
The Democratic Consequences of Climate Attitudes & Concerns



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For my grandfather

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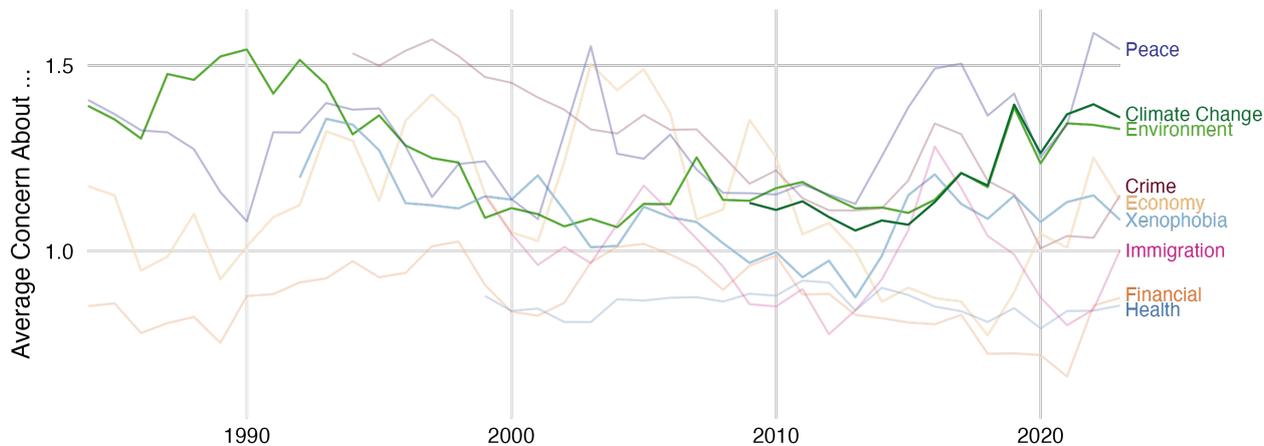
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I Introduction

According to the 2023 report of the Intergovernmental Panel on Climate Change, an estimated 3.3 to 3.6 billion people are exposed to climate risks (IPCC, 2023). The impacts are severe and wide-ranging: reduced food security, increased water scarcity, substantial and partly irreversible biodiversity loss, and growing harm to human health, livelihoods, and critical urban infrastructure.

Citizens are acutely aware of this. In 2023, 17% of Europeans mentioned climate change as the single most serious global problem, on par with ‘poverty, hunger and lack of drinking water’ (20 %), and ‘armed conflicts’ (19%) (European Commission, 2023). According to the *European Social Survey*, concern about the impacts of climate change have risen strongly over the last decade in almost all studied countries (European Social Survey, 2020, 2024). Data from the German Socio-Economic Panel illustrates how climate concern levels remained stable between 2010 and 2015, increased in the following years, and plateaued again in the 2020s on a substantially higher level (fig. I.1). While current average climate (and environmental) concern is superseded by concern about peace, it is much more prevalent than concerns about the economy, crime, or immigration. In fact, it is comparable to immigration concern at the height of migration into Germany in 2016, or economic concern following the financial crises in 2002 and 2008.

Figure I.1: Germans’ Rising Climate Concern



Based on *V40* of the Socio-Economic Panel (SOEP, 2025). Variables treated as numeric: ‘not concerned at all’ equaling 0, ‘somewhat concerned’ resulting in 1, and ‘very concerned’ corresponding to 2. Exact wording of concern items is provided in tab. B.1. Climate concern only included since 2009.

European citizens are also overwhelming discontent with elected officials. Roughly two-thirds evaluate their respective governments’ approach to climate action as insufficient (European Commission, 2023). At the same time, climate change has become increasingly ideologically polarized (Coffé et al., 2024; Otteni & Weisskircher, 2022) with growing segments of society, especially on the political right, fundamentally opposing further climate action. Of all studied issues, Herold et al. (2023) find that climate change, next to immigration, elicits the highest

levels of issue-based affective polarization across Europe.

Existing research, especially within the economic domain, demonstrates that salient societal concerns and discontent with government performance can feed into democratic discontent (Daoust & Nadeau, 2021; Nadeau et al., 2019, 2020) and diminish political trust (de Blok et al., 2022; van der Meer & Dekker, 2011). Additionally, the literature on polarization broadly shows a negative impact on the support and upholding of various basic democratic principles (Carothers & O'Donohue, 2019; Graham & Svobik, 2020; Kingzette et al., 2021; Lelkes & Westwood, 2017). While climate change checks all these boxes – high salience, high concerns, overwhelming negative performance evaluations from both proponent and opponents, affective and ideological polarization – research on its democratic consequences is still lacking. Only Isermann et al. (2024) show that stronger climate concern is correlated with a higher willingness to transgress democratic norms in favor of more ambitious climate action.

The threat and political challenge posed by the climate crisis will be a defining characteristic of our political reality for the foreseeable future. Therefore, I believe a better understanding of climate change's potentially eroding impact on citizens' political support is strongly necessary. While wide-spread political support is a cornerstone of democratic stability (Claassen, 2020; Dalton, 2006), an erosion of popular support or adherence to its norms and principles can foster instability (Levitsky & Ziblatt, 2018; Norris, 2011). Evaluating the democratic consequences of climate attitudes thus not only addresses an important scholarly gap. It may also provide insights for civil society actors seeking to strengthen and safeguard democratic resilience. Within this dissertation, I therefore aim to answer the following, overarching research question:

Do Climate Change-related Attitudes & Concerns erode Political Support?

In the following, I briefly sketch out the underlying argument, the outline of the dissertation, its core findings and contribution. Since this dissertation consists of three closely connected studies that draw on strongly overlapping strands of literature and each include their own conclusions, I keep this short to minimize redundancy.

I.1 Underlying Argument

Governments have a primary duty to protect their citizens from harm. Additionally, Esaiasson et al. (2020) introduce the idea of a 'happiness contract', where governments are held responsible to provide a satisfactory level of well-being.

Perceptions of political systems, in turn, strongly hinge on whether citizens believe that they fulfill these duties. Most generally, declines in subjective well-being or perceptions of systematic group relative grievances can reduce political system support (Esaiasson et al., 2020; Filsinger & Wamsler, 2025). More specifically, the literature cited above suggests a link between citizens' concrete evaluations of government performance, especially regarding the economy, and their political trust and support.

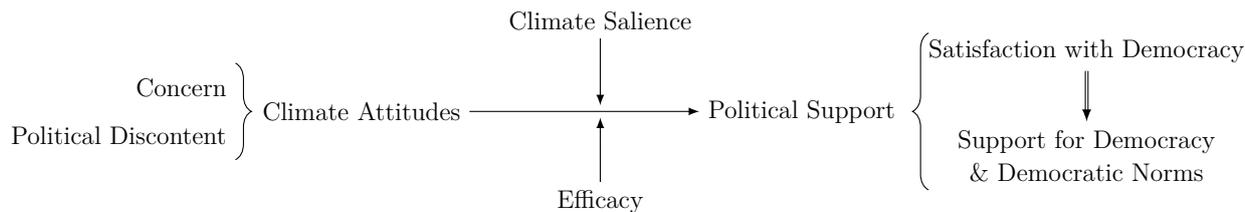
Ross Mittiga (2021) argues similarly that the 'foundational' legitimacy of states rests on the

assurance of the safety and survival of their citizens. He argues, when climate change threatens these basic conditions, the ‘contingent’ legitimacy that democratic values provide could be seen as secondary and values might be justifiably sacrificed to safeguard citizens’ lives. While Mitiga approaches this question from the state’s perspective, I advance the compatible argument focusing on the individual.

The survey data introduced above shows consistently that citizens do not think governments hold up their end of the ‘happiness contract’ when it comes to climate change. They experience widespread concern, and feel insufficiently protected against a looming threat and frustrated with governmental responses. Psychological research suggests that climate change violates citizens’ basic psychological needs, including a need for control, certainty, or self-preservation, by reminding individuals of their mortality and the limits of their personal control (Barth et al., 2018; Fritsche et al., 2011, 2012). I thus simply argue the more climate concern and discontent about climate action citizens experience, the more likely they should withdraw political support from regimes that fail to mitigate these concerns. This main proposition is illustrated by the central horizontal arrow of figure I.2.

Importantly, given the increased polarization inherent in the climate issue and the growing opposition to climate action (Coffé et al., 2024; Herold et al., 2023), I argue that a complete account of the democratic consequences of climate attitudes needs to acknowledge both sides of this emerging cleavage. I propose that discontent with ‘overreaching’ governmental action and concern about the potential impacts of climate policies, such as financial costs and lifestyle restrictions can trigger similar erosion of political support amongst the climate action opposition.

Figure I.2: Conceptual Framework



Within political support, scholars commonly differentiate between the more volatile, *specific* and deeper, more stable *diffuse* support (Easton, 1965, 1975; Norris, 1999, 2011). Specific support is largely evaluative in nature, for example regarding short-term policy decisions or incumbent politicians. Diffuse support represents a more principled attachment to a regime, its values and norms. While specific support is thus more susceptible to frequent fluctuations, especially diffuse support has been theorized and empirically validated as a foundation of democratic resilience (Almond & Verba, 1963; Claassen, 2020; Dalton, 2006; Levitsky & Ziblatt, 2018).

Within my framework, support for democracy and the adherence to democratic norms operationalizes a very diffuse ‘Approval of Regime Principles’ (Norris, 2011, p. 27), while satisfaction with democracy can be understood as an evaluation of regime performance (Linde & Ekman,

2003) located more towards the center of a specific-diffuse continuum. The climate concern and dissatisfaction with climate governance itself can be seen as deteriorations of the most specific types of political support.

Such specific deteriorations do not automatically translate into declines on the more diffuse levels due to citizens' 'reservoirs of goodwill' towards the regime that buffer principled support against temporary dissatisfaction (Easton, 1965). However, these reservoirs are not endless and sustained or strong discontent can drain them, ultimately leading to an erosion of increasingly diffuse levels of support. Following this logic, I propose a mediation logic illustrated on the right side of figure I.2: Specific discontent within the climate issue might directly decrease democratic satisfaction, but erosion of the more diffuse democratic support should only occur mediated by these declines in satisfaction. Essentially, no one should withdraw support for anything that they are not dissatisfied with in the first place. While I test this proposition explicitly in Study 2, this generally suggests that effects on democratic satisfaction should be more likely than effects on diffuse democratic support.

I finally propose two moderations for the translation of specific climate-related discontent into declines of increasingly diffuse political support. Given that issue salience has been shown to amplify other linkages of performance evaluations and political judgments (de Vries & Giger, 2014; de Blok, 2023; Fournier et al., 2003) and accessing salient issues is less cognitively challenging for citizens (Lavine et al., 1996), I expect the more strongly citizens care about the climate issue, the stronger discontent impacts their political support. Contrary, a feeling of efficacy and believe that citizens can enact meaningful change and potentially contribute to 'solutions' for their own discontent in the existing system should provide an additional buffer against political support erosion.

In summary, my core argument builds on established theories on political support and evidence from other issue areas. Climate change differs from other policy domains as responsibility attribution is more widely shared and ambiguous. A 2023 *Eurobarometer* finds that Europeans attribute roughly equal responsibility for climate action to the European Union, national governments, and business and industry (European Commission, 2023). Hobolt and Tilley (2014) shows that compared, to climate change, national governments are more exclusively held accountable for issues like the economy or immigration. As responsibility attribution shapes the link between performance evaluations and political trust (de Blok et al., 2022; Hobolt & Tilley, 2014), dissatisfaction in these areas may translate more easily into eroding political support on a national level.

Additionally, while the IPCC (2023) documents that nearly half of the world's population faces adverse climate impacts, these are most severely observed in Africa, Asia, and Latin America, as well as among low-income households. In such contexts, the link between climate concern and political support may thus be even more pronounced.

In sum, examining the democratic consequences of climate change attitudes in a comparatively wealthy, West European case constitutes a relatively hard test for the underlying argument. If

corroborated, its foundational intuitions should travel well to other political contexts and issues. Beyond this fact, I specifically focus in this dissertation on the understudied case of climate change, as I believe it to be *the* defining challenge of the Anthropocene (European Environment Agency, 2023). It is thus crucial to understand how climate-related concerns and attitudes affect citizens' political support and whether the climate crisis poses not only an environmental and economic, but also a democratic threat.

I.2 Dissertation Outline & Core Findings

My dissertation investigates this topic through three closely connected studies. The studies all investigate how climate change related attitudes affect citizens' relationship with democracy, but at different levels of political support, with distinct methods, operationalizations and data. Taken together, they evaluate my argument in a stepwise manner: from establishing an initial link between climate concern and democratic dissatisfaction, to probing its effect on the more diffuse regime support, and finally uncovering partially hidden preferences for undemocratic climate governance.

The co-authored **Study 1** constitutes the foundation of this dissertation. We apply random-effects within-between models to high-quality German data from the *Socio-Economic Panel [SOEP]* (2010–2021) and find that within-respondent increases in climate concern erode citizens' satisfaction with democracy. This relationship survives very extensive robustness checks. Most importantly, it is not confounded by within-respondent changes in other concerns, for example about the economy, crime or immigration, or general mood swings. We additionally find that increases in climate concern only affect democratic satisfaction in more recent waves, suggesting that the relevance of the climate issue within society has increased over time. In line with the idea that salient issues matter most for system evaluations, the eroding effect is further amplified for citizens with an arguably higher climate salience: stable partisans of the Greens and post-materialists. In summary, Study 1 provides a very robust and credible establishment of the core link hypothesized between climate concern and political support.

Study 2 closely follows the argumentation and logic of Study 1. It extends it temporally with more recent data from the German *Social Cohesion Panel* (2021–2023) and conceptually by jointly probing climate concern's effects on both democratic satisfaction and diffuse support for democracy. While declines in democratic satisfaction could still motivate 'critical citizens' to improve democracy, declining principled support is an even stronger warning sign. Applying first-difference and asymmetrical panel models, I unexpectedly find significant but reversed associations compared to Study 1, largely driven by simultaneous decreases in climate concern and both indicators of political support. Sensitivity analysis suggests a moderate potential for omitted confounding. The finding might thus be explained by the broader polycrisis context (Covid pandemic, Russia's invasion of Ukraine) simultaneously reducing climate concern and democratic evaluations. Sub-group analyses show that these dynamics are concentrated among specific electorates, older citizens, and those with generally lower concern and efficacy.

Due to the availability of extensive time-varying control variables that allow for more extensive robustness checks, I argue that, in their sum, the two studies should shift our belief towards the fact that, yes, increasing climate concern can erode democratic satisfaction. But the divergences between Studies 1 and 2 underscores the importance of situating analyses of political support within broader political and crisis contexts and to investigate the considerable subgroup heterogeneity identified in both.

So far, like previous research in general, I focused exclusively on one side of the climate cleavage. **Study 3** remedies this. Drawing on cross-sectional survey data, collected through a co-authored module in the 2023 *SOEP-Innovation Sample*, I probe the demand for non-democratic climate governance of both, climate action proponents and opponents. I show that stronger policy discontent on both sides of the cleavage increases willingness to bypass various democratic norms in favor of citizens' preferred climate political outcome. I also uncover a surprisingly ubiquitous demand for technocratic climate governance. Two embedded original list experiments reveal substantial social desirability by estimating much higher levels of hidden support for abstract non-democratic climate action ($\approx 35\%$) and action prevention ($\approx 39\%$) than openly revealed. Especially climate action opponents do not disclose their non-democratic attitudes openly.

I.3 Contribution

The findings of this dissertation demonstrate that climate attitudes and concerns can shape how citizens evaluate their political system and the commitment to democratic norms on both sides of the climate cleavage. The central contribution of this dissertation is thus the establishment of climate-related concerns and the increasingly polarized climate cleavage more general as a credible, emerging threat to citizens' political support and, by extension, to democratic stability itself.

Beyond this core focus on the democratic consequences of climate attitudes, the dissertation also advances broader debates in political behavior and democratic support. Study 1 shows that increases in citizens' various concerns can exert parallel eroding effects on satisfaction with democracy. This highlights the cross-pressures under which democracies and civil society actors operate and challenges the assumption that holding one salient concern suppresses the political relevance of others. Study 2 adds to research on the dimensionality of political support by showing that performance evaluations can impact theoretically related indicators such as political trust and satisfaction with democracy differently, and that these impacts are not necessarily symmetrical for concern increases and decreases. These findings call for a more nuanced theoretical understanding of the distinct dimensions of political support, the respective determinants of their erosion, but also their invigoration.

The overwhelming support for technocratic climate governance on both sides of the climate cleavage also raises important new research questions. Combined with Amat et al. (2025) who identify a technocratic turn as a long-term consequence of the Covid pandemic, this vast support suggests that such an attitude shift might be a common product of highly polarized

crises, where citizens want to make sure that decision making is not in the oppositions' hands. Lastly, the experimental evidence for 'staged' democrats further exposes the fragility of democratic consensus and adds evidence to the crucial debate whether citizens' professed democratic support reflects conformity rather than conviction (Bischof et al., 2023; Kaftan, 2024). The results further illustrate that an erosion of political norms is also wide-spread within the climate action opposition, just in an even more concealed manner. As large amounts of democrats-in-name-only can be a risk for democratic stability (Valentim, 2024), these findings are not only scholarly relevant, but instructive for civil society actors to strengthen democratic resilience amid growing issue-based polarization around climate change.

Taken as a whole, the dissertation underscores that climate change constitutes not only an environmental and economic, but also an important democratic challenge in the twenty-first century. As societies navigate the twin pressures of climate change mitigation and issue-based polarization, the ways in which citizens interpret and politicize governments' climate action will increasingly determine not only support for policies or incumbents, but also their satisfaction with and commitment to democracy itself. This dissertation provides novel and systematic evidence to map these emerging dynamics. Its findings are instructive not only for policymakers seeking to safeguard democratic legitimacy amid climate transitions, but also for scholars who should continue to deepen and extend this line of research.

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II Empirical Studies

How Growing Climate Concern Erodes Democratic Satisfaction

Jan Menzner & David Schweizer

Abstract. Citizens' satisfaction with democracy (SWD) has long been a topic of scholarly interest as a key indicator of political support. However, while the climate crisis intensifies and climate change becomes an increasingly polarized and salient political issue, its impact on political support remains understudied. Applying random-effects-within-between models to German panel data from 2005 to 2021, we find that within-individual increases in climate concern are linked to declining SWD. This effect is driven by the most recent survey waves, where it affects democratic satisfaction stronger than changes in economic concern. The relationship is amplified for citizens with an arguably higher climate salience, namely, stable Green partisans and post-materialists. This shows that the climate crisis can increasingly put pressure on citizens' democratic satisfaction.

Keywords. Climate Change, Democratic Satisfaction, Citizen Concerns

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In this contribution, we investigate whether increases in climate concern lead to an erosion of citizens' democratic satisfaction. Generally, such an erosion has the potential to either create 'critical citizens' aiming to reform and improve the democratic system (Norris, 1999, 2011) or to translate into decreasing diffuse support for democracy (Claassen & Magalhães, 2022). As democratic support is prominently theorized as a major foundation of democratic stability (Almond & Verba, 1963; Dalton, 2006; Easton, 1975), it is important to understand the early origins of citizens' (dis-)satisfaction with their political system, especially against the backdrop of wide-spread decreasing trust in representative political institutions such as countries' parliaments and governments (V. Valgarðsson et al., 2025).

