional social risks, simply because there are no additional resources to confront additional costs. However, as has been briefly mentioned above, this might differ with respect to the existing social infrastructure, that is the welfare state, individuals find themselves in. Welfare states already employing a wide range of resources might find it harder to mobilize additional ones to combat a new risk. Adversely, regimes, which employ few resources might find it easier to implement new costly policies. This possible competition on a macro-level might eventually affect individual preferences about new policies. The results presented above support these stated hypotheses with respect to both, differences in environmental attitudes and mediation by the welfare state. However, the assumption made about the mediating effect of the welfare state has to be rebuked. It is individuals from states with few employed resources, who are not willing to pay for costly climate policies. Additionally, individuals in states with a conservationist

motivation, are both, more aware of a new threat and more willing to pay for necessary policies. This implies that though social risk exposure matters for the assessment of additional risks (on cost considerations see also Gervek/Uydaranoglu 2015) excessive social risk exposure might as well detract attention from newly emerging social risks such as climate change. Another possible intervening factor can be the timing of the ESS Round 8 (2016) and a lack of consciousness for environmental threats simply due to such risks not being present. Needless to say, to get to the ground of this seeming contradiction, further investigation is necessary.

Bonoli/Natali (2012) reassess the notion of social risks and the responses of welfare states to the very same. Häusermann (2012), then, highlights the notion of multidimensionality of the social political space resulting from these responses. One dimension consists of social investment policies such as human capital investment, child-care services and family work balance and is aiming at long-term effects of policy investment. The other dimension is focused on redistributive policies such as unemployment benefits or payments for sick leaves and channels more of a short-term compensation for risk exposure. Individuals with distinct social policy preferences differ with regard to other socio-economic and political characteristics like left-right placement or socio-economic class (Garritzmann et al. 2018; Häusermann 2019a; 2019b). Such distinct preferences affect other political choices of individuals such as vote choice (Fosati/Häusermann 2014). Although reassessing the multidimensionality of social policy preferences is fundamental to test the third set of hypotheses, it has not been achieved in the present thesis. This taps in the critique of this distinction voiced by Nolan (2013) on the empirical and theoretical peculiarities of the concept of social investment as opposed to redistributive social policies.

Nonetheless, one key consequence of multidimensional social policy preferences as described by Häusermann (2012) is the potential rearrangement of actors' positions and preferences along the borders of these dimensions. In other words, when only one dimension exists, dichotomous preferences are the status quo. Adding another dimension, however, leads to a more nuanced arrangement of preferences and might result in unexpected similarities across actors. Extending this rationale to the context of an additional social risk as posed by climate change, means that such rearrangements can take place with respect to a new policy field. Hypothesis 3a highlights the shared long-term perspective of social investment policies and environmental policies, meaning that investments now yield higher benefits in the far future. Hypothesis 3b on the other hand establishes contradicting aims of short-term compensations through redistributive policies and additional cost resulting from policies necessary to adapt to climate change. In other words, individuals with redistributive preferences have a lower willingness to pay for such adoption

policies than individuals with social investment preferences as the payoffs for such policies will only be realised in the far future and do not offer immediate relaxation of constraints.

While H3a is supported by the results, the underlying logic is contradicted by the effects of redistributive policies on an individual's willingness to pay. This is because the latter is increased with increasing support for social policy preferences. One possible way out of this dilemma is reassessing the dimensions of social policy with different items or different data in order to get clear results and not using proxies (Dolezal et al. 2013). On the other hand, however, it might be that a long-term – short-term rationale is just too simple to address the relationship between social policy preferences and environmental attitudes. Instead of assuming long-term effects of environmental policies it might be that different policies trigger different effects in the short and in the long run. Gervek/Uydaranoglu (2015) for example investigate a short run policy, namely a fossil fuel tax in turkey and find that support decreases with individual cost associated to this policy. Adversely, highlighting that environmental policy such as reducing car traffic can result in individual health benefits and avoidance of climate change in the long run, lead individuals to assess such policies more positively (Aasen/Vatn 2018). Respondents with higher social responsibility are in favour of both, long- and short-term policies, while individualists tend to emphasize the latter (Aasn/Vatn 2018: 111). What these results suggest is a necessary distinction between environmental policies with immediate effects as opposed to such with long-term effects.