From a citizen's perspective, concern about the consequences of climate change is on the rise across Europe (European Social Survey, 2020, 2023a, 2023b, 2024). At the same time, we can observe that ideological polarization around climate attitudes (Coffé et al., 2024; Dunlap et al., 2016; McCright & Dunlap, 2011) and climate policy (Otteni & Weisskircher, 2022) is growing. Researchers have also provided evidence for a link between successful enactment or presence of policies related to climate action in a broader sense and SWD (Alkon & Wang, 2018; Halla et al., 2013; A. F. Wagner & Schneider, 2006). At the same time, the implementation of climate policies has the potential to generate divergent political outcomes, including both electoral backlash (Colantone et al., 2024; Stokes, 2016) and reward (Urpelainen & Zhang, 2022). In this context, we expect climate concern to play an important role in shaping citizens' evaluations of how their political system functions. Against the backdrop of accelerating climate change, it is surprising that the link between climate concern and democratic satisfaction has been understudied.

We aim to address this gap by studying the relationship between climate concern and satisfaction with democracy [SWD] using random-effects-within-between [REWB] estimators and German panel data ranging from 2005 to 2021. Related work focuses predominantly on economic measures and citizens' retrospective evaluations (e.g. Daoust & Nadeau, 2021; Nadeau et al., 2020) and future expectations (e.g. Loveless & Binelli, 2020; Nadeau et al., 2019) in this issue area.

Empirically, we find that increases in climate concern are related to decreases in citizens' SWD. In fact, climate change concern is even more consequential for citizens' democratic satisfaction than changes in citizens' economic concern in the latest sub-sample (2020 & 2021). While climate change concern deviations are very important for SWD in the most recent data, it is not robustly linked to SWD in earlier waves. This aligns with the fact that climate change salience has increased during this time period. Fittingly, issue salience has previously been found to moderate the relationship of government performance evaluations and trust in government (de Blok, 2023). In the absence of direct salience measures in our data, we run two proxy moderator analyses on the individual level investigating groups that should perceive climate change as more salient than the average citizen: stable partisans of the Green party and post-materialists (Inglehart, 1971, 1977). Both moderator analyses align with our general argument. First,

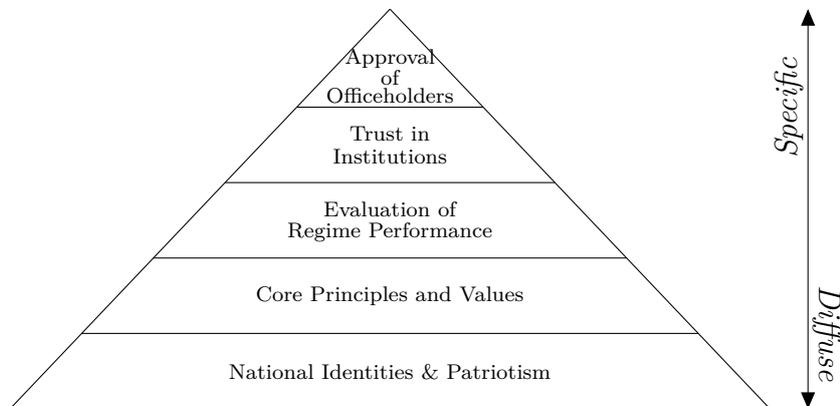
increases of climate change related concern lower democratic satisfaction amongst respondents always identifying with the Greens about 4 times as strong as amongst those who never identify with them. Second, the negative effect is strongest for ‘pure post-materialists’ and non-existent for ‘pure materialists’.

Summarized, our contribution illustrates the danger growing climate concern poses to citizens’ democratic satisfaction in general. By comparing the effect of various concerns, we demonstrate that a predominant focus on economic concern is short-sighted and instead point towards the cross-pressure policy makers face to address various concerns held simultaneously by citizens. Further research should investigate the applicability of our results to other, more principled levels of political support and related downstream consequences.

1.1 Studying Satisfaction With Democracy

In his seminal work, David Easton (1957, 1965, 1975) differentiates between specific and diffuse political support. Specific support relates to citizens’ evaluation of politicians’ and governments’ acute performance. Diffuse support describes generalized support for a political regime and its institutions. This typology was further divided up into five categories by Pippa Norris (1999, 2011) situated along a continuum from most specific (approval of incumbents) to most diffuse (patriotism and national identities) levels of political support.

Figure 1.1: Political Support after Norris (2011)



Own Visualization.

Generally, the more specific the level, the more volatile the support. In practice, it is impossible for political actors to fulfill every expectation of every citizen. Disapproval with officeholders or specific government actions should thus always exist to a certain extent in a pluralist society and does not immediately threaten system stability. To weather such periods of increased specific dissatisfaction, Dalton (2006) argues that any political system requires a sufficient amount of principled, diffuse support. Easton (1965, p. 273) describes this as citizens’ *reservoir of good will*. A lack of diffuse support, in turn, could “encourage protest politics through peaceful or radical means, and, ultimately, [...] foster regime instability.” (Norris, 2011, p. 37).

Our data allows us to study SWD, which is located towards the center of the specific-diffuse

continuum of political support. While the exact meaning and measurement of SWD has been debated extensively (Canache et al., 2001; Linde & Ekman, 2003; V. O. Valgarðsson & Devine, 2022), in this article, we understand it as a performance-based assessment corresponding to how citizens evaluate their regime’s performance. Thus, it represents the third and central level of Norris’ conceptualization (fig. 1.1).

SWD has been studied extensively through the argument of political winners and losers of elections as well as policy satisfaction and evaluation (Singh and Mayne (2023) provide an encompassing review of this literature). Policy evaluation comes conceptually closest to concern about an issue. The existing studies investigating citizens’ evaluations and democratic satisfaction have largely focused on the economy. For example, Christmann and Torcal (2017) demonstrate that worsening sociotropic economic evaluations at the individual level cause declining democratic satisfaction. They do not find a corresponding effect for egotropic economic concern, corroborating Anderson and Guillory’s (1997) insight that sociotropic economic evaluations are more consequential for democratic satisfaction. Recent studies also show that a positive evaluation of the countries’ past economic performance or holding more hopeful economic expectations for the future is correlated with higher satisfaction with democracy (Daoust & Nadeau, 2021; Loveless & Binelli, 2020; Nadeau et al., 2019, 2020). The findings focusing on citizens’ perceptions align with those using objective economic indicators (Claassen & Magalhães, 2022; Quaranta & Martini, 2016).

In a notable exception to the economic studies, de Blok (2023) investigates multiple policy areas. She shows that, across the board, issue satisfaction is positively correlated with political trust, a different indicator of political support. This cross-sectional evidence supports our argument that also concern about issues outside of the economy, climate change for example, could affect democratic satisfaction. Importantly though, we focus on the effects of changes in concern over time using panel data from 2005 to 2021 at the individual level. On the one hand, while we expect similar effects of concern and political evaluation on political support, we argue that they are conceptually different. Concern is forward-looking in nature, reflecting expectations about the future, whereas an evaluation implies a retrospective judgment about past performance. On the other hand, our research design enables us to study within-respondent changes in climate concern and a variety of other concerns instead of between-respondent differences to better understand antecedents of political support. A similar approach is taken by Christmann and Torcal (2017), who investigate two-wave panel data from Spain. However, the authors focus primarily on economic evaluations and aggregate evaluations of other policy areas such as employment or immigration into a single index.

Further studies that claim to investigate relationships between citizens’ concerns and democratic satisfaction in other issues, such as immigration, often rely on salience measures as proxy operationalization for concern (e.g., Böhmelt et al., 2019; Claassen, 2023; Reher, 2015b). But while issue concern and salience can be correlated, theoretically, citizens can be strongly concerned about an issue without seeing it as very salient (Crawley et al., 2019). For example,

people might say that they are very concerned about peace in the Middle East and only a little concerned about inflation, but perceive the latter as the more pressing issue in their own priority ordering.

1.2 Why Climate Change Concerns Should Affect SWD

The threat exerted by climate change is intensifying. More frequently occurring extreme weather events and natural disasters such as floods or droughts increase the threat posed to citizens' well-being, their livelihood, and lives. While there is information accessible that shows potential solutions to the climate crisis, even more sources stress how destructive our current state and trajectory are. Due to this permanent stressor, social psychologists have argued that just as with terrorism threats and other crises, facing climate change may violate citizens' very basic psychological needs, including a need for control, certainty, or self-preservation, by reminding individuals of their mortality and the limits of their personal control (e.g. Barth et al., 2018; Fritsche et al., 2011, 2012). Situations where individuals perceive situational low self-control (e.g. Tiedens & Linton, 2001), low certainty of the outcome (e.g. Huddy et al., 2005; Lerner & Keltner, 2001), and low external agency (M. Wagner & Morisi, 2019), can lead to anxiety and worry (cf. Gu et al., 2020).

Given that citizens have reason to become (more) concerned about climate change, how does this concern translate into an evaluation of the political system? Our expectation is straightforward: In general, increases in any concern about a political issue can translate in lower democratic satisfaction. Esaiasson et al. (2020) make a similar argument when investigating the effect of subjective well-being on political support. According to their happiness contract model, the state is contractually obliged to provide its citizens a certain level of well-being. Fulfillment or violation of this contract predicts the level of support for the political system. Indeed, the authors provide evidence that citizens' well-being is associated with political support. We argue that the impact of being changes in concern operates similarly. However, our argument assumes that citizens will attribute at least some responsibility for their climate concern to their government or their national political system. While some policy fields such as crime or health care are more clearly related to the national level, the fight against climate change often goes beyond national borders. However, Hobolt and Tilley (2014) provide evidence that citizens attribute equally high responsibility for climate change action to their national government and a supranational body, the European Union. Therefore, despite its global nature, citizens perceive climate change also as a national political issue.

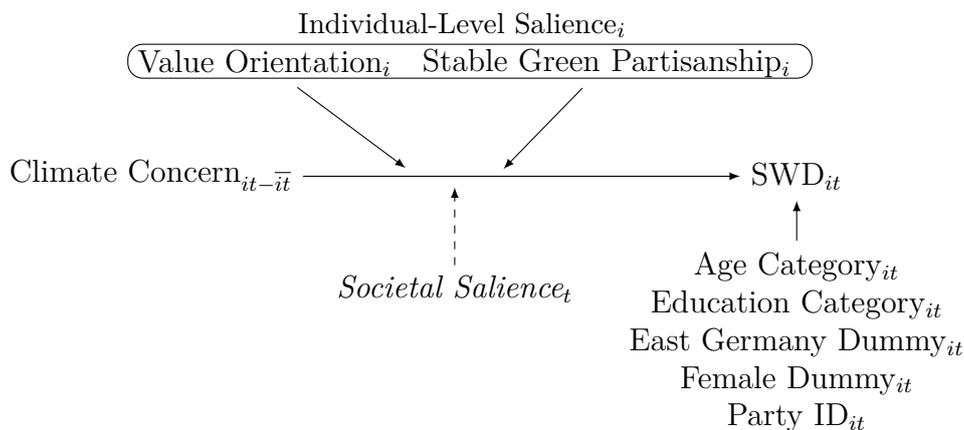
Existing research suggesting a positive relationship between the successful enactment or presence of policies related to climate action and evaluation of governments and regimes further supports such responsibility attribution. Alkon and Wang (2018) find that efforts to reduce air pollution is associated with better government evaluation. At the same time, polluted air reduces these evaluations. Halla et al. (2013) and A. F. Wagner and Schneider (2006) provide evidence that the more environmental policies there are in a country and the higher envi-

ronmental expenditures, the higher SWD. Consequently, we formulate our first hypothesis as follows:

Hypothesis 1 *An increase in individuals' concern about the consequences of climate change lowers their satisfaction with democracy.*

Figure 1.2 illustrates our empirical framework to test our hypotheses. The horizontal arrow represents our first, main hypothesis H1.

Figure 1.2: Empirical Framework



Visualization of our empirical set-up. Subscript it represents individual i 's values at wave t ; $it - \bar{it}$ represents i 's deviation from her mean value \bar{t} at wave t ; and i represents time-constant terms. The moderation by societal salience is tested indirectly.

1.2.1 Issue Salience as Moderator

Research has long established that individual and societal issue salience matters for citizens' evaluations of the political sphere, for example, of prospective candidates (Rabinowitz et al., 1982) and incumbent presidents (Edwards III et al., 1995). While candidate evaluations represent rather specific measures of political support, salience is likely also an important moderator regarding more diffuse levels of political support as citizens generally evaluate the output of democratic systems based on their ability to address issues most salient to them (Reher, 2015a, p. 177). De Blok (2023) demonstrates that the impact of perceived government performance on citizens' political trust is moderated by the salience individuals attach to the issue for which the performance is evaluated. That is, a bad performance regarding welfare policies does not affect political trust for people who do not consider welfare issues as important in the first place. Similarly, de Vries and Giger (2014) show that issue salience strongly affects performance-based voting. Here, the authors point to Lavine et al. (1996) for an explanation of the underlying mechanism at play: The more salient an attitude, the more accessible and less cognitively demanding it is for citizens to use as foundation for a judgment.

When aggregating this logic to a societal level, our proposition suggests that the more salient an issue is on average in society, the larger its potential to erode political support to a relevant

extent. This is supported by additional findings of de Blok (2023) showing that the relational strength between economic or welfare performance and political trust mirrors the share of citizens who name the respective issue as most important in EU countries over time. In summary, we argue that especially increases in concern about an issue deemed salient by many citizens should give us cause for worry about its impact on political support.

Today, climate change is highly salient, especially in Western Europe. This constitutes a rather recent phenomenon that can be traced back to a variety of developments: The first in this series of impactful events is arguably the signing and ratification of the Paris Climate Agreement in 2015. However, climate change only became a highly visible and contested issue in media and public discussion when Greta Thunberg started the first school strike in 2018. This was followed by an enormous climate movement all over the world, leading to the first global climate strike in 2019. A few months later, the European Parliament declared the climate emergency. In Germany specifically, Fridays For Future constitutes one of the largest re-occurring protest movements and its most prominent faces are regularly invited to prime time talk shows and other public events. Climate protests continued even during the Covid-19 pandemic and kept climate change on the political agenda. This ongoing support for the protest movement was reflected in over 250.000 people participating in the 2023 global strike throughout Germany, according to the activists' own estimates. The continuous protests generated a lot of media attention, and thus likely contributed to an increased issue salience. Furthermore, these climate protest also increased concerns about climate change (Brehm & Gruhl, 2024).

In Germany, public attention was raised again in the 2021 election year when constitutional complaints against the German Federal Climate Change Act were partially successful. This marked a significant response to climate change from the German Constitutional Court openly criticizing the government's performance and demanding changes to the legislation. In addition, one of Germany's most severe floodings in decades put climate change mitigation and adaptation even more on the public agenda. Garside and Zhai (2022) and Hilbig and Riaz (2024) find evidence that the German floods contributed to increased salience of climate change in the short-term (see Damsbo-Svendsen (2025) for similar evidence from Denmark).

Based on these considerations, we formulate a first conditionality to our main hypothesis:

Hypothesis 2 *The main effect (H1), on average, manifests more strongly during time periods with higher societal climate change salience (i.e., post 2018).*

1.2.2 Individual Effect Conditionalities

Additionally, climate change salience undeniably differs between individuals. This is not only true between, but also within countries (Crawley et al., 2021). In this article, we propose two measures within this article that should capture higher climate salience for individuals: their value orientation and long-standing green partisan attachment.

Building on the work of Inglehart (1971, 1977), we assume that individuals with a post-

materialist value orientation are more likely to pay attention to and prioritize post-materialist issues such as environmental protection and climate change mitigation. Empirically, evidence shows a positive correlation between a post-materialist value orientation and the belief that the effects of global warming have serious consequences (Kvaløy et al., 2012). We therefore argue that the stronger the post-materialist value orientation of citizens, the greater salience they should attach to the issue of climate change. Since we expect higher salience to positively moderate the main effect, we propose the following hypothesis:

Hypothesis 3 *The main effect (H1) is stronger for individuals with a post-materialist value orientation, compared to those with a materialist value orientation.*

Further, we expect stable green partisanship to amplify the salience of climate change as parties can influence their electorate’s opinion (Druckman et al., 2013; Fuller et al., 2025; Slothuus & Bisgaard, 2021; Slothuus & De Vreese, 2010). Indeed, Green party supporters are on average more climate conscious than other citizens in Western Europe, even when controlling for left-right placement and political values (Fisher et al., 2022). Importantly, parties can also affect their supporters’ issue salience by selectively emphasizing an issue (Neundorf & Adams, 2018). It comes to no surprise that green parties take pro-climate positions and put more issue emphasis on climate change compared to other party families (Farstad, 2018). In the German case, this position in the political spectrum is taken up by the “Greens”, who were part of the governing coalition following the 2021 election.

While individuals might identify with different parties at different points in time, those who exclusively identify with a party over a longer period are arguably more prone to subscribe to their parties’ positions and salience attribution as well as more susceptible to this parties’ cues. In a similar vein, Ray (2003) shows that the effect of party positions on citizens’ opinions is strongest for those with a high partisan attachment. Thus, we argue that stable partisan attachment with the Greens should make individuals, on average, more sensitive to the climate issue than compared to individuals with changing partisan attachment. Therefore, we hypothesize:

Hypothesis 4 *The main effect (H1) is stronger for individuals with a stable partisan attachment to the Greens.*

1.3 Research Design

We test our hypotheses using the high quality German Socio-Economic Panel [SOEP] (Goebel et al., 2018, 2023). Data from the European Social Survey [ESS] illustrates that German’s average democratic satisfaction is very stable over time (see fig. A.2). Comparatively, it ranks at the upper quartile of surveyed European countries. Simultaneously, a majority of Germans self-report as “extremely” or “very” concerned about climate change in both the 2020 and 2023 ESS (see fig. A.1). This is the highest share of all 31 countries participating and a strong

increase from a previous survey round in 2016. Between 2016 and 2020 the share of those “extremely” concerned doubled from 7.2 to 14.8 per cent.

Due to the rather stable average satisfaction with democracy, we argue Germany represents a relatively hard test for our proposed mechanism. Effects identified in Germany should replicate reasonably well in other countries where democratic satisfaction is less consolidated and might thus be more susceptible to erosion. At the same time, Germany is a suitable case for our specific climate focus, due to the substantial recent increases in climate concerns and the previously illustrated overall high climate salience.

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1.3.1 Data

Our main analyses rely on four unequally spaced panel waves (2010, 2016, 2020, and 2021) – the only ones jointly including our dependent (SWD) and core independent variable (climate concern). This allows us to examine long-term and recent short-term effects.

We first drop every observation with missing values in the variables used in our models. We then exclude respondents participating in only one wave, since no within-change can be estimated for them. This results in 65.409 observations distributed over four waves ($N_{2010} = 12.346$; $N_{2016} = 18.575$; $N_{2020} = 19.448$; $N_{2021} = 15.040$). Table A.1 shows the respondents’ participation history in more detail. Tables A.7, A.8 and A.9 provide descriptive statistics for all variables used in the analysis and robustness checks. Moreover, table A.9 underscores that throughout the waves, there is no discernible pattern of panel attrition as distributions regarding sex, age, and education remain fairly stable. The data resembles the German public well regarding sex and age, while East Germans and more educated individuals are over-represented (see table A.2). Our analysis results are robust to re-running our climate concern models with survey weights.

To facilitate sub-sample analyses, we create separate data sets for each pair of consecutive waves ($N_{10\&16} = 23.846$; $N_{16\&20} = 28.006$; $N_{20\&21} = 28.400$). In 2005, climate concern was not surveyed, but satisfaction with democracy and other concerns were. So we create another sub-sample ($N_{05\&10} = 24.986$) to run models providing additional context.

Main (In)Dependent Variables

All exact item wordings, variables with their original scales, and performed recodings are listed in tables A.4 & A.5.

SWD is measured on an 11-point scale and treated as continuous. All concerns, including that about the consequences of climate change, are captured on Likert scales ranging from ‘not concerned at all’ over ‘somewhat concerned’ to ‘very concerned’. Since we are interested in within-respondent effects, our main predictor is respondents’ deviation from their average concern levels over all waves at wave t . We generally treat these measures as continuous. Still, we re-run our core models treating climate concern as categorical, producing significant, robust,

and fairly linear coefficients.

Interaction Variables

We use two time-invariant moderators to test H3 and H4: individuals' value orientation and the stability of their partisan attachment to the Greens. First, (post-)materialist value orientation is measured on a 4-point ordinal scale using the classical measure pioneered by Ronald Inglehart (1971, 1977). This measure is time-invariant, because during the study period it was only included in the 2016 wave. Although period effects might influence value orientations, Inglehart (1971, 1977) argues that they are shaped by formative years and resistant to short-term shocks. Figure A.3 leverages previous measures from 1996 and 2006 corroborating said stability.

Second, we code 'Stable Green Partisanship' as a categorical variable. Respondents are separately classified as always, sometimes, or never identifying with the Greens within each subsample. Someone identifying with the Left in 2010 but the Greens in 2016, 2020, and 2021 is thus coded as "Sometimes Green" in the main data, and "Always Green" in the 20/21 subsample.

Control Variables

Finally, our empirical framework (fig. 1.2) contains a selection of time-invariant and time-varying control variables. We always control for the following socio-demographics to improve model precision: sex, East vs. West German residence, age, and education. Women (Hansen & Goenaga, 2021), East Germans (Welsch, 2022), older (Zilinsky, 2019) and less educated (Anderson & Guillory, 1997) citizens are generally expected to be less satisfied with democracy. We enter respondents' place of residence when surveyed and their self-reported sex as theoretically time-varying dummy variables. In practice, both measures are time-invariant for most respondents. Additionally, age and education are captured at each wave. Age is recoded in six levels ranging from below 26 to above 65 years in ten-year intervals. Education is recoded according based on to the ISCED 1997 standard. Following the recommendation of the European Commission (Eurostat, 2023) the final variable reflects low, medium, and high educational attainment. Robustness check models using education and age as numeric variables do not alter our results meaningfully. Additionally, Aldrich et al. (2020) show that partisan attachment is associated with higher democratic satisfaction. We thus also control for individuals' partisan identification at each survey wave. Beyond improving the model precision, conditioning on time-varying partisan attachment at wave t accounts for an eventual confounding effect on our main relationship of interest. Note that our results are robust to the inclusion or exclusion of any of the control variables.

1.3.2 Modeling Strategy

We employ linear REWB models with wave fixed effects and random intercepts for each respondent. Specified this way, REWB models are a less restrictive version of the common two-way fixed effects [TWFE] approach (Bell & Jones, 2015; Bell et al., 2019; Mundlak, 1978). As a robustness check we also specify our main analyses as TWFE models, producing essentially

equal results throughout. The general form of our REWB models (adapted from Bell and Jones (2015) and Bell et al. (2019)) can be expressed as follows:

$$Y_{it} = \beta_0 + \beta_1 * \bar{X}_i + \beta_2 * (X_{it} - \bar{X}_i) + \beta_3 * W_{it} + \beta_4 * Z_i + \beta_5 * T_t + \nu_i + \epsilon_{it}$$

Here, Y_{it} is respondent i 's satisfaction with democracy at wave t . Our independent variable of interest is decomposed into a respondent i 's mean concern over all observations (\bar{X}_i) and her deviation from said mean at wave t ($X_{it} - \bar{X}_i$). The former estimates between- and the latter within-respondent relationships which we focus on for our hypotheses. W_{it} then stands for all time-varying variables measured for each respondent i in wave t (e.g., party identification). Z_i stands for all time-invariant variables measured for each respondent i . T_t represents the fixed effects for each survey wave. ν_i are normally distributed respondent-level random intercepts [$\nu_i \sim N(0, \sigma_\nu^2)$], and ϵ_{it} represents the normally distributed residuals [$\epsilon_{it} \sim N(0, \sigma_\epsilon^2)$].

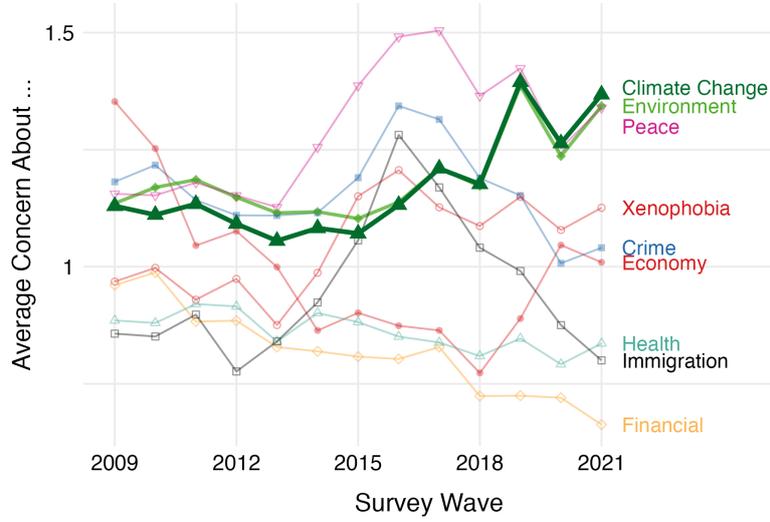
The REWB models prevent confounding by time-invariant respondent-specific measures and account for general time trends. As such, it also controls for any exogenous events between waves that uniformly affect our sample in the same way. In addition, we run multiple robustness checks and extreme bounds analyses to make our inferences more robust regarding potential time-varying confounders. Importantly, REWB models do not identify a causal direction. All descriptions of the order of causes and effects are thus purely theoretically motivated.

1.4 Analysis

Figure 1.3 describes respondents' average concern levels since 2009, highlighting a steady rise in climate-related concern. While average climate concern consistently exceeds the "somewhat concerned" level, it strongly spikes in 2019. This coincides, for example, with the emergence of the *Fridays For Future* movement. By 2021, average concern about climate change registers higher than any other surveyed concern. Throughout the years, average environmental concern closely follows that of climate concern. To trace the other concerns' developments going back to 1984, see figure A.4. Table A.6 additionally shows the change pattern of respondents' climate concern between subsequent panel waves (2010, 2016, 2020, 2021). Generally, approximately 60 per cent of respondents report the same concern level in waves $t-1$ and t . Less than 3 per cent switch between being 'very' or 'not at all' concerned.

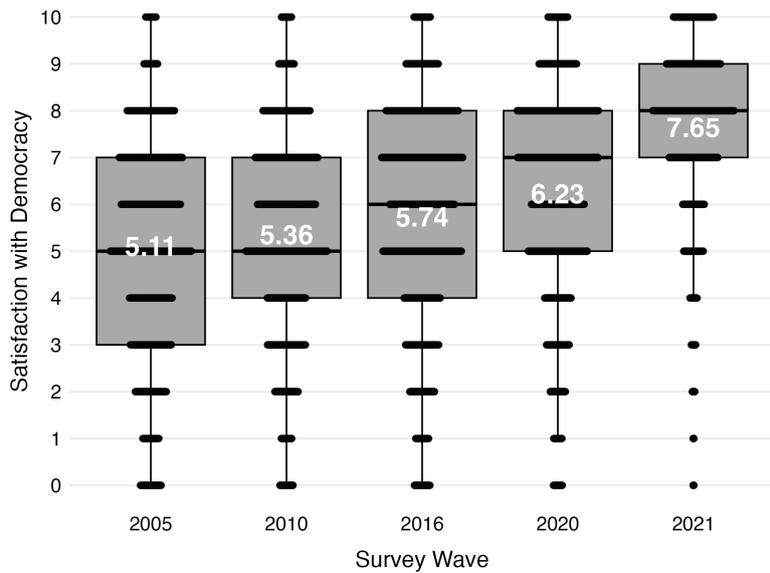
Democratic satisfaction, our dependent variable, also increases over time (fig. 1.4). While the upswing is rather incremental in the beginning, a more substantial jump occurs between 2020 and 2021. We trace this back to the extraordinary situation surrounding the Covid-19 pandemic, as Bol et al. (2021) identify that lockdowns positively impacted trust in government and SWD. Importantly, the SOEP collects its data throughout the whole year. Thus, the impact of lockdown policies on respondents' democratic satisfaction and concern levels likely depends on their interview date. Indeed, monthly averages of democratic satisfaction in 2020 varied significantly (see upper panel of figure A.5). Due to this strong intra-wave variance, we later re-run our climate concern models using monthly instead of wave fixed effects as a

Figure 1.3: Concern Averages over Waves



Concern averages since inclusion of the concern about the consequences of climate change. ‘Not concerned at all’ equals 0, ‘somewhat concerned’ equals 1, and ‘very concerned’ equals 2. Based on raw data from *SOEP V38* (Goebel et al., 2023). For a plot of the other concern averages dating back to 1984, see figure A.4.

Figure 1.4: Average Satisfaction with Democracy over Waves



Boxplot shows median and inter-quartile range satisfaction with democracy. Averages are written in white. Whiskers extend to $1.5 \times$ the IQR. Overimposed points identify the distribution and outliers. Based on the full data set (2005, 2010, 2016, 2020, 2021) based on *SOEP V38* (Goebel et al., 2023) with described data transformations.

robustness check – corroborating our results.

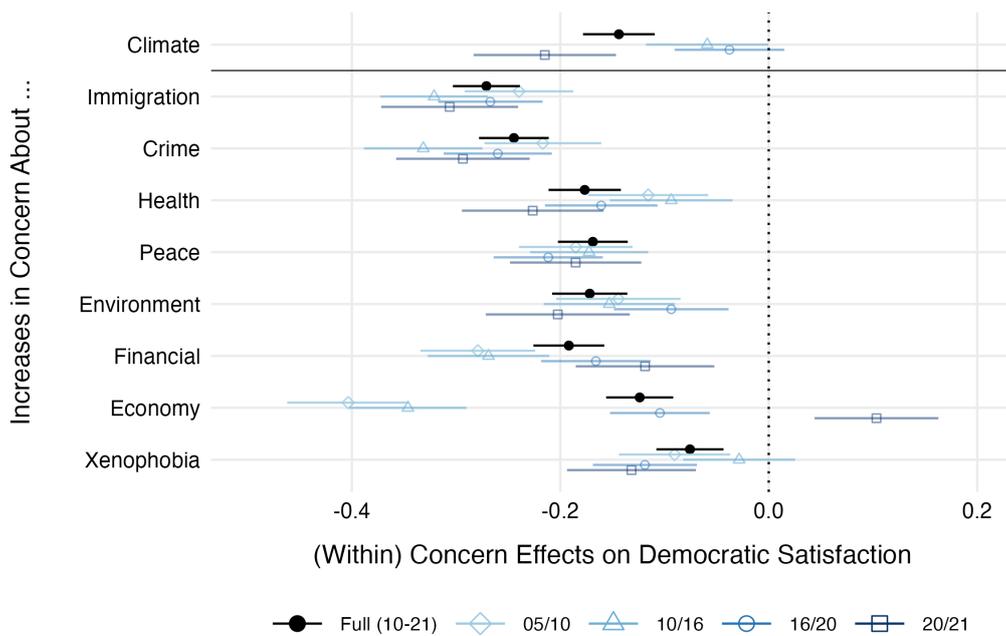
1.4.1 The Effect of Increasing Concern on Democratic Satisfaction

Figure 1.5 visualizes the effects of hypothetical within-respondent concern increases on democratic satisfaction for nine concerns based on the fully controlled REWB models. Black coefficients are based on the main data set (2010–2021). Blue-shaded coefficients relate to the various two-wave sub-samples.

Climate Concern Can Decrease Satisfaction With Democracy

We find that a hypothetical within-respondent climate change concern increase by one point relates to a significant 0.14 point decrease in democratic satisfaction in the main model. This initially supports our hypothesis H1. We further demonstrate that increasing concerns about other issues are likewise related to declining democratic satisfaction. With very few exceptions, sub-sample analyses prove significant as well.

Figure 1.5: Concern Coefficients Visualized



Black coefficients based on ‘Full’ REWB models, controlling for age, education, sex, East vs. West Germany, and partisan attachment, using main data set (tables A.10 – A.18) & blue-shaded ones on ‘Full’ REWB sub-sample models (tables A.19 – A.24). Note, there is no coefficient for climate concern for the 05/10 sub-sample, as this concern was not included in the 2005 survey. Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP (Goebel et al., 2023) with the described data transformations.

These results illustrate how focusing primarily on economic concerns clearly misses the full picture, both from the perspective of scholars and policymakers. Overall, concerns about immigration and crime in Germany are consistently related to the strongest declines in democratic satisfaction, with weaker effects for concern about maintaining peace, respondent’s health, and violence against foreigner. Compared to the other concerns under study, the effect of climate

concern is medium-sized and differs from the other concerns in two meaningful ways.

First, comparing the fully controlled *between*-respondent coefficients from tables A.10 – A.18, only average climate concern exhibits a significant positive correlation with SWD. Citizens who are, on average, very concerned with climate change exhibit a 0.26 points higher democratic satisfaction than those who are, on average, not concerned at all. For comparison, those either consistently very concerned about crime, immigration, the economy, or their financial situation are, on average, at least two points less satisfied with democracy than those consistently not concerned about these issues.

Second, the effects of most concern deviations remain stable throughout the study period, or, in case of the economic concerns, the relationship even weakens over time. For climate concern deviations, figure 1.5 clearly shows a weak relationship with SWD in the earlier sub-samples, even though it still is statistically significant in the 10/16 sub-sample. However, the effect size increases strongly to -0.21 and becomes statistically significant in the latest sub-sample (2020 & 2021) revealing a strong relationship in line with our framework. For one, this pattern supports H2, suggesting that climate concern increases have a greater negative effect on democratic satisfaction in times when climate change is arguably more salient. It also underscores the importance of studying and understanding the impact of growing climate concerns on democratic satisfaction. On the other hand, it demonstrates how the overall effect is driven by the most current survey waves thus weakening support for and prohibiting a full acceptance of H1.

Environmental Concern – Similar Trends, Differing Salience Levels

Over time, the closely related environmental concern follows a similar, albeit much less pronounced, pattern which grants additional plausibility to our estimates. However, unlike climate concern, deviations in environmental concern significantly impact SWD in every sub-sample. Regarding our main argument, this suggests that environmental protection was a sufficiently salient issue throughout the study period, while the more specific issue of climate change only recently gained enough political relevance. By now, however, increases in climate change concerns are at least as important for citizens' democratic evaluations as those in environmental concerns.

Climate Concern beats Material Concern

While the effect of environmental and climate concern changes has recently risen, the impact of changes in concern about Germany's economy as a whole and concern about respondents' own financial situation on democratic satisfaction has declined (fig. 1.5). Indeed, in the most recent data, both material concerns are less consequential for citizens' evaluation of the democratic system than changes in climate and environmental concerns.

Coefficients for increases in both concerns more than halved since the earliest available sub-samples. While a hypothetical one-point increase in sociotropic economic concern meant a substantial 0.4-point drop in SWD in the 05/10 sub-sample, this shrinks to 0.35 (0.1) in the

10/16 (16/20) sub-samples. For the 20/21 sub-sample, we even find a counter-intuitive significant positive effect suggesting increasing concern about the economy raises SWD. However, this can be traced back to monthly intra-wave co-variance with SWD, likely caused by the Covid pandemic (fig. A.5).¹ Contrary to earlier results from Christmann and Torcal (2017), our data suggests that egotropic financial concerns are more consequential for SWD than sociotropic concerns about the economy as a whole.

The Climate Concern Effect’s Robustness

We thoroughly probe the robustness of the results underlying the hypotheses testing. Overall, they remain stable across all robustness checks regarding direction, magnitude, and statistical significance.

First, re-running a balanced model with 5.032 respondents who participated in all waves rules out bias from sample composition or panel attrition (tab. A.19). Second, adding age, education, or both as numeric predictors does not change results (tab. A.30 - A.32). Third, results further hold when using two-way fixed effects (tab. A.34). Fourth, treating climate concern as categorical variable yields similar results (tab. A.33). For example, in the 2020/21 sub-sample, a hypothetical shift from ‘not concerned’ to ‘somewhat concerned’ decreases democratic satisfaction by 0.17 points, and to ‘very concerned’ by 0.41 points. This aligns well with the corresponding main model estimates (-0.21 and -0.42, tab. A.10). Fifth, we create survey weights via iterative proportional fitting and the *anesrake*-package (Pasek, 2018) to make our sample reflective of the German population at each wave t and thus evaluate the external validity of our results. Table A.3 shows that for these weighted models, every single sub-sample coefficient is actually statistically significant, while their size only changes minimally.

Sixth, REWB models’ within-respondent coefficients can, by design, only be biased by omitted time-varying, but not time-invariant variables. While we already control, for example, for party identification at wave t in all models, it is plausible that there are other time-varying confounders not considered in our previous analysis. For example, time-varying deviations in multiple concerns could interact with each other to determine citizens’ SWD. For one, variation in citizens’ concern about their own financial situation might confound our main effect as it could affect both their satisfaction with democracy and climate concern levels. Untangling these interactions is not the focus of this contribution. Still, we aim to rule out omitted variable bias as best as possible. We thus perform extreme bounds analyses (Leamer, 1985; Sala-I-Martin, 1997) to test the main effects’ sensitivity to multiple confounding influences. Figure A.6 and table A.35 illustrate the strong robustness of the climate concern effect to the inclusion of the other concern deviation measures. Table A.36 shows the same for a series of measures that capture life satisfaction and respondents’ mood during the month before the survey. This ensures that our results are not driven by respondents’ more general mood swings

¹ Re-estimating our models with monthly fixed effects corrects the counter-intuitive effect to a non-significant 0.01 (tab. A.28). As a robustness check, we also re-estimate our climate concern models with monthly fixed effects (tab. A.29). As average climate concern remained rather stable throughout the year (fig. A.5), this does not meaningfully change the model results.