Even though no hypothesis has been brought forward in the current thesis with respect to social policy preferences and environmental threat awareness, the results indicate a distinct relationship. Namely, redistributive social policy preferences affect the environmental threat awareness positively. As the models presented above highlight that this has most likely nothing to do with individual risk exposure, this aspect might tap into a more encompassing OPVS-perspective (Brechin 1999; Dunlop/York 2008). Individuals already sensitive to the risks covered by the existing welfare state might be more aware of additional future risks adding to the task-portfolio of the social infrastructure. However, this is mere speculation and further investigation is needed in this vein.

All in all, the discussion above highlights that environmental attitudes are more nuanced than originally assumed and maybe not always clearly separable. Additionally, risk exposure proved to be an influential aspect, although the mechanisms assumed to lie behind this relationship might differ with regard to individual capacities of dealing with another risk. Lastly, social policy preferences do have an impact on environmental attitudes, however, not in the way

described further above. General approval of social policies appears to affect the willingness to pay for costly climate policies, regardless of the type of social policy. The latter findings imply that the “willingness to pay”-dimension is in need of a respecification with respect to immediate as opposed to long-term effects. Thereby, policy proposals resulting in immediate changes in current lifestyle such as a carbon tax would have to be separated from, for instance, long-term infrastructure investments. While the costs of the former are clearly visible from day one of the policy implementation, effects of costly infrastructure investments are not as easy to evaluate. Therefore, it appears to be useful to categorize costly environmental policies according to how soon individuals are affected by them. In the next section a brief summary of the work conducted in this thesis is done in order to highlight possible weaknesses and avenues of further research.

6. Conclusion

This thesis is among the early attempts to address the transformation triggered by climate change as a social question. At the beginning of this thesis I asked the question of possible effects of social policy preferences on environmental attitudes with respect to the welfare state regime individuals live in. The theoretical and empirical assessment suggests that several mechanisms might be at play here. First, environmental attitudes might be even more fine-grained than hypothesised in this thesis. To be concrete, adding a social versus an individual perspective as well as an assessment of long- and short-term evaluations of environmental policies might be worth considering. However, one robust and two very sensitive dimensions of environmental policy preferences have been identified. More precisely, a “willingness to pay” dimension as the robust one and an “environmental threat awareness” as well as a “environmental/personal efficacy” dimension as the more volatile ones could be replicated with the data and method used in this thesis. As such attitudes do not emerge in a vacuum, a contextual view is very important.

The context in this thesis has been delivered by a reassessment of welfare state regimes by going back to their origins in the transformation of societies (Polanyi 1944). Thereby, the aim has been to show how additional risks resulting from such transformations might interact with already existing and partly covered risks in the social infrastructure currently in place. Thereby the connection of present risk exposure to newly emerging risks has been key in the assessment of how individuals might evaluate policies, which aim at reducing these risks. Higher risk exposure thereby appears to decrease the willingness to pay for adaptive policies as well as the awareness to such threats. While the former can clearly be argued in light of a lack of resources

the latter is not so straight-forward. However, the similar directions of the effects suggest that the argument of a lack of resources might also translate to a reduced capability of being aware of an additional social risk.

With regard to social policy preferences, the picture is not clear-cut either. After establishing the distinction of such preferences in a social investment and redistributive dimension theoretically, I have not succeeded in replicating these dimensions empirically with the present data. The social investment dimension is associated with a long-term perspective, while the redistributive dimension is more concerned with short-term compensations of risk exposure. This long-term – short-term rationale has been assumed to translate to the “willingness to pay” dimension detected above. Thereby I have assumed that social investment policy preferences increase the willingness to pay for long-lasting adaptations to climate change. The opposite has been assumed for redistributive preferences. Both dimensions have turned out to significantly influence the willingness to pay, however, in the same direction. This means that the proposed mechanism is not the one describing this effect. Furthermore, it implies that a reassessment of environmental attitudes might be necessary with regard to both its effects in the long and the short run as well as different cost evaluations of individuals. After doing so, the effects of distinct policy preferences on such environmental attitudes can be re-evaluated.