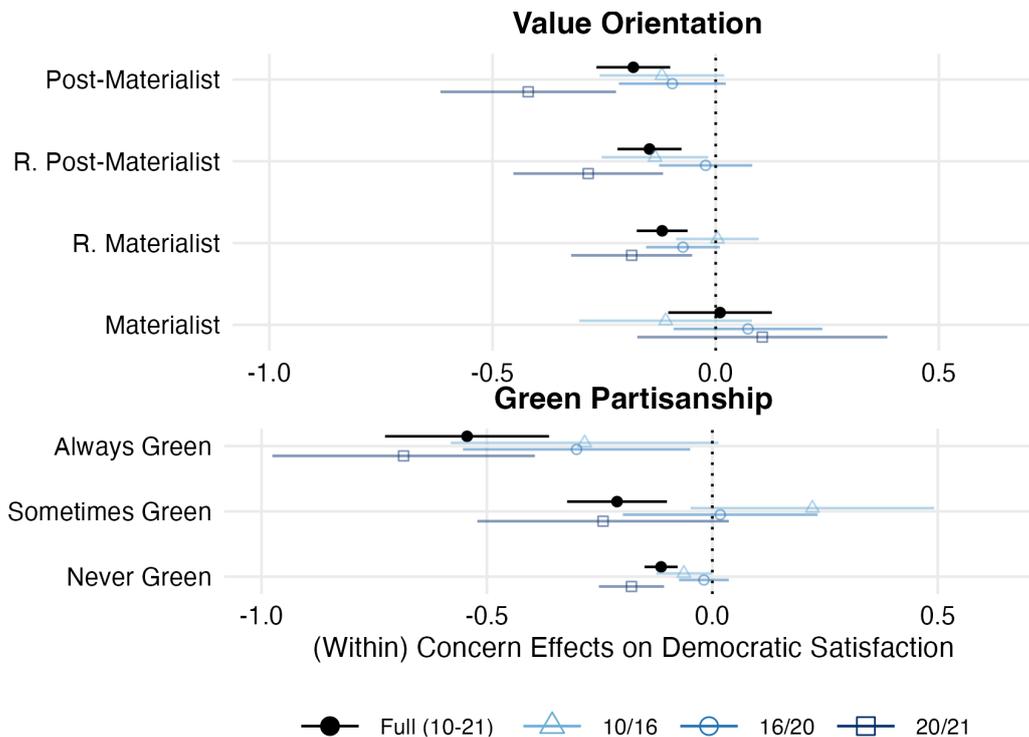
between survey waves. Summarized, while the weak 2010/16 sub-sample coefficient proves to be rather sensitive to control strategies, the overall and 2020/21-effect remain robustly significant throughout. Section A.3 describes the EBA procedure in more detail.

Even though this is not definite evidence, the EBAs demonstrate the identified relationships' robustness to a wide range of possible confounders which strengthens our confidence in their causal nature. Of course, future studies will be needed to tease out this causality and its direction, for example in form of (natural) experiments. For our contribution, the EBAs and adjacent robustness checks support our partial acceptance of H1 and full acceptance of H2.

1.4.2 Salience Heterogeneity: Post-Materialists & Green Partisans

Our framework suggests that concern deviations are more relevant for respondents with higher issue salience. For the present case, we proxy individuals' climate salience via post-materialist value orientations (H3) and stable Green partisan attachment (H4).

Figure 1.6: Moderated Climate Concern



Coefficients show linear combinations for the interacted main effect. Black coefficients are based on 'Full' REWB models using the main data set, blue-shaded ones on 'Full' REWB sub-sample models (tables A.37 & A.40). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel *SOEP V38* (Goebel et al., 2023) with described data transformations.

Figure 1.6 shows linear combinations based on the full sample models that illustrate how a hypothetical one-unit climate concern increase impacts SWD dependent on the moderator values. Figure 1.7 additionally depicts respondents' predicted democratic satisfaction based on the 20/21 sub-sample models for an easier substantial interpretation. Predicted democratic satisfaction is derived using statistical simulation (King et al., 2000), following the observed

value approach recommended by Hanmer and Ozan Kalkan (2013). Points represent the average predicted satisfaction across different scenarios, where all respondents share the same moderator value and hypothetical climate concern change at point t , with all other variables held at their observed values.

(Post-)Materialism Moderates 20/21-Effect

The upper panel of figure 1.6 shows that, as expected, climate concern deviations do not affect SWD for pure materialists in any model. For all other groups, climate concern increases significantly lower satisfaction with democracy in the full sample model. Again, these effects are driven chiefly by the 2020/21 sub-sample, while we find mostly (narrow) null-effects in both other sub-samples.

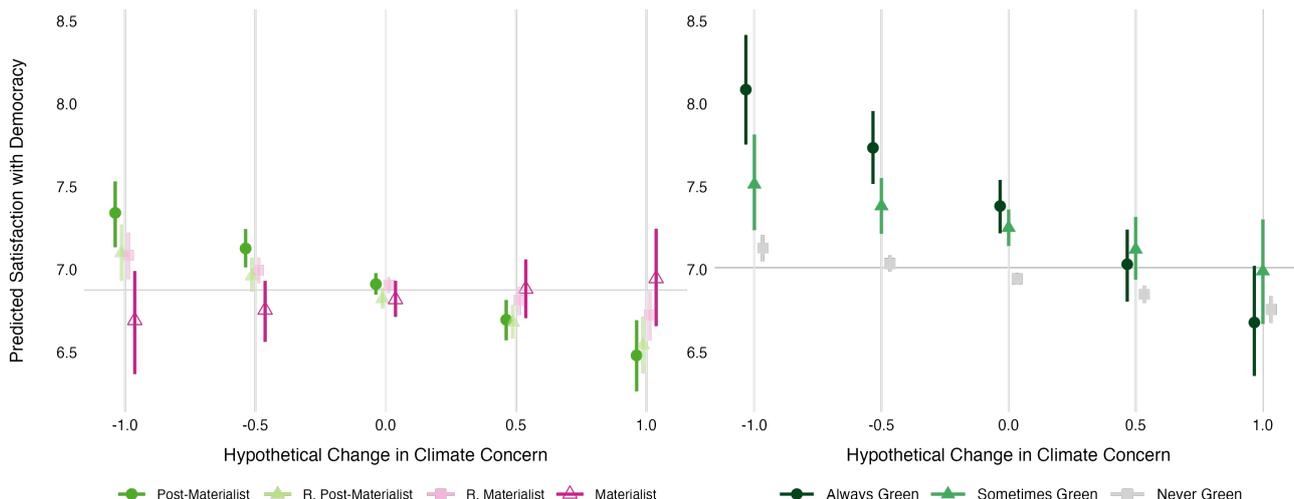
In line with H3, the difference between pure post-materialists and pure materialists is statistically significant in the full sample model (tab. A.37). In the 2020/21 sub-sample, post-materialists even differ significantly from pure and rather materialist respondents. Here, a one-unit increase in climate concern decreases democratic satisfaction by 0.42 units for post-materialists. Rather materialist individuals still lose 0.19 units, while the effect completely vanishes for pure materialists.

The left panel of figure 1.7 translates these model results into predictions of respondents' democratic satisfaction. Here, we only show predictions for concern deviation values that are actually present in the data. Across value orientation groups, concern deviations follow similar distributions with roughly $\frac{2}{3}$ of respondents exhibiting no deviation in climate concerns between the 2020 and 2021 waves (tab. A.39). Absent a deviation from respondents' average concern levels ($X = 0$), predicted SWD hovers around the model average of 6.9 for all four value orientation scenarios. While predicted SWD is the highest in the pure post-materialist case, it surmounts that of the pure materialist case by less than 0.1 points.

In scenarios with stronger hypothetical deviations from respondents' average climate concern, an X-shape emerges. Materialist scenarios defy the general trend of decreasing SWD under higher concern conditions. On the far left we can compare how satisfied with democracy citizens are predicted to be assuming that their climate concern has decreased by one unit (e.g., from being 'somewhat' to 'not at all' concerned). If respondents were pure post-materialists, our model predicts a 0.58-points higher SWD compared to a scenario in which respondents are purely materialist (7.31 vs. 6.73). Contrary, assuming a hypothetical one-unit concern increase, pure post-materialists' predicted SWD falls 0.45 units below than that of pure materialists (6.48 vs. 6.93).

In line with H3, differences in predicted SWD are most pronounced assuming the post-materialist scenario. Assuming respondents experience a one-unit increase or decrease in climate concern amounts to a difference 0.83 points on the satisfaction scale. This corresponds to roughly 0.4 standard deviations in the underlying sample. In summary, we find strong support for a value orientation moderation in the latest sub-sample, but not over the entire study period.

Figure 1.7: Simulating Predicted Satisfaction with Democracy



The plots present predicted satisfaction with democracy and corresponding 95-percent confidence intervals based on an observed value simulation. Figure A.7 provides a more detailed explanation. Based on fully controlled interaction models (tables A.40 & A.37) with the 20/21 sub-sample created from *SOEP V38* (Goebel et al., 2023). Horizontal lines indicate average measured SWD in observations used for respective analysis.

Stable Green Partisans Consider Climate Most

We find more consistent evidence for our moderation hypothesis regarding stable Green partisanship. Across all models, rising climate concern leads to the greatest decline in democratic satisfaction among stable Green identifiers (fig. 1.6). Note that in the 10/16 sub-sample, the effect amongst this group is only statistically significant on a 0.1 α -level and the comparison between those ‘always’ and ‘never’ identifying with the Greens does not reach statistical significance and (tab. A.40). In the 16/20 sub-sample comparing ‘never’ and ‘sometimes’ Greens also reaches only a 0.1 α -level while all other interactions are significant and substantial.

For example, in the latest sub-sample a hypothetical one-unit increase in climate concern lowers democratic satisfaction by copious 0.68 points for consistent Green identifiers. The SWD of those identifying with the Greens in only one wave declines by 0.27 points, while those never identifying with the Greens lose 0.17 points. This smallest effect itself is, however, still statistically significant (fig. 1.6). The magnitude of the interaction coefficients obtained from the full sample analysis closely resemble those from the most recent sub-sample.

Next, we examine the simulations under the three partisanship scenarios in the 20/21 sub-sample (right panel of fig. 1.7). Assuming no deviation from respondents’ average concern levels ($X = 0$), ‘always’ and ‘sometimes’ identifiers are predicted to be substantially more satisfied with democracy (7.39 & 7.26) than ‘never’ identifiers (6.94). In all partisan scenarios, a hypothetical decrease in climate concern ($X < 0$) raises democratic satisfaction, while an increase ($X > 0$) lowers it. Here, it should be noted that amongst stable identifiers approximately $\frac{3}{4}$ of respondents report the same concern level in both waves, compared to only $\frac{2}{3}$ of ‘never’ identifiers (tab. A.42)

Overall, figure 1.7 emphasizes that predicted democratic satisfaction is influenced by climate concern changes across all Green attachment levels. However, in line with our overarching salience argument, the changes in predicted SWD are, by far, the strongest in the ‘Always Greens’ scenario. This also applies when comparing them to any of the previously discussed changes conditioned on value orientations. Assuming respondents always identify with the Greens, the predicted SWD differs by 1.35 units comparing if they experience a hypothetical one-unit increase or decrease in climate concern (8.07 vs. 6.72). This corresponds to more than 0.6 standard deviations in the underlying sample. Also consider that throughout the ESS data collection from 2002 to 2023, Germans’ average democratic satisfaction never differed by more than one unit (fig. A.2). This illustrates how strongly changes in climate concern could affect democratic satisfaction for those who likely care strongly about the issue. Given the stronger robustness of this finding compared to the value orientation moderation, we fully accept H4, while we only partially accept H3.

Taken together, these results grant credibility to the underlying argument that increased issue salience strengthens the effect of concern deviations on democratic satisfaction. Since stable green partisans and post-materialists might also differ systematically from the remaining sample in other ways, we still encourage future research to directly re-evaluate our salience argument.

We investigate other potentially moderating factors – respondents’ age, education, region (East/West Germany), sex, and party identification at point t – in an exploratory fashion. Regression models and more detailed discussion are provided in section E of the appendix. Overall, the probed socio-demographic variables do not moderate the relationship between rising climate concern and democratic satisfaction in a consistent manner. However, models based on the most recent data hint at some heterogeneous effects. For example, the relationship between climate concern and democratic satisfaction is stronger for West (vs. East) Germans and for more highly educated respondents. These patterns warrant further empirical analyses by researchers.

1.5 Conclusion

Our article provides first empirical evidence that growing climate concern threatens democratic satisfaction. Within the 2020/21 sub-sample, a hypothetical change from being ‘not at all’ concerned to being ‘very’ concerned decreases satisfaction with democracy by ≈ 0.41 scale points or about $\frac{1}{5}$ of a standard deviation (tab. A.33).

Through two proxy analyses we further provide credible support for our underlying argument of heterogeneous issue salience as a moderator of this effect. This adds to the evidence for issue salience as an important moderator of evaluations of the political sphere (e.g. de Vries & Giger, 2014; de Blok, 2023). In the 2020/21 sub-sample, the reduction of democratic satisfaction caused by a hypothetical one-unit increase in climate concern is roughly four times as large for stable Green partisans compared to respondents that never identify with the Greens (-0.68 vs. -0.17). The same sub-sample also provides evidence in line with the value orientation hypothesis

H3: Pure post-materialists lose 0.42 points on the democratic satisfaction scale for any one-unit increase in climate concern, whereas the effect vanishes completely for pure materialists. While this moderation is not robustly identified throughout the whole study period, the stable Green partisanship hypothesis H4 is corroborated in various sub-sample models.

We argue that our results should replicate in countries with similar contexts. In Germany, climate salience and concern levels are comparatively high and have increased strongly in recent years. According to ESS data from 2016, 2020 & 2023 (tab. A.1), European countries with either similar climate concern levels or similarly strong increases over the last years include Spain, the UK, Slovenia, or Czech Republic.

Beyond climate concerns, we provide evidence that a variety of societal concerns reduce citizens' political support in the form of democratic satisfaction. This finding contributes to and expands the research investigating the relationship between economic evaluations and SWD (e.g., Anderson & Guillory, 1997; Christmann & Torcal, 2017) as well as the evaluation-trust literature (e.g. de Blok, 2023; de Blok et al., 2022). Beyond academia, it illustrates the cross-pressures faced by policy-makers today to address multiple concerns simultaneously to uphold democratic satisfaction.

More specifically, we robustly identify very strong negative relationships with SWD for increases in concern about immigration or crime in Germany, and weaker ones for concern about maintaining peace, xenophobia or one's health. While the negative effect of climate and environmental concern increases grows over time, the initially strong impact of material concern increases declines in recent waves. So much so, that changes in climate and environmental concern have become more consequential for citizens' SWD than changes in the two material concerns.

Our contribution empirically focuses on establishing the link between increasing climate concerns and declining democratic satisfaction. Declining SWD, however, could only be a precursor to the even more foundational erosion of diffuse democratic support. Empirically, Claassen and Magalhães (2022) show that even though the relationship between both types of political support is somewhat reciprocal, SWD has a larger impact on diffuse support than vice versa. Theoretically, Easton (1965, p. 273) used the analogy of a citizen's *reservoir of good will* to explain why short-term fluctuations in democratic satisfaction do not deterministically affect support for democratic rule. But as citizens "accumulate and eventually generalize" their evaluations of the system's performance onto the system itself (Mauk, 2020, p. 20) this reservoir might still get drained. Declining democratic satisfaction can thus be seen as an early warning sign for a withdrawal of principled support for democracy. Contrarily, Norris (1999, 2011) argues that declining democratic satisfaction might even benefit democracies if individuals turn into 'critical citizens'. She argues that declining satisfaction despite strong diffuse support could motivate citizens' to 'repair' the democratic system instead of dismantling it. A similar thought is posited by Klingemann (1999), who labels these unhappy but democracy-committed citizens 'dissatisfied democrats'. While the present data does not allow us to investigate these

very different potential downstream consequences empirically, we encourage future research to address this important question.

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From Dissatisfaction to Disapproval? Climate Concern's Impact on Political Support

Jan Menzner

Abstract. Democratic endurance fundamentally depends on citizens' diffuse political support. Identifying threats to this principled support is thus crucial in times of democratic backsliding. Meanwhile, an escalating climate crisis is threatening adverse effects on billions of humans. Surveys attest that European citizens view climate change as a very serious problem and exhibit increasing concern about its impacts, while simultaneously judging government action as insufficient.

Against this backdrop, I draw on the German *Social Cohesion Panel* (2021-2023) and first-difference models to investigate whether within-respondent increases in climate concern can erode not only democratic satisfaction but also democratic support. Contrary to expectations and previous evidence, results indicate a positive association between changes in climate concern and both democratic satisfaction and support.

Asymmetrical panel models reveal that this association is largely driven by joint *decreases* in concern and democratic evaluations. As sensitivity analyses indicate moderate potential for omitted confounders, the findings may reflect the broader polycrisis context of the Covid-19 pandemic and Russia's invasion of Ukraine simultaneously reducing climate concern and democratic satisfaction. Sub-group analyses further show that the relationship manifests primarily among specific electorates, older citizens, and those with lower average climate concern and efficacy. Together, these findings add to the literature on political support and highlight the need to closer investigate the identified sub-groups and political contexts in which climate concern meaningfully threatens democratic attitudes.

Keywords. Satisfaction with Democracy, Support for Democracy, Climate Change

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Democratic resilience rests on citizens’ political support (Claassen, 2020; Dalton, 2006). Classic work distinguishes between volatile *specific* support such as evaluations of incumbent actors and short-run performance and the more inert endorsement of regime institutions, norms and principles labeled *diffuse* support (Easton, 1957, 1965; Norris, 1999, 2011). Political support strengthens democratic endurance (Claassen, 2020), whereas an erosion invites system instability (Levitsky & Ziblatt, 2018; Norris, 2011).

To protect contemporary democracies during times of potential backsliding (Coppedge et al., 2024; Foa & Mounk, 2016), it is crucial to understand the determinants of and threats to political support. With few outliers (de Blok, 2023; de Blok et al., 2022), existing research has predominantly focused on economic evaluations and concerns as predictors of democratic satisfaction (Armingeon & Guthmann, 2013; Daoust & Nadeau, 2021; Nadeau et al., 2019, 2020). This study contributes new evidence by instead examining the democratic consequences of climate concern.

Climate change is an escalating crisis, already threatening adverse impacts on more than 3 billion people world wide (IPCC, 2023). Public opinion mirrors this salience. A majority of Europeans view climate change as a serious problem and deem government action as insufficient (European Commission, 2023), while concern about its impacts has strongly increased since 2016 (European Social Survey, 2020, 2024).

Still, we know relatively little about how climate concern affects political support. So far, Isermann et al. (2024) show that stronger climate concern leads to a higher willingness to transgress democratic norms in favor of more ambitious climate action. Study 1 suggest that within-respondent increases in climate concern predict declines satisfaction with democracy. This study expands on this literature in multiple ways.

Compared to Isermann et al. (2024), I analyze within-person change in *diffuse* support for democracy, reducing bias from stable traits. Without a policy-for-democracy trade-off, I also conduct a stricter test of whether increased concern reduces democratic support without instrumental gains. I expand on Study 1 by *jointly* studying democratic satisfaction and support. Theoretically, declines in only democratic satisfaction do not deterministically undermine democracy. They may instead produce “dissatisfied democrats” or “critical citizens” who remain committed to democratic norms while seeking system improvement (Klingemann, 1999; Norris, 1999, 2011). Following, Easton (1965), citizens can draw on a ‘reservoir of goodwill’ protecting diffuse regime support from short-term specific discontent. Depletion of the more inert and consequential diffuse democratic support, on the other hand, mandates a more dire prognosis. The present study thus constitutes an even harder and more impactful test whether climate concern poses a threat for democracies.

This way, I also contribute to the broader political support literature. Previously, Claassen and Magalhães (2022) found that *objective* government performance in the economy and crime domains affects both democratic satisfaction and support, with the latter mediated through the former. I extend this logic by focusing on citizens’ *subjective* perceptions of climate change,

expecting rising concern to directly decrease democratic satisfaction and, mediated through these declines, indirectly decrease diffuse support for democracy. I further expect climate issue salience to strengthen the eroding effect of rising concerns, while higher efficacy should attenuate it as high-efficacy citizens at least feel empowered to ameliorate their own concerns.

I probe these hypotheses using two waves (2021,2023) of the German *Social Cohesion Panel* (Gerlitz et al., 2024). I estimate first-difference models, that difference out all constant characteristics, to study within-person changes. Due to data availability, my moderator hypotheses are tested using time-invariant measures.

Counter to expectations and previous evidence, changes in climate concern are significantly *positively* associated with changes in democratic satisfaction and support and only a small component of the effect on democratic support follows the proposed mediation path. I run extensive additional analyses to circumscribe this unexpected effect more precisely.

Sensitivity analysis suggests moderate potential for omitted variable bias, but suggests it is not competing economic concerns that are ‘missing’ from my models. Instead, the presence of other crises (Covid-pandemic and Russia’s invasion of Ukraine) during the study period might have simultaneously suppressed climate concern and created dissatisfaction with the democratic system. Indeed, asymmetric panel models show that the overall effect is more strongly driven by joint *decreases* in concerns and political support. Sub-group analyses reveal that the relationship only manifests robustly for some sub-groups – specifically for SPD-, Union-, and (in part) AfD-voters, citizens over 65 years old and those with an overall lower level of climate concern and efficacy. Future investigations should thus begin with these individuals.

Taken together my analyses paint a complicated picture. They contribute to the broader political support literature by corroborating that intra-individual changes in democratic satisfaction and support are related. I also show that citizens’ attitudes can have direct and differing impacts on various political support levels. Most importantly, as climate change will remain a pressing political challenge of our time (IPCC, 2023), my analyses and results have revealed important further research questions, provided novel evidence and can inform future research into the increasingly important climate-democracy nexus.

2.1 Specific & Diffuse Political Support

Conceptually, the literature on political support builds upon foundational work by David Easton and Pippa Norris. First, David Easton (1957, 1965, 1975) differentiates between two types of political support: *specific* and *diffuse*. Extending Easton’s dichotomous typology, Pippa Norris (1999, 2011) works out five separate support indicators aligned on a latent dimension ranging from most specific (top) to most diffuse (bottom):

1. Approval of Incumbent Politicians
2. Confidence in Regime Institutions
3. Evaluations of Regime Performance

4. Approval of Regime Principles & Values

5. National Identities

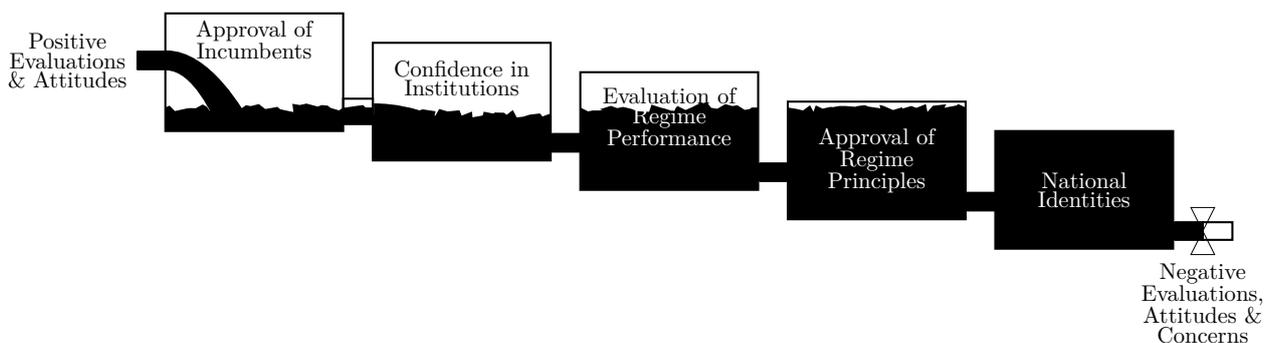
Specific support relates to citizens’ evaluations of aspects of the current system and politicians’ performance regarding current demands. Diffuse support stands for a more abstract and principled support for a political regime, its institutions and core values.

In pluralist democracies, no regime can fully satisfy all citizens at all times. Hence, frequent changes in approval of incumbent parties, ministers, policy decisions or other measures of specific support can be expected. Moving towards the diffuse side of the political support spectrum, this volatility should decrease. For instance, support for regime principles – freedom of speech, separation of powers, universal voting rights or democracy in general – are expected to be more resistant to short-term political developments.

This protection against rapid changes is important, as diffuse support has been empirically shown to improve the endurance of democratic systems (Claassen, 2020). To sustain, any democracy requires a decent measure of citizens’ commitment to its norms and values (Ginsburg & Huq, 2018; Levitsky & Ziblatt, 2018). Political support – especially the diffuse variety – is thus a major foundation for the resilience of democratic systems (Almond & Verba, 1963; Claassen, 2020). Dwindling political support, on the contrary, encourages “protest politics through peaceful or radical means, and, ultimately, [...] regime instability.” (Norris, 2011, p. 37). In summary, political systems, including democracies, require a sufficient amount of diffuse support to withstand the expected fluctuations in volatile specific support (Dalton, 2006).

Easton (1965) illustrates this dynamic with the analogy of a ‘reservoir of goodwill’. This reservoir allows citizens’ specific support to vary, for example following dissatisfaction with a policy or election outcome, without immediately losing diffuse support for the underlying principles of a regime. But these reservoirs are not infinite. Each specific disappointment lowers their metaphorical water level, while positive experiences could also help replenish them. Devine and Valgardsson (2023) show, for example, that political trust may reduce following specific negative evaluation, but tend to recover in the medium-long run.

Figure 2.1: Cascading Reservoirs of Goodwill



Own Visualization.

Figure 2.1 visualizes the reservoir-analogy adapted to Norris' five latent indicators. If dissatisfaction, negative evaluations or concerns open the valve at the bottom, this leads to an overall reduction in support levels, but the effect is felt first in the upmost, most specific reservoir.

There are a number of studies investigating linkages between government or policy evaluations and singular levels depicted in figure 2.1. Scholars are especially interested in the effect of economic evaluations on satisfaction with democracy – which can be understood as an ‘Evaluation of Regime Performance’ (Linde & Ekman, 2003). They show that negative evaluations of countries’ past economic performances, citizens’ perceptions of their own economic stance, and pessimistic expectations for future economic development are consistently related to lower satisfaction with democracy (Christmann & Torcal, 2017; Daoust & Nadeau, 2021; Nadeau et al., 2019, 2020). Dissatisfaction with the economy has also been linked to lower political trust (van der Meer & Dekker, 2011), which can be considered an operationalization of ‘Confidence in Institutions’. Summarized, especially negative evaluations within the economic domain have been shown to be able to ‘open the valve’ and to decrease different levels of political support. Beyond that, de Blok et al. (2022) and de Blok (2023) show that performance evaluations and policy satisfaction across other issues can also affect individuals’ political trust.

Studies linking multiple, more diffuse support levels are rare. Claassen and Magalhães (2022) show that government effectiveness regarding economic performance and violent crime significantly affects citizens’ democratic satisfaction, while support for democracy, a possible operationalization of the more diffuse ‘Approval of Regime Principles’ (Norris, 2011, p. 27) remains comparatively impervious. In line with the implied order of the reservoir-analogy, the authors find that any impact on democratic support only occurs mediated through declines in the more specific satisfaction with democracy.

Another stand-out exception is the integrated explanatory model of regime support provided by Marlene Mauk (2020). She uses multilevel structure equation models to demonstrate that incumbent support, democratic performance, and positive system evaluations all relate to higher diffuse democratic support. In line with the reservoir-analogy, she concludes that citizens accumulate singular negative experiences and eventually generalize them onto the system itself (Mauk, 2020). Implicitly, this describes citizens as a type of Bayesian updater. They hold a diffuse support level for the political system they live in and update this belief based on new information they observe such as (dis-)satisfaction with policy outcomes or politicians.

Taken together, the existing literature identifies that different, but foremost economic evaluations and concerns can affect indicators of more specific support: trust in institutions and democratic satisfaction [SWD]. As suggested by Easton (1965), the more diffuse support for democracy [SFD] remains rather impervious. Still, declines in SFD are possible following sustained dissatisfaction (Mauk, 2020), and mediated through declining democratic satisfaction (Claassen & Magalhães, 2022).

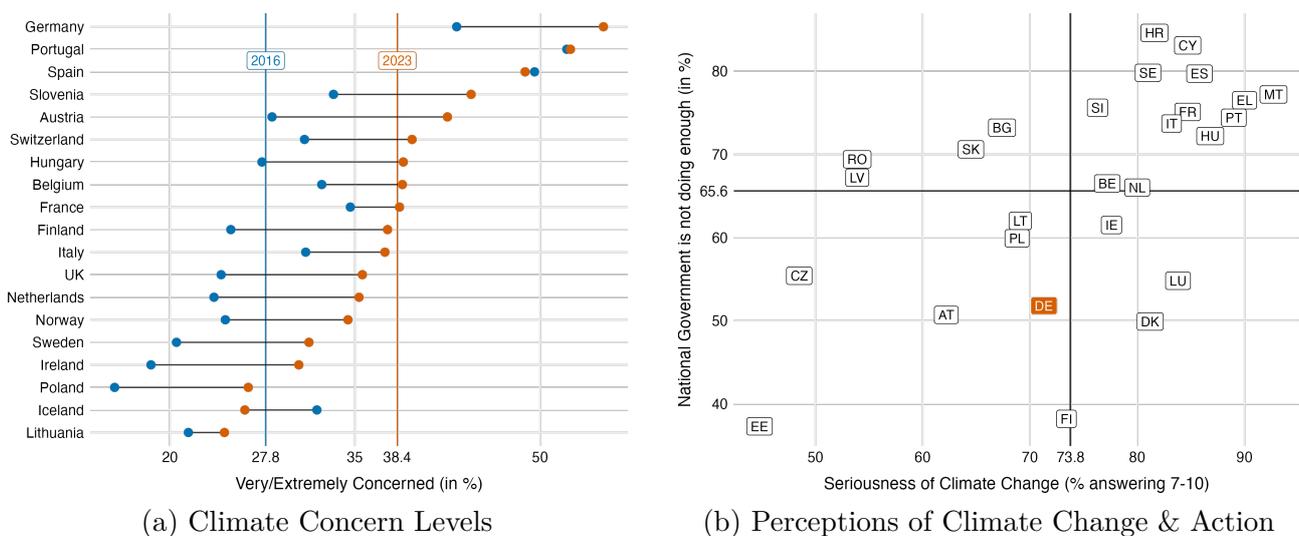
2.2 Climate Concern and Political Support

Given the foundational nature of political support for system stability (Almond & Verba, 1963; Claassen, 2020; Dalton, 2006), a better understanding of its determinants and threats is crucial to ensure democratic resilience. With this paper, I contribute to this understanding by investigating the democratic consequences of climate change, a highly salient but understudied issue. Specifically, I investigate the impact of intra-individual changes in climate concern on SWD and SFD – as well as the interplay of the two indicators of political support.

2.2.1 The Importance of Climate Change

In 2023, the Intergovernmental Panel on Climate Change estimated that 3.3 to 3.6 billion people live in contexts highly vulnerable to climate change (IPCC, 2023). Climate change has reduced food security, strained water supplies, caused substantial damages and increasingly irreversible losses of biodiversity, and has inflicted serious harms on human health, livelihoods, and critical infrastructure in urban areas. Taken together, the IPCC’s report strongly underscores that climate change is not a distant threat but a present and escalating danger to both societies and ecosystems worldwide (IPCC, 2023).

Figure 2.2: Comparative Survey Data on Climate Attitudes



Panel (a) based on waves 8 (2016) & 11 (2023) of the *European Social Survey* (European Social Survey, 2020, 2024). Percentages show respondents who report feeling ‘very’ or ‘extremely’ concerned about climate change. Panel (b) based on aggregated Eurobarometer Data provided by the European Commission (2023).

The relevance of climate change is also reflected in public opinion surveys. Comparing the 2016 and 2023 waves of the *European Social Survey* illustrates a substantial Europe-wide rise in climate concern (fig. 2.2a). Across the 19 countries participating in both waves, the share of citizens who are ‘very’ or ‘extremely’ concerned about climate change increased from 27.8 to 38.4 percent. The same year a *Eurobarometer* asked about the single-most serious problem facing the world (European Commission, 2023). Here, climate change was named by 17% of

respondents, behind only ‘poverty, hunger and lack of drinking water’ (20 %), and ‘armed conflicts’ (19 %), but surpassing, for example, respondents’ economic situation (11%).

In the same *Eurobarometer*, respondents rated how serious the problem of climate change is on a scale from 1 (not at all) to 10 (extremely), and whether their national government is doing ‘enough’, ‘not enough’ or ‘too much’ to fight climate change. Overall, about $\frac{3}{4}$ of respondents perceive climate change as a very serious problem (7-10), while $\frac{2}{3}$ think their government is not doing enough to prevent it (European Commission, 2023). In most countries, both these groups constitute majorities (fig. 2.2b).

Taken together, climate change is not only an empirical reality that threatens lives, prosperity and biodiversity (IPCC, 2023). Instead, the opinion data clearly illustrates that climate change is a highly salient issue with wide-spread related concerns in many European democracies. A clear majority of Europeans see climate change as an important problem and are dissatisfied with a lack of governmental action.

Circling back, this dissatisfaction with national governments constitutes a decline on the most specific, most volatile level of political support. Within this study, I evaluate whether this decline feeds into an erosion of more diffuse and inert political support levels, specifically democratic satisfaction and support. As climate change is set to remain a defining political challenge in the foreseeable future, it is essential to understand how the climate crisis puts pressure on attitudes that underpin democratic resilience. Such knowledge can help scholars and civil society actors identify and address potential fault lines in the foundations of democracy.

2.2.2 Climate Change & Democracy

Despite its relevance, empirical studies into the nexus of climate change attitudes and democracy are rare. A contribution by Isermann et al. (2024) examines how, back in 2020, climate concerns shape German citizens’ willingness to accept democratic norm violations that are explicitly framed as serving ambitious climate action – for instance, curtailing the ability to challenge climate policies in court or justifying coercive measures against major emitters. Compared to their *abstract* norm support, this *contextualization* reduces support by 5 (legal process) to 25 (parliamentary oversight) percentage points for strongly concerned individuals (Isermann et al., 2024). Generally, stronger concern about climate change is related to less contextualized support of all studied democratic norms. The evidence of my Study 1 further suggests that increases in within-respondent climate concern levels are linked with democratic dissatisfaction, especially for long-time Green party identifiers or post-materialist respondents.

Both of these studies support the proposition that increased climate concern can pose a threat to different levels of political support: Study 1 corroborates that within-respondent increases in climate concern can translate into worsening ‘Evaluations of Regime Performance’ (i.e. satisfaction with democracy). Isermann et al. (2024) show that between-respondent differences in climate concern can affect the more diffuse ‘Approval of Regime Principles’ (i.e. democratic norm support).

The present research extends on this existing evidence in four ways: First, contrary to Isermann et al. (2024), using longitudinal data allows me to study within-respondent effects of climate concern changes on changing 'Approval of Regime Principles' (i.e. democratic support). This promises more robust insights because it isolates intra-individual dynamics over time, ruling out confounding influences of stable characteristics such as personality, or socio-demographics that may otherwise bias cross-sectional associations. Second, unlike Isermann et al. (2024), I do not frame the withdrawal of democratic support as a trade-off that enables more ambitious climate action. The absence of such incentives arguably makes this a stricter test, since respondents have no immediate 'gain' from expressing lower support for democracy.

Third, I examine the climate–democracy nexus with novel, more current panel data from 2021 to 2023. This not only offers more up-to-date evidence but also situates the analysis within a period characterized by overlapping crises. Alongside the escalating climate emergency, these years were shaped by soaring inflation, the tail end and aftermath of the COVID-19 pandemic, and Russia's invasion of Ukraine. My study therefore also evaluates whether previously observed effects persist during a polycrisis.

Fourth, I *jointly* consider both previously studied political support levels by integrating democratic satisfaction and support in one study. This matters as the declining democratic satisfaction identified in Study 1 is not deterministically a bad sign. It could also lead to the formation of so-called 'dissatisfied democrats' or 'critical citizens' who are committed to democratic norms, but want to change and even improve the democratic system (Klingemann, 1999; Norris, 1999, 2011). Declining support for democracy, on the other hand, is a more unequivocal warning sign for the stability of democratic rule. Given that democratic support is supposedly less volatile than democratic satisfaction and more consequential for system stability, the present study provides a harder test of the threat climate concern poses for democracies.

The joint investigation further probes how different levels of political support are interconnected, adding to the literature on political support more broadly. Whereas much of the existing literature, including the encompassing work by Mauk (2020), relies on cross-sectional designs, using panel data allows me to identify within-respondent dynamics. Previously, Claassen and Magalhães (2022) examined how *objective* indicators of government effectiveness regarding economic performance and crime levels shape satisfaction and support. I instead focus on citizens' *subjective* perceptions of a different, highly salient issue: climate change. Building on Claassen and Magalhães' (2022) empirical findings and the theoretical ordering implied by the political support reservoir model, I expect that any effects of rising climate concern on the more diffuse level of democratic support will occur mediated through changes in democratic satisfaction. In summary, this yields the following two main hypotheses, that are also illustrated in figure 2.3.

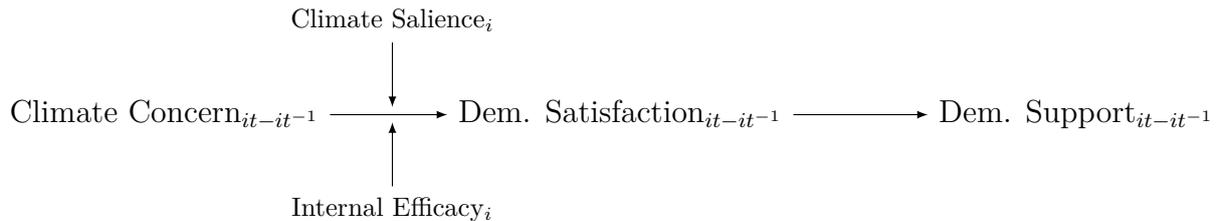
Hypothesis 1 *An increase in individuals' concern about climate change lowers their satisfaction with democracy.*

Hypothesis 2 *An increase in individuals' concern about climate change indirectly lowers their support for democracy through decreases in satisfaction with democracy.*

2.2.3 Climate Salience and Efficacy as Moderators

While the two main hypotheses are visualized through the horizontal arrows, figure 2.3 also shows two variables that I expect to moderate the main effect: respondents' climate salience, and efficacy.

Figure 2.3: Framework



Subscript $it - it^{-1}$ represents individual i 's change in a variable between waves t and t^{-1} ; i represents time-constant terms.