The mixed support for the hypotheses developed in this thesis opens up room for further investigation. First, a more detailed assessment of environmental attitudes is necessary in order to clearly distinguish between multiple dimensions. In this vein it is probably fruitful to further differentiate concrete policy proposals and vague evaluations of possible consequences. A similar critique is valid also for the present assessment of the multidimensionality of social policy preferences. Moreover, social risks have proven to significantly influence environmental attitudes, pointing at the necessity to take existing risk exposure into account when crafting concrete policy proposals. This is because more vulnerable individuals might be affected very differently from individuals who lack such constraints. However, how such proposals affect individuals with different characteristics is subject to future research. Lastly, the macro-perspective chosen in this thesis, namely welfare state regimes, is in need of a reassessment, which takes into account the dynamics of ongoing transformations in the field of social policy and other possibly related fields such as environmental policy. In other words, which policy fields have been added to the agenda of welfare states and how do they deal with these additional tasks.

The context of welfare state regimes provides a useful starting point for the assessment of climate change as a social question, as its roots lie in another societal transformation. As a last

reference to the title of the thesis, whether environmental and social policies coexist in conflict or are complements, the results in this thesis provide only an ambiguous answer. If carefully crafted, taking into account existing mechanisms and the current social infrastructure, environmental policy preferences might work out complementary to social policies and reduce individuals' risk exposure. If, on the other hand, such proposals are designed in a trade-off logic, the aim of reducing risk exposure might be in danger. To be precise, if new policies leave individuals with a choice between either one of the risks they prefer to be reduced, support for climate change adaption policies might vanish.

7. Appendix

Table A1: Promax rotated factor analysis of environmental attitudes, liberal regime

Item	Environmental threat awareness	Willingness to pay	Environmental/personal efficacy
Willingness to pay			
Taxes on fossil fuels	0.067	0.417	0.077
Subsidies for renewable energy	0.056	0.497	-0.081
Ban of inefficient household appliances	-0.002	0.481	0.062
Environmental threat awareness			
General worry about climate change	0.684	-0.009	0.074
Thought about climate change	0.678	0.044	-0.071
Environmental/personal efficacy			
Personal responsibility for reduction of climate change	0.460	0.050	0.320
Reduction of own energy use	0.114	-0.008	0.446
Eigenvalue	1.871	1.482	1.082
N	5,244	5,244	5,244

Notes: Full-sample computation of factors applying promax rotation. Rearrangement of the items based on the results from the empirical analysis above. Items on taxes, subsidies and bans of appliances recoded for high values indicating a high support. Values above 0.31 are highlighted.

Table A2: Promax rotated factor analysis of environmental attitudes, social democratic regime

Item	Environmental threat awareness	Willingness to pay	Environmental/personal efficacy
Willingness to pay			
Taxes on fossil fuels	0.059	0.439	0.041
Subsidies for renewable energy	0.017	0.477	-0.035
Ban of inefficient household appliances	0.068	0.301	0.099
Environmental threat awareness			
General worry about climate change	0.595	-0.022	0.106
Thought about climate change	0.582	0.055	-0.055
Environmental/personal efficacy			
Personal responsibility for reduction of climate change	0.331	0.087	0.347
Reduction of own energy use	0.081	-0.028	0.440
Eigenvalue	1.529	1.304	1.074
N	6,265	6,265	6,265

Notes: Full-sample computation of factors applying promax rotation. Rearrangement of the items based on the results from the empirical analysis above. Items on taxes, subsidies and bans of appliances recoded for high values indicating a high support. Values above 0.31 are highlighted.

Table A3: Promax rotated factor analysis of environmental attitudes, corporatist-statist regime

Item	Environmental threat awareness	Willingness to pay	Environmental/personal efficacy
Willingness to pay			
Taxes on fossil fuels	0.028	0.368	0.071
Subsidies for renewable energy	0.027	0.457	-0.020
Ban of inefficient household appliances	0.042	0.385	0.026
Environmental threat awareness			
General worry about climate change	0.618	0.024	0.082
Thought about climate change	0.635	0.010	-0.061
Environmental/personal efficacy			
Personal responsibility for reduction of climate change	0.387	0.022	0.360
Reduction of own energy use	0.035	0.009	0.450
Eigenvalue	1.491	1.252	1.034
N	9,864	9,864	9,864

Notes: Full-sample computation of factors applying promax rotation. Rearrangement of the items based on the results from the empirical analysis above. Items on taxes, subsidies and bans of appliances recoded for high values indicating a high support. Values above 0.31 are highlighted.