According to Lavine et al. (1996), the more salient an attitude is for citizens, the easier it is to recall and use as a basis for judgment as it reduces cognitive effort in forming an opinion. In general, citizens are thus expected to base evaluations of their respective political system on what is most salient to them (Reher, 2015). In line with this idea, early research has shown that issue salience affects assessments of candidates and sitting presidents (Edwards III et al., 1995; Rabinowitz et al., 1982). More recently, scholars found that the effect of important predictors of vote choice such as government performance evaluations (de Vries & Giger, 2014; Fournier et al., 2003) and issue ownership (Bélanger & Meguid, 2008) are moderated by the varying salience voters ascribe to the issues under consideration.

But its not only political decisions that are moderated by issue salience. Both the linkages of policy satisfaction (de Blok et al., 2022) and government performance evaluations (de Blok, 2023) with political trust have been found to be conditional on issue area salience. This suggests that salience can also moderate effects on citizens' political support levels, as political trust relates to the more specific level of 'Confidence in Institutions'. Moreover, Study 1 provides initial support for the idea that issue salience moderates the relation of climate concerns and democratic satisfaction. But where Study 1 had to resort to salience proxies such as Green partisanship, the present data allows for a more direct test.

Hypothesis 3 *The effect hypothesized in H1 is stronger for individuals with a high climate salience.*

Meanwhile, political efficacy describes the "feeling that political and social change is possible and that the individual citizen can play a part in bringing about this change" (Campbell et al., 1954, p. 187). Due to data availability, I focus exclusively on respondents' *internal* efficacy.

Going back to Converse (1972) scholars relate *internal* efficacy to individuals’ confidence in their own abilities to affect social change. Its counterpart that should be incorporated in future work, *external* efficacy, represents the judgment of the political responsiveness of a regime, or to what extent it allows input by its citizens.

Research on efficacy is focused predominantly on two mechanisms: explaining efficacy levels through differences in democratic processes or institutions (Boulianne, 2018; Karp & Banducci, 2008; Morrell, 2005; Valentino et al., 2008), and relating it to political participation and voting behavior (Finkel, 1985, 1987; Ikeda et al., 2008).

Less is known about its connection to political support levels. Regarding *direct* relationships, a study focusing on a single federal state in Germany identifies a weak negative correlation between internal efficacy and democratic satisfaction (Vetter & Brettschneider, 2023). Meanwhile, Morrell (2003) find no direct relationship between internal efficacy and political trust at all. Incorporating efficacy into my framework thus generally sheds light onto a fairly unexplored relationship. I am, however, chiefly interested in efficacy’s *moderating* impact on democratic evaluations:

Imagine two citizens whose climate concerns have increased substantially. Citizen A has high levels of efficacy. She believes to be absolutely capable to affect social change, for example through means of demonstrations or voting. Meanwhile, citizen B feels powerless and beliefs that he can have no impact on any social developments. As he feels incapable of working towards a solution to alleviate his increased concerns, the concerns’ negative effect on political support should more pronounced than for citizen A.

Hypothesis 4 *The effect hypothesized in H1 is attenuated by a higher internal efficacy.*

2.3 Research Design

2.3.1 Case Description: Climate Attitudes in Germany and Europe

To evaluate my hypotheses, I focus on citizen opinions in Germany captured between 2021 and 2023. In 2021, climate change was at the center of German politics: The German Constitutional Court decided in a landmark case that the governments’ Federal Climate Change Act was unsatisfactory and needed revising. A devastating flood in the Ahr valley contributed to an increased salience of climate change and short-term support increases for the Green party (Garside & Zhai, 2022; Hilbig & Riaz, 2024). Finally, in autumn the Greens achieved their strongest national election result ever and became part of a new three-party government promising stronger climate action.

Despite the parallel crises of the Covid-19 pandemic, the Russian invasion of Ukraine and increased inflation, pro-climate protests by *Fridays for Future* and civil disobedience by the *Last Generation* kept climate change on the agenda. In April 2023, a quarter of *DeutschlandTREND*-respondents placed it in their two most important issues. The same year, over 250.000 people

throughout Germany participated in Friday for Future’s global strike.

Comparatively, a majority of Germans reported being at least ‘very’ concerned about climate change in the 2023 *European Social Survey* (fig. 2.2a) which constitutes the highest proportion amongst surveyed countries (European Social Survey, 2024). Like in most countries, this proportion has grown substantially since it was first queried in 2016. As climate concern is wide spread as has increased over the last decade, the proposed consequence of eroding political support could apply for a substantial share of the population. This make Germany a promising and relevant case for my study.

At the same time its, at least comparatively, low dissatisfaction with the government climate action make Germany a harder test for my propositions. While a majority of Germans (52%) think that their government is not doing enough, this proportion is well-below the EU average (fig. 2.2b). Negative downstream effects become arguably more likely with increased dissatisfaction on the specific political support level (i.e. approval of current climate action) as this implies already more depleted ‘reservoirs’. For example in Italy, France, Portugal or Spain, between 70 and 80 % of citizens deem government climate action as unsatisfactory (European Commission, 2023, see fig. 2.2b). I thus expect effects identified in Germany to replicate in those countries.

2.3.2 Data

My analyses draw on novel data from the *Social Cohesion Panel* run by the *Research Institute Social Cohesion* in Germany (Gerlitz et al., 2024; Groh-Samberg et al., 2023). I mainly rely on the 1st (07.09.21 – 03.04.22) and 3rd (12.05.23 – 04.09.23) waves, which jointly include repeating measures of climate concern and democratic attitudes (SWD & SFD).

I drop every observation missing any of these three measures or any of the major control variables (life satisfaction, social class self-placement, fairness perception, vote intention). I exclude respondents with inconsistent age or education level combinations (e.g. younger in later waves). I exclude those with missing age, sex or state of residence measures, as I use those to evaluate survey weights. I exclude likely inattentive respondents exhibiting straightlining behavior in an 11-item institutional trust battery included in waves 1 and 3. Similarly, I drop respondents who illogically perceive all major German parties exhibiting the same stance on climate action on a 10-point scale in wave 2.

After these exclusions, I create a balanced panel of 4.191 remaining respondents who are observed in both waves.

Dependent Variables

I employ two dependent variables: satisfaction with democracy and support for democracy. In the 1st and 3rd wave, democratic support was elicited first, by asking whether democracy is the system that suits respondents’ society best. Answers are captured on a five-step Likert scale ranging from full disagreement to full agreement. Democratic satisfaction is surveyed directly after democratic support on an 11-point scale. I treat both variables as continuous and

calculate respondents’ changes between the two waves.

Main Independent Variable

My main predictor is an item from the 1st and 3rd wave asking respondents how concerned they are about climate change on a five-step Likert scale ranging from ‘not at all’ to ‘extremely’. I again treat this variable as continuous and calculate respondents’ change between the two waves.

Interaction Variables

I enrich my data with two time-invariant moderators that are only elicited in the 2nd wave to test H3 & H4: individuals’ climate change salience and their internal efficacy.

Climate salience is captured on a five-step Likert scale ranging from ‘not at all’ to ‘very’ important. Internal efficacy is measured using two five-step Likert items ranging from ‘disagree completely’ to ‘agree completely’. One focuses purely on the individual respondent and the other on citizens as a collective. I treat all measures as continuous. For my main models, I combine both efficacy items by taking respondents’ mean, but I run additional models using the singular items.

The wording and original scales of all (in)dependent and interaction variables are provided in table B.1, applied recodings in table B.2, distributions of raw measures in tables B.3 & B.4, and distributions of recoded measures in tables B.5 & B.6.

2.3.3 Modeling Strategy

To test my hypotheses, I rely on a first-difference (FD) approach estimated via ordinary least squares. FD provides a straightforward way to rule out confounding influences by all observed (e.g., gender, education) and unobserved (e.g. personality) time-invariant respondent characteristics. Doing so, these models reveal the relationship of intra-individual changes in (in)dependent variables instead of between-individual differences. As my core data covers only two survey waves (2021 & 2023), I estimate a simple linear regression model using the changes in the (in)dependent variables between waves as its input. Equation (2.1) represents the models to investigate changes in democratic satisfaction, equation (2.2) represents the additionally necessary models to investigate changes in support for democracy:

$$\Delta\text{SWD}_i = \beta_0 + \beta_1\Delta\text{Climate Concern}_i + \beta_2\Delta W_i + \epsilon_i \quad (2.1)$$

$$\Delta\text{SFD}_i = \beta_0 + \beta_1\Delta\text{Climate Concern}_i + \beta_2\Delta\text{SWD}_i + \beta_3\Delta W_i + \epsilon_i \quad (2.2)$$

In the two-wave setting, uniform time-trends between 2021 and 2023 are captured by the intercept β_0 , though heterogeneous sub-group changes, or other time-varying variables could still bias estimates. In both cases ΔW_i thus stands for the changes in a set of time-varying control variables that are again treated as continuous: respondents’ generalized life satisfaction,

their self-placement in a societal hierarchy and whether they perceive to receive ‘their fair share’. Life satisfaction and subjective perceptions of group relative deprivation have previously been shown to negatively affect democratic evaluations (Esaiasson et al., 2020; Filsinger & Wamsler, 2025). With a similar intuition, I control for ΔW_i to rule out that identified relationships between climate concern and democratic attitudes are spurious and confounded by changes in citizens’ general, unrelated grievances.

While these models are the basis for my main inferences, I run additional analyses also conditioning results on respondents’ reported vote decision in each wave (Vote_{2021} & Vote_{2023}). Together, this should strengthen the robustness of my findings. Still, it is important to note that FD models can neither establish a causal direction nor ‘prove’ causality itself. As before, the wording, original scales, applied recodings, and distributions of these control variables are provided in tables B.1 – B.6.

To improve external validity, I leverage weights provided by the *Research Institute Social Cohesion* for the 1st wave data. These sophisticated weights are a combination of design weights accounting for unequal selection probabilities, participation probabilities calculated via non-response analyses and extrapolation based on official population statistics (Gerlitz et al., 2024). As I have excluded various respondents, I re-estimate how well my unweighted and weighted sample corresponds to microcensus population statistics from 2022 with regards to sex, age and state of residence in table B.7. Generally, the weighted sample still very closely corresponds to the German population. Compared to the unweighted sample, it especially improves geographical representation, as the *Social Cohesion Panel* over-samples East German respondents. While I interpret unweighted model results as indicative for patterns within the underlying sample, I thus base my main inferences on the weighted models.

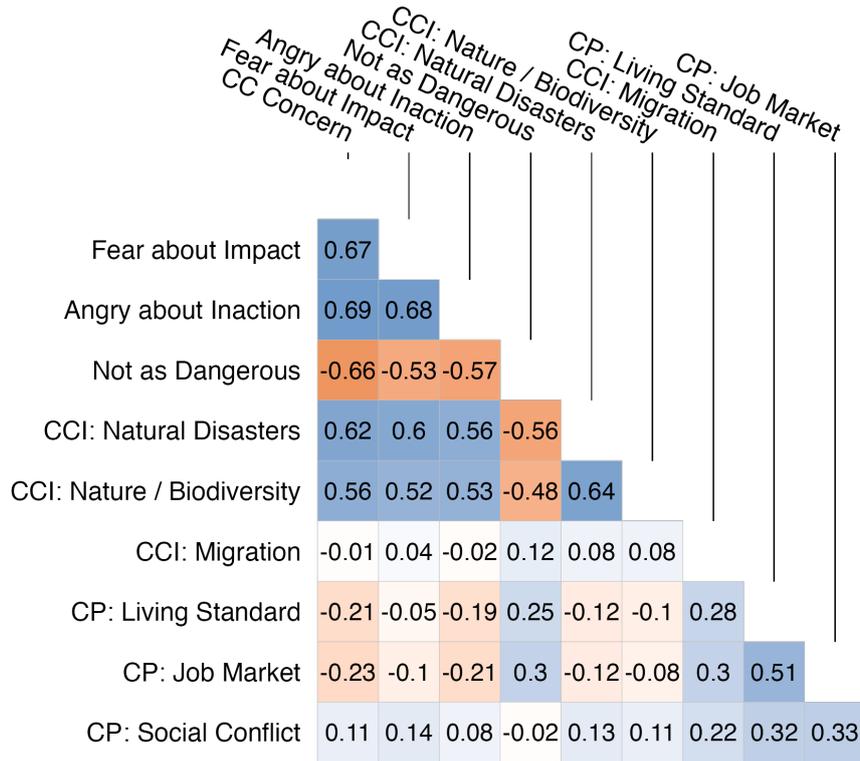
To test the mediation hypothesized in H2, I rely on the *mediation* package in *R* (Imai, Keele, Tingley, & Yamamoto, 2010; Tingley et al., 2014). The first-differenced model of democratic satisfaction (eq. 2.1) serves as the mediator equation, while the first-differenced model of support for democracy (eq. 2.2) serves as the outcome equation. Based on the procedures described by Imai, Keele, and Yamamoto (2010) and Imai et al. (2011), *mediation* then calculates the direct, indirect, and total effects of Δ Climate Concern on Δ SFD and easy to interpret confidence intervals via a quasi-Bayesian approximation with 1.000 Monte Carlo draws. Due to the strong underlying assumptions necessary to interpret these mediation estimates as causal (VanderWeele, 2016), I only interpret them as correlational evidence to evaluate my theorized underlying structure.

To test the moderation effects hypothesized in H3 and H4, I interact respondents’ measurements of climate change salience and internal efficacy with Δ Climate Concern. Since the moderators were only captured once (in 2022), the interactions identify whether the effects of climate concern changes differ between respondents with varying levels of salience or efficacy, but they cannot capture how within-individual changes in these moderators alter the relationships.

2.4 Analysis

To begin the analysis, I contextualize what the measured ‘climate concern’ entails for respondents. In the 2nd wave, respondents answered additional items on affective reactions to climate change, perceived impacts, and climate politics. Figure 2.4 displays bi-variate correlations between nine items and the main climate concern indicator (first column).

Figure 2.4: Climate Concern Contextualized



Unweighted bi-variate correlations, based on 2nd wave of the *Social Cohesion Panel* (Gertitz et al., 2024). **CCCI** stands for ‘climate change impact’; **CP** for ‘climate politics’. Created using *ggcorrplot* (Kassambara, 2023). Question wordings provided in table B.8.

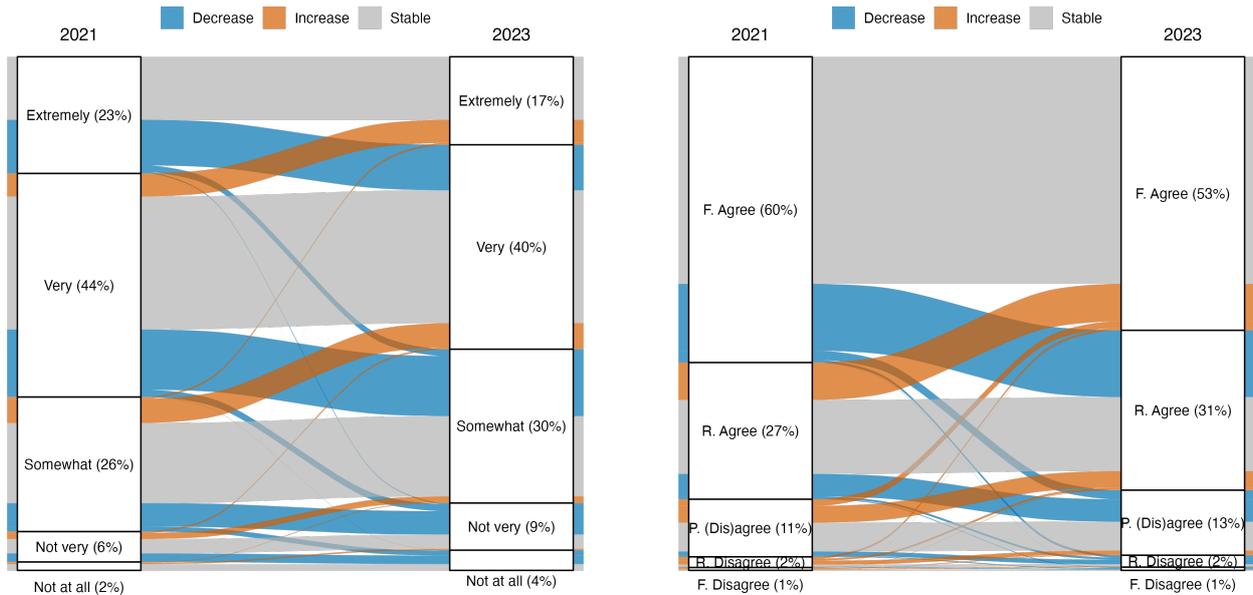
Climate concern seemingly represents an affective stance. It is most strongly associated with fear of climate impacts, anger about political inaction and (negatively) with a perception that climate change is not as dangerous. Substantively, it correlates with concern about more frequent natural disasters and a loss of biodiversity, but has little to no association with concerns about climate change-induced migration or social conflicts. Meanwhile, concerns about the impact of climate politics on the German job market and respondents’ standard of living show only weak negative associations. In conclusion, my independent variable captures the extent to which respondents view climate change as a personal and environmental rather than a societal or economic threat.

2.4.1 Patterns of Change

Figure 2.5 illustrates the three main variables’ changes between the 1st and 3rd wave. A majority of respondents report stable levels of climate concern (57.8 %) and democratic support (65 %)

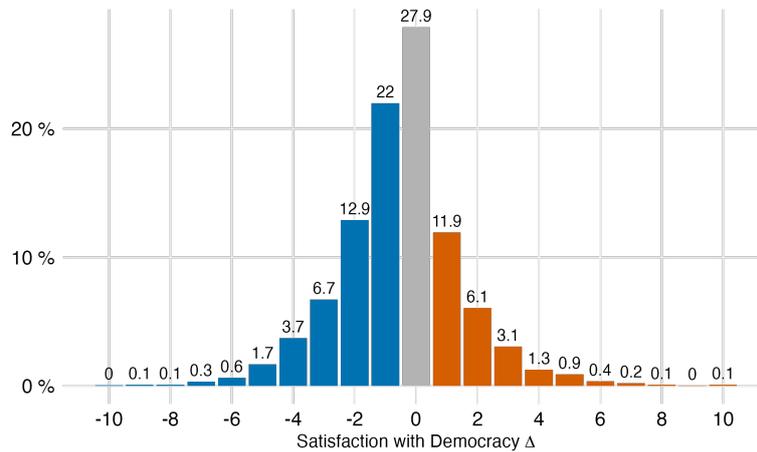
and nearly $\frac{1}{3}$ even exhibit consistent SWD on the more fine-grained 11-point scale. Otherwise, incremental changes are much more frequent than fundamental changes of opinion and there is a declining tendency in all three measures. On average, climate concern decreased by 0.23, SFD by 0.08, and SWD by 0.51 points. Decreases are twice as common as increases (48.2 vs. 23.9 %) for democratic satisfaction and three times as common (30.7 vs. 11.5 %) for climate concern.

Figure 2.5: Changes between Waves in Key Variables



(a) Changes in Climate Concern

(b) Changes in Democratic Support



(c) Changes in Satisfaction with Democracy

2.4.2 Climate Concern, Democratic Satisfaction & Support

In the aggregate, climate concern, democratic satisfaction and support all decline, but what about the individual level? Moving towards hypothesis testing, table 2.1 shows the model results evaluating the proposed link between intra-individual changes in climate concern and democratic satisfaction.

Table 2.1: Climate Concern and Democratic Satisfaction (H1)

	Bi-Variate		Full		Parties	
Climate Concern Δ	0.15*** (0.04)	0.15*** (0.04)	0.15*** (0.04)	0.17*** (0.04)	0.15*** (0.04)	0.18*** (0.04)
Constant	-0.47*** (0.03)	-0.44*** (0.03)	-0.43*** (0.03)	-0.41*** (0.03)	-0.37** (0.14)	-0.40** (0.16)
Weights		✓		✓		✓
Life Satisfaction Δ			✓	✓	✓	✓
Fair Share Δ			✓	✓	✓	✓
Social Ladder Δ			✓	✓	✓	✓
Vote ₂₀₂₁					✓	✓
Vote ₂₀₂₃					✓	✓
Observations	4,191	4,191	4,191	4,191	4,191	4,191
Adjusted R ²	0.003	0.003	0.02	0.02	0.04	0.04

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Contrary to the expectations posited in H1, I find a significant, *positive* relationship between changes in climate concern and SWD across all model specifications. A change in climate concern by one unit unexpectedly predicts a 0.15 - 0.18 unit change in democratic satisfaction *in the same direction*. This contradicts the earlier findings of Study 1 which demonstrates a robust, and nearly as strong *negative* relationship in an earlier study period (2010 - 2021).

Regarding the mediation hypothesis, table B.9 first corroborates that intra-individual changes in democratic satisfaction significantly predict changes in democratic support in the same direction. Despite the unexpectedly reversed main effect, the underlying logic of H2, namely that any resulting changes in democratic support should be mediated by changes in democratic satisfaction still warrants inspection.

Table 2.2: Mediation Analysis (H2)

	Est.	Lower CI	Upper CI	p-Value
Mediated Effect	0.01	0.01	0.02	0.00
Direct Effect	0.06	0.03	0.09	0.00
Total Effect	0.07	0.04	0.10	0.00
Prop. Mediated	0.16	0.07	0.30	0.00

Computed via the *mediation*-package (Tingley et al., 2014) using the 4th model of table 2.1 as mediator equation and the 4th model of table B.10 as outcome equation. The table shows the *direct* effect of within-respondent climate concern changes on SFD, the *mediated* effect through changes in SWD, the combined *total* effect and the proportion flowing through the mediation path.

Table 2.2 contains the results of the mediation analysis for my preferred model specification using the provided weights and all general grievance controls (ΔW_i). However, table B.11

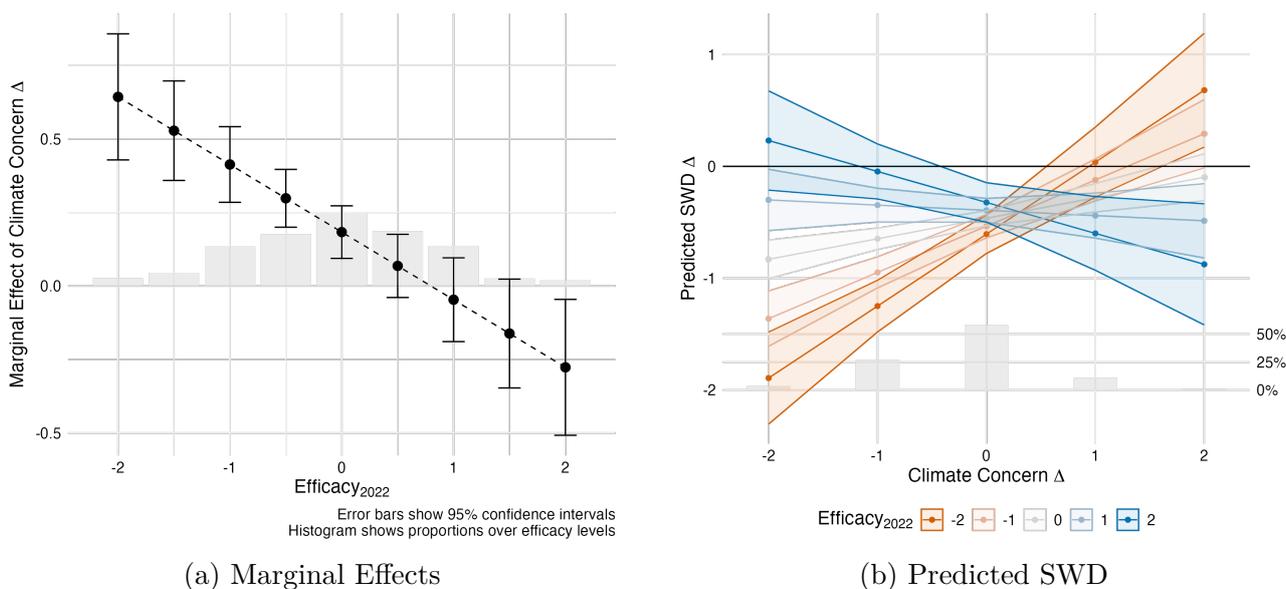
illustrates that results are robust across all specifications. Substantively, table 2.2 shows that limited evidence for a mediation logic in line with H2. While the models show that a significant positive effect is mediated by changes in SWD ($\beta_{mediation} = 0.01$), the simultaneous direct effect is about six times as strong ($\beta_{direct} = 0.06$).

2.4.3 Moderation Models

The two moderation hypothesis essentially need to be rejected outright, as their underlying main effect acts opposed to expectation. However, it can still be instructive to learn about potential moderations in an attempt to understand this unexpected finding.

For individuals' climate salience, as measured in the 2nd wave, I find no significant interaction effect in any model specification (tab. B.12). Contrary, respondents' efficacy, again measured in the 2nd wave, significantly and strongly moderates the relationship between changes in climate concern and SWD. This holds true for both their sense of individual efficacy (tab. B.14) and their perception whether citizens as a collective can influence politics (tab. B.15).

Figure 2.6: Visualization of Efficacy Interaction Models



Based on the 4th model of table B.13. Marginal effects calculated via *marginaleffects* (Arel-Bundock et al., 2024), SWD Δ predictions estimated using *ggeffects* (Lüdtke, 2018) in *R*. For predictions, co-variates are set to their means (Life Sat. $\Delta = -0.38$; Fair Share $\Delta = -0.03$; Social Ladder $\Delta = 0.14$).

The left panel of figure 2.6 illustrates that the counterintuitive positive relationship between climate concern and SWD changes occurs most strongly for respondents with neutral or negative efficacy. For respondents who feel at least somewhat efficacious, the relationship becomes insignificant. The right panel translates these patterns into predictions of changes in democratic satisfaction. We see, for example, that a decrease in climate concern by one unit predicts a decline in democratic satisfaction by about 1.25 units for respondents without any feeling of efficacy (-2), compared to nearly no change in SWD for those feeling very efficacious (+2).

Summary of Confirmatory Hypotheses Testing

In summary, none of the four hypothesized relationships could be corroborated (see tab. B.16 for an overview). Still, there are some important take-aways from these results:

First, despite the unexpected directionality of the effect itself, the analysis suggests that changes in citizens’ concerns can potentially affect democratic support directly and independently from changes in democratic satisfaction. Combined with the evidence that within-respondent declines in the specific democratic satisfaction significantly predict declines in the diffuse democratic support (tab. B.9) these results add to the growing and important literature on the underlying structure of political support, its determinants and threats.

Second, the moderation analysis provides no evidence for issue salience strengthening the link between climate concern changes and democratic satisfaction, which contrasts earlier evidence that issue salience strengthens the evaluation-satisfaction link (e.g. de Vries & Giger, 2014; de Blok, 2023). Most specifically, we find in Study 1 that proxy measures for climate salience strongly amplify the identified *negative* link between climate concern increases and declining democratic satisfaction. The diverging finding in this study raise important questions about the conditionality of issue salience’s impact on democratic evaluations.

Third, the strong efficacy moderation constitutes a first step towards understanding *who* drives the counterintuitive average relationship between changes of climate concern, SWD and SFD. It is especially those perceiving low individual and collective agency whose climate concern and democratic satisfaction change in unison.

In the following, I conduct additional analyses to shed even more light on the origins of this positive relationship, identify the groups driving it, and assess its sensitivity to modeling choices.

2.4.4 Making Sense of Unexpected Findings

Omitted Confounders and Competing Concerns

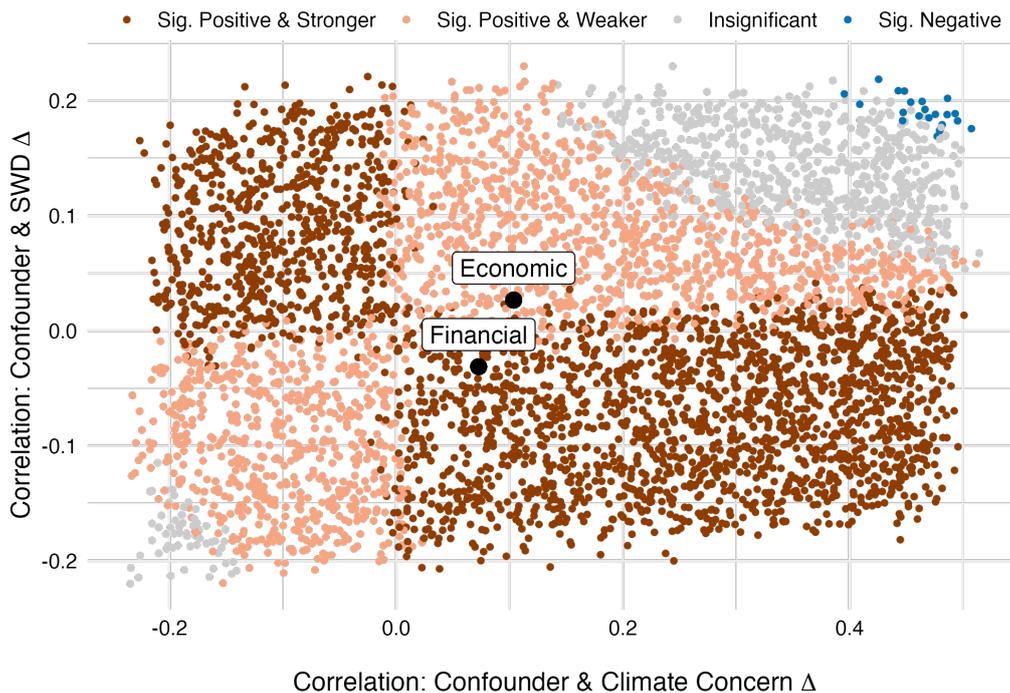
First, it is important to note that while first-difference models remove overall time trends, omitted time-varying confounders may still bias results. In Study 1, we demonstrate that the *negative* effect of climate concern changes on SWD remains robust across extensive model specifications, including additionally controlling for time-varying concerns about the economy, personal finances, crime, and immigration.

My panel lacks these repeated measures. Instead, I thus conduct a sensitivity analysis to estimate how strongly a confounder must relate to Δ SWD and Δ Climate Concern to overturn results (Cinelli & Hazlett, 2020). I find that any variable explaining more than 2.87% of the residual variance of both variables would suffice to render results insignificant (tab. B.17). This threshold is not implausibly high. But, for comparison, results still remain robust if the relationships between the omitted confounder and the two main variables were 10 times as strong as that of Δ Fair Share.

As additional visualization, I simulate 5,000 confounders with varying correlations to Δ SWD

and Δ Climate Concern and re-estimate the main model. Figure 2.7 displays how coefficients for Δ Climate Concern respond, indicating the level of correlation a confounder would require to nullify or reverse the relationship. I then draw on the Socio-Economic Panel (Goebel et al., 2023) to compute correlations between changes in economic and financial concerns, SWD, and climate concern from 2020 to 2021, as this was the last time all measures were jointly included. Adding these to figure 2.7 suggests that if including an omitted variables that exhibits a similar relationships hardly affects the model results.

Figure 2.7: Sensitivity Analysis: Simulated β s of Climate Concern Δ

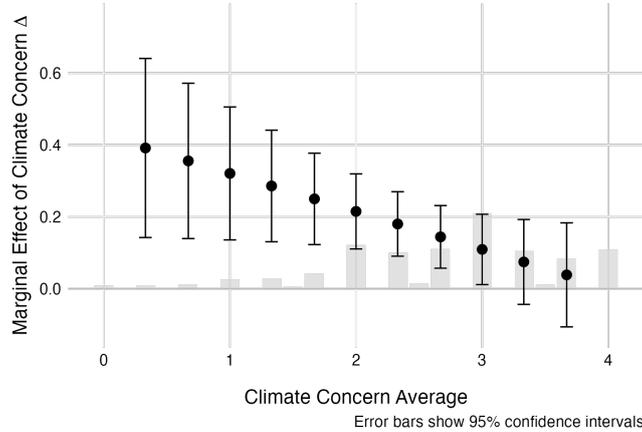


Confounder values simulated using the *simstudy*-package in *R* (Goldfeld & Wujciak-Jens, 2020). Coefficients based on adding the respective confounder to the controlled and weighted 4th model in table 2.1. Black dots visualize empirical correlations based on changes between the 2020 and 2021 SOEP waves for concern about the economy and concern about respondents' own financial situation. All concerns in the SOEP (including about climate change consequences) queried on a three-point Likert scale.

Lastly, even though controlling for time-invariant measures does not address the omitted variable problem, it can help understand whether citizens who hold more or less (competing) concerns display differential relationships between climate concern and SWD. I thus interact the main effect with four additional measures included in the 2nd wave. Given the context of high inflation and the previously established link between economic and climate attitudes (Böhmelt & Zhang, 2023; Kenny, 2019), this includes respondents' concern about the economy and their personal financial situation. Additionally, I consider concerns that climate politics may destroy jobs or reduce respondents' living standards. Table B.18 shows, however, that all four interactions with competing concerns are insignificant in the controlled, weighted models. Contrary, I find significantly diverging effects based on an interaction with respondents' climate

concern levels *averaged* across the three waves (tab. B.18). As figure 2.8 shows, the positive relationship is substantially stronger for citizens with a comparatively low average climate concern, while it becomes non-significant for those with comparatively high concern.

Figure 2.8: Diverging Effects based on Average Climate Concern Levels



Marginal effects calculated via *marginaleffects* (Arel-Bundock et al., 2024). Based on the 5th model from table B.18. Average climate concern represents respondents’ mean across all three waves. Histogram shows average climate concern distribution (in %). Marginal effects not plotted for respondents with averages of 0 or 4, as this implies no change throughout.

In summary, the sensitivity analysis indicates that a confounder would need to explain ‘only’ 2.87% of the residual variances in climate concern and SWD changes to nullify the results. At the same time, it does not appear likely that time-varying economic concerns are driving substantial omitted variable bias. Nor do respondents’ absolute competing economic concerns moderate the effect, which manifests most strongly for those with overall low levels of climate concern. Still, unprecedented times like the Covid-19 pandemic or Russia’s invasion in Ukraine may have generated a strong enough confounding influence by simultaneously suppressing climate concern, especially for those already comparatively less concerned, and reducing democratic satisfaction. Future research should examine whether this constitutes a case of confounding or whether the backdrop of broader political developments meaningfully conditions the actual democratic implications of climate concern changes.

Asymmetrical Models

Next, I consider the directionality of climate concern changes. Whereas average climate concern and SWD increase through Study 1’s period, both decline in the present data (fig. 2.5). This pattern is not idiosyncratic to this data. In 2023, Germans also, for example, recorded the lowest average SWD in the *European Social Survey* since 2010 – declining .23 points from the previous round (ESS, 2025). Within my sample, only 3.3% of respondents experience joint increases in climate concern and SWD, but 15.4% experience joint decreases (tab. B.19).

Hypothesis H1 posits that an *increase* in climate concern reduces SWD, but this does not necessarily imply that a *decrease* in climate concern should symmetrically raise SWD. Standard

(panel) estimators rest on the same implicit assumptions of symmetry as my original hypothesis: A one-unit increase in X has an opposite, but equally strong effect on Y as a one-unit decrease in X (Lieberson, 1985). This assumption can be relaxed by estimating asymmetrical panel models proposed by York and Light (2017) and further developed by Allison (2019). Decomposing the predictor variables to estimate separate effects for positive and negative changes between waves yields the following model:

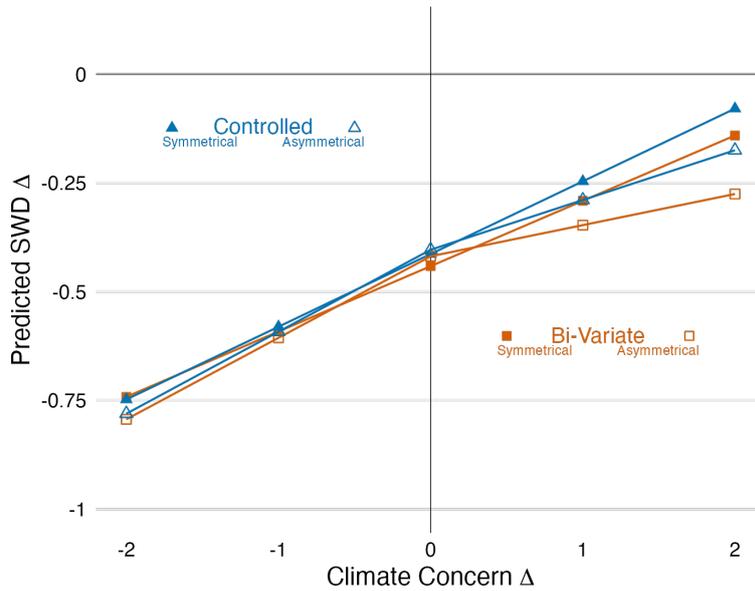
$$\Delta \text{SWD}_i = \beta_0 + \beta_1 \Delta^+ \text{Climate Concern}_i + \beta_2 \Delta^- \text{Climate Concern}_i + \beta_3 \Delta^+ W_i + \beta_4 \Delta^- W_i + \epsilon_i \quad (2.3)$$

where

$$\Delta^+ \text{CC}_i = \begin{cases} \Delta \text{CC}_i, & \text{if } \Delta \text{CC}_i > 0 \\ 0, & \text{otherwise} \end{cases} \quad \Delta^- \text{CC}_i = \begin{cases} -\Delta \text{CC}_i, & \text{if } \Delta \text{CC}_i < 0 \\ 0, & \text{otherwise} \end{cases}$$

Essentially, $\Delta^+ \text{CC}_i$ captures only climate concern increases between 2021 and 2023, while $\Delta^- \text{CC}_i$ captures only climate concern decreases. The same transformation is applied for the control variables ΔW_i . Logically, if $\beta_1 = -\beta_2$ the studied effect is symmetrical, which can be tested via a Wald-test (Allison, 2019).

Figure 2.9: Predicted Δ SWD from Asymmetrical Models



SWD Δ predictions estimated using *ggeffects* (Lüdtke, 2018) in *R*. Based on the weighted 2nd and 4th models of table 2.1 (symmetrical, solid shapes) & table B.20 (asymmetrical, hollow shapes). For the controlled curves, control-variables were set to zero – indicating no change between waves.