Table A4: Promax rotated factor analysis of social policy preferences, respecification

Item	Dimension 1
Redistribution	
Standard of living of old governments' responsibility	0.615
Standard of living of unemployed governments' responsibility	0.605
Social Investment	
Childcare governments' responsibility	0.509
More education instead of unemployment benefits	-0.152
Ease of reconciling family and work	0.099
Eigenvalue	1.055
N	20,606

Notes: Full-sample computation of factors applying promax rotation. Items recoded such that high values correspond to high approval of social policy/governments responsibility. Item "Small differences in standard of living" excluded from the analysis. Values above 0.31 are highlighted.

Table A5: Promax rotated factor analysis of social policy preferences, respecification

Item	Dimension 1
Redistribution	
Small differences in standard of living	0.197
Standard of living of old governments' responsibility	0.633
Standard of living of unemployed governments' responsibility	0.612
Social Investment	
Childcare governments' responsibility	0.374
Ease of reconciling family and work	-0.063
Eigenvalue	1.13
N	20,996

Notes: Full-sample computation of factors applying promax rotation. Items recoded such that high values correspond to high approval of social policy/governments responsibility. Item "More education instead of unemployment benefits" excluded from the analysis. Values above 0.31 are highlighted.

Table A6: Promax rotated factor analysis of social policy preferences, respecification

Item	Dimension 1
Redistribution	
Standard of living of old governments' responsibility	0.616
Standard of living of unemployed governments' responsibility	0.589
Social Investment	
Childcare governments' responsibility	0.390
Ease of reconciling family and work	-0.025
Eigenvalue	1.031
N	21,123

Notes: Full-sample computation of factors applying promax rotation. Items recoded such that high values correspond to high approval of social policy/governments responsibility. Item "Small differences in standard of living" and "More education instead of unemployment benefits" excluded from the analysis. Values above 0.31 are highlighted.

Table A7: By regime type estimation of social policy preferences and social risk exposure on environmental attitudes

	Social democratic regime				Liberal regime				Conservative regime			
	Willingness to pay		Environmental threat awareness		Willingness to pay		Environmental threat awareness		Willingness to pay		Environmental threat awareness	
Social policy preferences/risk exposure												
Redistributive preferences	0.127***	(0.006)	0.069***	(0.017)	0.105***	(0.007)	0.053**	(0.020)	0.104***	(0.005)	0.029*	(0.014)
Social investment preferences	0.055***	(0.016)	-0.016	(0.045)	0.071***	(0.021)	0.028	(0.057)	0.068***	(0.014)	-0.001	(0.040)
Social risk exposure	0.127***	(0.006)	0.069***	(0.017)	0.105***	(0.007)	0.053**	(0.020)	0.104***	(0.005)	0.029*	(0.014)
Controls												
Left-right placement (0 = left)	-0.159***	(0.005)	-0.137***	(0.015)	-0.154***	(0.008)	-0.102***	(0.020)	-	(0.005)	-	(0.013)
									0.154***		0.146***	
Gender (1=female)	0.088***	(0.021)	-0.020	(0.058)	0.024	(0.027)	-0.019	(0.076)	0.050***	(0.019)	-0.029*	(0.050)
Age in years	-0.064***	(0.001)	-0.120***	(0.002)	-0.013	(0.001)	-0.047**	(0.002)	-0.024°	(0.001)	-	(0.001)
											0.109***	
Education in years	0.206***	(0.003)	0.164***	(0.009)	0.187***	(0.004)	0.139***	(0.011)	0.163***	(0.003)	0.150***	(0.007)
N	4,923		4,991		3,446		3,469		6,105		6,157	
AIC	10745.187		21178.631		8231.990		15396.848		13342.215		25757.412	
BIC	10797.201		21230.755		8281.150		15446.061		13395.950		25811.214	
R2	0.120		0.079		0.096		0.048		0.080		0.072	

Standardized beta coefficients; Standard errors in parentheses; ° p<0.1, * p<0.05, ** p<0.01, *** p<0.001; reduced sample size due to regime type specific estimation of coefficients.

7.1 Abstract

Climate change and its impact on societies worldwide is subject to an ongoing debate in political systems, especially in the developed world. While such debates are often led in purely scientific or economic terms, they tend to overlook the context in which the impact of climate change will manifest. One of these contextual factors is the welfare state and its capability to palliate social risks. Such social infrastructure is made necessary by societal transformations putting new groups in societies under risk. Thus, assessing new risks, such as climate change, in the context of existing social risks seems intuitive. Thereby, climate change is addressed as a social question. However, this thesis asks this question more specifically, namely how do people's social policy preferences influence their attitudes towards the environment across different welfare state regimes? First, a theoretical assessment of environmental attitudes, the welfare state and social policy preferences is conducted, in order to highlight possible interdependencies. Second, using data from the European Social Survey Round 8, exploratory factor analysis (EFA) helps identifying multiple dimensions of environmental attitudes. Thirdly, applying OLS regression analysis, the relationship between social infrastructure and environmental attitudes is highlighted. I find a significant effect of social policy preferences on environmental attitudes. However, a proposed long-term – short-term rationale cannot be sustained. That is, preferences for immediate compensations by the welfare state do not differ from social investment policy preferences in their impact on the willingness to pay for costly climate change adaptations policies. The thesis concludes by discussing alternative mechanisms and highlights the complexity of political preferences and attitudes.

7.2 Abstract in German

Der Einfluss des Klimawandels auf verschiedene Gesellschaften ist Gegenstand andauernder Diskussionen in politischen Systemen, vor allem in Industriestaaten. Während viele dieser Debatten ausschließlich unter naturwissenschaftlichen oder ökonomischen Gesichtspunkten geführt werden, wird der Kontext, in dem sich der Klimawandel manifestieren wird, oftmals übersehen. Zu diesem Kontext zählt auch der Wohlfahrtsstaat und seine Fähigkeit, bestehende soziale Risiken zu bewältigen. Diese soziale Infrastruktur ist das Ergebnis von gesellschaftlichen Transformationen, die immer mehr Individuen neuen und unterschiedlichen Risiken aussetzen. Die Analyse dieser neuen Risiken, wie dem des Klimawandels, im Kontext bestehender gesellschaftlicher Infrastruktur erscheint also intuitiv. Der Klimawandel wird hierbei als soziale Frage betrachtet. Im Zentrum dieser Arbeit steht die Frage, wie individuelle Sozialpolitikpräferenzen deren Einstellung gegenüber Umweltpolitik in verschiedenen Wohlfahrtsstaatsregimen

beeinflussen. Zunächst erfolgt eine theoretische Auseinandersetzung mit Umwelteinstellungen, dem Wohlfahrtsstaat und Sozialpolitikpräferenzen, um mögliche Interdependenzen herauszuarbeiten. Unter Verwendung von Daten des European Social Survey (ESS) Runde 8 werden in einem zweiten Schritt mittels explorativer Faktorenanalyse (EFA) verschiedene Dimensionen von Umwelteinstellungen identifiziert. Im Anschluss daran wird die Beziehung zwischen sozialer Infrastruktur und Umwelteinstellungen mithilfe von OLS Regressionsmodellen analysiert. Sozialpolitikpräferenzen haben demnach einen signifikanten Einfluss auf Umwelteinstellungen, allerdings nicht im Sinne einer kurz- vs. langfristigen Investitionslogik. In anderen Worten: Präferenzen für kurzfristige Kompensationen durch den Wohlfahrtsstaat unterscheiden sich in ihrem Einfluss auf die Zahlungsbereitschaft für Umweltmaßnahmen nicht von Präferenzen zu langfristigen Investitionen in Humankapital. Diese Arbeit wird durch die Diskussion alternativer Mechanismen abgeschlossen und unterstreicht dabei die Komplexität von politischen Präferenzen und Einstellungen.

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