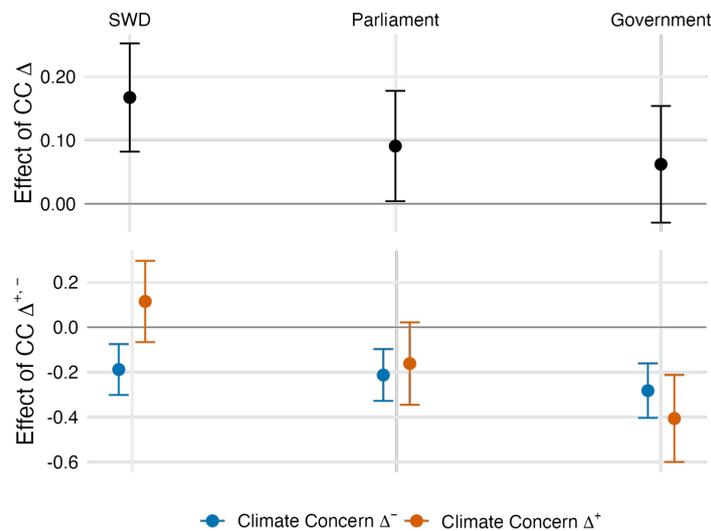
Table B.20 shows that effects on Δ SWD are somewhat stronger and only significantly identified for *decreases* in climate concern. Yet, Wald-tests across all model specifications fail to reject coefficient equality, providing no significant evidence of asymmetric effects. Figure 2.9 illustrates the similarity of Δ SWD predictions from the (a)symmetrical models. There is also

no significant evidence of an asymmetric direct relationship between changes in climate concern and democratic support (tab. B.21). The positive relationship generally persists for the more frequent climate concern decreases and (albeit insignificantly) for the rarer climate concern increases.

Conceptual Validation with Related Indicators

To further assess whether this relationship is specific to the operationalization of my dependent variable or reflects a broader substantive link to political support, I replicate the analysis using two measures of related political trust (in the government and national parliament) equally captured in the 1st and 3rd waves. Existing literature suggests that both satisfaction with democracy and institutional trust can be understood as individuals’ evaluations of a political system (Martini & Quaranta, 2020). Figure 2.10 displays the coefficients for climate concern changes from symmetrical and asymmetrical models compared to those for Δ SWD.

Figure 2.10: Effects on Climate Concern Changes on Δ Institutional Trust



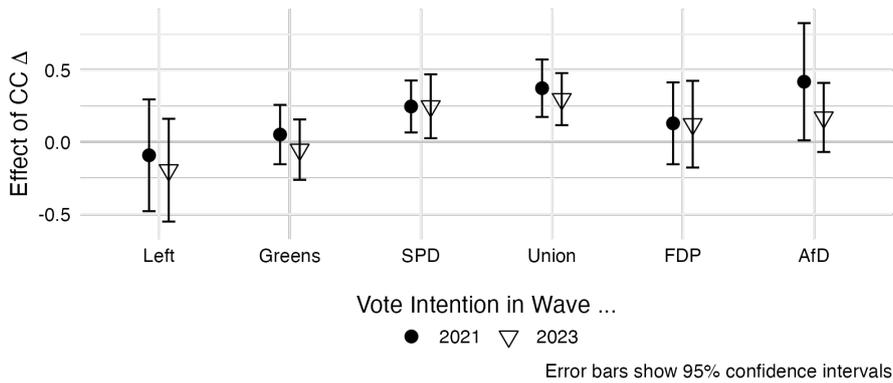
Marginal effects calculated via *marginaleffects* (Arel-Bundock et al., 2024). Based on weighted and controlled symmetrical and asymmetrical models from tables B.22 & B.23. Institutional trust was captured on an 11-point scale ranging from ‘Don’t trust at all’ to ‘Trust completely’.

In the symmetric models, like SWD, both trust measures exhibit a positive relationship to climate concern changes, even if it does not reach statistical significance for changes in governmental trust. The asymmetrical models in the bottom panel, however, reveal a more distinctive pattern: While *decreases* in climate concern significantly and with similar strength predict decreases in all democratic outcomes, *increases* in climate concern are only positively related to increases in SWD. Instead, they are significantly related to declines in trust towards the government and, to a lesser extent ($p = 0.08$), towards parliament.

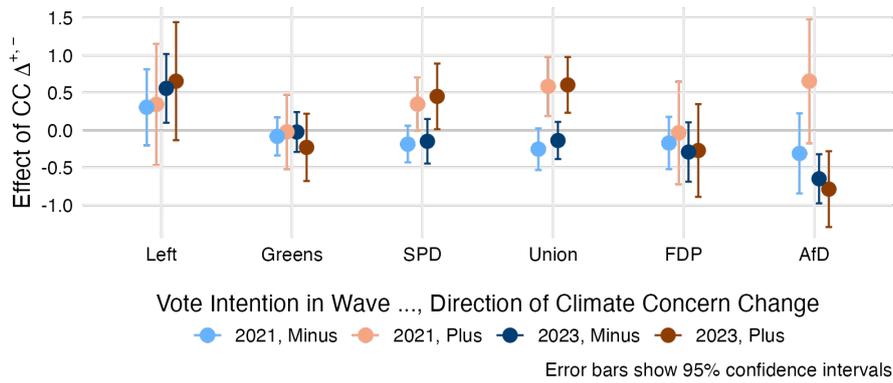
The timing of data collection may help explain these findings. The 1st wave began shortly before the 2021 federal election, when the Green Party entered government. The period until the 3rd

wave was marked by the Greens' attempts and ultimately failure to enact comprehensive climate policies and a dysfunctional three-party coalition. Disappointment with unmet promises may have led some citizens to simultaneously report rising climate concerns and declining trust in this specific government and parliament. At the same time, democracy itself may have been insulated from such disillusionment, as voters had successfully empowered actors that, at least in theory, prioritized climate action more strongly than previous governments.

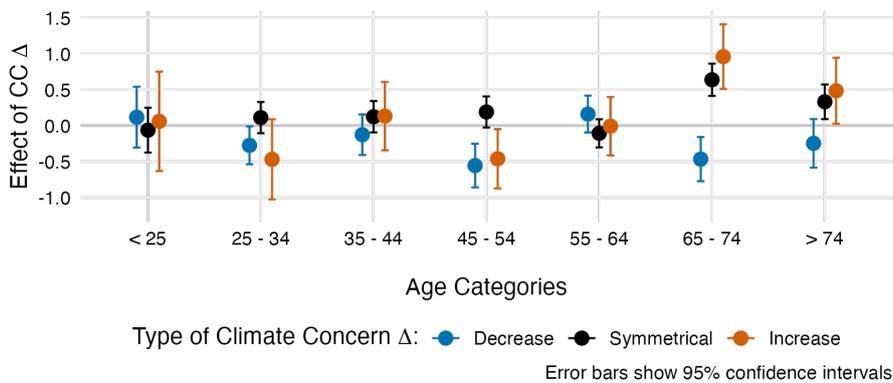
Figure 2.11: Effect of Climate Concern Changes over Sub-Groups



(a) Symmetrical Effect over Vote Intentions in 2021 & 2023



(b) Asymmetrical Effect over Vote Intentions in 2021 & 2023



(c) (A)symmetrical Effects over Age Groups

Marginal effects calculated via *marginal effects* (Arel-Bundock et al., 2024). Based on weighted and controlled symmetrical and asymmetrical interaction models from tables B.24 & B.26. Vote intention figures only show major party electorates. See tab. B.24 for estimates for voters of radical right or other small parties, undecided or non-voters.

Conversely, especially populist and right-wing actors have recently begun mobilizing against proposed environmental policies, emphasizing financial costs and lifestyle restrictions (Quent et al., 2022). Since party cues can shape public opinion (Druckman et al., 2013; Slothuus & Bisgaard, 2021), such messaging may have fostered a joint decline in climate concern, trust in government and parliament, and ultimately democratic satisfaction among these electorates. Supporting this interpretation, Table B.19 shows that joint declines are especially common among supporters of the far-right AfD (22.2%), as well as the center-right Union (18%) and FDP (18.3%), compared to only about 11% among center-left Green and SPD supporters.

Sub-Group Analyses

Building on these descriptive patterns, I next examine more systematically *who* drives the identified effects by running sub-group analyses across vote intention, East vs. West German residency, and age.

First, I interact climate concern changes with reported vote intention in 2021 or 2023. In both symmetrical (upper panel) and asymmetrical (center panel) models, climate concern changes are never significantly related to changes in democratic satisfaction amongst supporters of the Greens or FDP (fig. 2.11). Instead, the previously identified average effect is primarily driven by SPD-, Union- and AfD-supporters. Especially for the two centrist parties, the asymmetrical models suggest significant relationships between joint *increases* in climate concern and democratic satisfaction.

While I find little differences between East and West Germans (tab. B.25 & fig. B.1), the symmetric effect (black dots) is only significantly identified for and strongly driven by respondents aged 65 and above (lower panel of fig. 2.11). Like the SPD- and Union-electorates, only these two age groups display significant relationships between joint *increases* in climate concern and democratic satisfaction. Any future investigation into the unexpected relationship of within-individual climate concern and democratic satisfaction should thus start with these individuals driving the overall effect.

2.5 Conclusion & A Call for Further Research

Climate change remains one of the most pressing political challenges of our time (IPCC, 2023). Encompassing investigations into its impact on democratic culture are thus crucial to document and understand its potentially eroding effect on democratic support and ensure democratic resilience. This study, though unsuccessful in corroborating its original hypotheses, contributes new, relevant empirical evidence to this endeavor.

My results stand in contrast to earlier research by identifying a significant and reasonably robust *positive* association between intra-individual changes in climate concern, democratic satisfaction, and democratic support. Combined with the insights from an extensive exploration, these results raise new questions about the complex interplay of climate concerns and democratic evaluations and point towards a number of promising research avenues:

Even though respondents' absolute levels of economic and financial concern did not moderate the main effect and additional sensitivity analyses did not point towards varying economic concern as a crucially omitted variable, it is possible that the unique situation during the survey period had a confounding effect. The study traces opinions in a time of high uncertainty due to the Covid-crisis and Russia's invasion of Ukraine. The presence of other crises might have simultaneously suppressed climate concern and created dissatisfaction with the democratic system.

This could apply especially amongst those who were not extremely concerned about climate in the first place. Fittingly, I find a significantly stronger relationship between changes in climate concern and democratic satisfaction for citizens who are, on average, less concerned about climate change. Using asymmetrical models, I further demonstrate that overall effects are mainly driven by joint *decreases* in climate concern and democratic satisfaction, which were also descriptively about five times as common as joint increases. Together, this strongly mandates further investigation of the conditionality of climate concerns' impact on democracy and the interplay of multiple crises on citizens' attitudes.

My sub-group and moderation analyses allow me to sketch out for *whom* climate concern changes and democratic evaluations co-varied significantly during this specific period. For one, these are the supporters of the SPD, Union, and to a lesser extent the AfD, as well as citizens aged 65 or older. Meanwhile, internal efficacy significantly moderated the effect to the extent that it disappeared for respondents perceiving at least a moderate amount of self-agency. These analyses suggest that there are meaningful differences in how climate concerns translate into democratic attitudes on a socio-demographic, electoral and psychological level that should be further explored in future research.

Beyond that, my analyses add evidence to the literature on political support more broadly by corroborating that intra-individual changes in democratic satisfaction indeed predict changes in democratic support. Through additional models, I also show that the effects of climate concern changes, and especially concern increases, on SWD differ substantially from those on supposedly related indicators of political trust. Together, this should also motivate further research to determine under what conditions citizens' attitudes affect different levels of political support.

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The Two-Sided Demand For Non-Democratic Climate Governance

Jan Menzner

Abstract. Preferences about climate action are increasingly politicized and polarized. Using original survey data from Germany (N = 2.101), I demonstrate that stronger preferences – whether for or against climate action – are robustly correlated with support for various forms of non-democratic governance. Citizens on both sides of the cleavage are willing to bypass democratic norms in pursuit of their preferred outcomes. This includes, for example, restricting climate activism, ignoring pro-climate action court rulings, and censoring climate change denial. I uncover a surprisingly ubiquitous demand for technocracy on both sides of the climate cleavage.

As respondents might hide their support for non-democratic governance due to a strong social norm for democracy, I use two original list experiments to uncover hidden preferences. The experiments reveal ‘true’ support for undemocratic climate action (prevention) by about 35 (39) % of citizens. Especially climate action opponents tend not to disclose their non-democratic attitudes openly. These insights add evidence to ongoing debates about the existence of ‘fake’ democrats and are instructive for civil society actors aiming to uphold democratic resilience amid growing issue-based polarization surrounding climate change.

More broadly, these findings contribute to the growing literature on democratic resilience and the conditionality of citizens’ commitment to democratic norms. Here, my focus on the climate crisis reveals a so-far overlooked dimension of democratic vulnerability: Erosion of democratic norms is not limited to those concerned about climate change itself, but also manifests for those vehemently opposing climate action.

Keywords. Democratic Norms, Climate Change, Political Support, List Experiments

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Climate change has become a contentious and increasingly polarized political issue. Ideological disagreements are no longer limited to the direction of climate action but have hardened into stark divisions between those demanding much stronger policies and those opposing further intervention (Coffé et al., 2024). This division also manifests in strong issue-based affective polarization (Herold et al., 2023). Ideological and affective polarization generally sharpens conflicts and makes compromises less likely. Polarization can also be detrimental to the support and upholding of various basic democratic principles (Carothers & O’Donohue, 2019b; Graham & Svobik, 2020; Kingzette et al., 2021; Lelkes & Westwood, 2017).

This is concerning, as broad societal commitment to democratic norms is foundational for democratic stability (Ginsburg & Huq, 2018; Levitsky & Ziblatt, 2018). Against the backdrop of growing dissatisfaction with democracy and increased openness to non-democratic governance types (Foa & Mounk, 2016; Wuttke et al., 2020), understanding under which circumstances this commitment erodes is of high importance. I argue, due to its contentious and polarized nature, the climate cleavage poses a relevant, yet understudied, threat to democratic norms.

On a societal level, increased public and scholarly interest emerged in recent years asking whether democracies are empirically best suited to face the challenge of climate change (Fiorino, 2018; Povitkina, 2018; von Stein, 2020). At the same time, researchers have discussed normative arguments concerning potential trade-offs between effective climate protection and democratic values (Lazar & Wallace, 2025; Maloy, 2024; Mittiga, 2021).

Despite its relevance for democracy, evidence on the individual level is scarce. Initial research suggests that citizens who are highly concerned about climate change are seemingly more open to illiberal or non-democratic measures if these are perceived as advancing climate action (Isermann et al., 2024). But even though ideological polarization necessarily implies the existence of opposing camps, the democratic commitment of those in opposition of climate action remains, so far, completely unstudied. This leaves us with an incomplete account of the extent to which the climate cleavage affects citizens’ democratic commitment.

To address this issue, I draw on original 2023 survey data from Germany (N = 2.101) to examine whether both strong supporters and strong opponents of climate action are more likely to endorse non-democratic governance that aligns with their political goals. I find that stronger preferences – either for or against climate action – are robustly correlated with support for various proposals of abstract and specific non-democratic governance. Strong opponents are, for example, more willing to restrict climate activism or ignore court rulings mandating climate action, while strong supporters are more open to censor climate change denial. Notably, both sides of the cleavage exhibit a stronger demand for technocratic climate governance compared to centrists. This suggests either camp beliefs decisions of the eventual experts in charge would align with their own views.

Beyond a first joint empirical investigation of both sides of the climate cleavage, I field two original list experiments to address the risk of concealed undemocratic attitudes. Recent research has provided mixed evidence for the existence of ‘fake democrats’ who publicly endorse

democracy for reasons of social desirability while privately favoring authoritarian alternatives (Bischof et al., 2023; Kaftan, 2024). Such ‘staged democrats’ may quickly withdraw their support once societal norms for democracy erode (Valentim, 2024). Understanding hidden preferences is thus crucial, as the stability of democracy depends not only on citizens’ stated commitments but rather on their genuine willingness to uphold democratic norms. My results suggest that conventional surveys can indeed underestimate citizens’ openness to democratic norm transgressions. Specifically, while approximately 22 (14) % of respondents openly agree that “If necessary, stronger climate protection measures should also be introduced (prevented) through undemocratic means”, support increases to roughly 35 (39) % in the list experiments.

This study contributes empirical insights to important broader debates on democratic resilience and climate politics. By analyzing both sides of the climate divide, the study shows that the willingness to bypass democratic procedures is substantial and not confined to one ideological camp. In short, contentious climate politics create conditions under which support for democratic norms becomes contingent on policy outcomes. The embedded list experiments speak towards the existence of ‘fake democrats’. They highlight that the true extent of the non-democratic tendencies is concealed, suggesting that conventional survey approaches may underestimate citizens’ openness to undemocratic governance. Recognizing these dynamics is crucial to understand the democratic risks arising from conflicts over climate policy and to develop strategies for protecting democratic commitments amid intensifying issue-based polarization around climate change.

3.1 Democratic Norms under Attack

On their own, constitutions, laws and institutions are insufficient to ensure the survival of democratic rule (Ginsburg & Huq, 2018; Levitsky & Ziblatt, 2018). Instead, shared democratic values and adherence to democratic norms like mutual tolerance, separation of power, and respect for electoral outcomes are necessary ‘guardrails of democracy’ (Levitsky & Ziblatt, 2018). Even democratically elected officials can gradually erode democratic norms and, without a societal commitment to defend these principles, institutions struggle to withstand such internal pressures. As Ginsburg and Huq (2018, p.245) put it: “There is no democracy without a decent measure of popular commitment to democracy”.

For a long time, political science treated the existence of such a popular commitment amongst established Western democracies as given. Over the last decade, however, democratic backsliding occurred in multiple countries, as illustrated by declining democracy scores in expert ratings or indices like V-Dem (Coppedge et al., 2024; Mechkova et al., 2017). Simultaneously, Foa and Mounk (2016) prominently document a decline in democratic government satisfaction and increased openness to non-democratic modes of governance amongst citizens in northern America and Europe. While Zilinsky (2019) and Wuttke et al. (2020) show generally strong and continuing satisfaction with and support for democratic rule in Europe, Wuttke et al. (2020) also identify a growing (and younger) population of ‘democrats in name only’. These citizens ex-

press democratic support, but simultaneously endorse being ruled by ‘a strong leader’, experts or even the army – all modes of governance that are at odds with liberal democracy.

3.1.1 Instrumental & Hypocritical Democrats

In a similar vein, a growing body of research now demonstrates that substantial amounts of citizens are rather *instrumental* than convicted democrats.

Using mostly conjoint survey-experiments, scholars have shown that citizens are willing to sacrifice democratic values if they hold other, competing interests. A commonly studied trade-off occurs in the context of electoral decisions between (fictional) candidates (e.g. Frederiksen, 2023; Graham & Svulik, 2020; Krishnarjan, 2022; Saikkonen & Christensen, 2022). In these studies, substantial shares of society trade away democratic norms by ‘voting’ for candidates that violate those norms in favor of partisan loyalty (e.g. Graham & Svulik, 2020) or due to policy congruence (e.g. Frederiksen, 2023; Lewandowsky & Jankowski, 2023). These trends are robust across multiple countries including the U.S. Finland, Germany, Canada, Denmark, Mexico, and South Korea (Aarslew, 2022; Gidengil et al., 2021; Graham & Svulik, 2020; Lewandowsky & Jankowski, 2023; Saikkonen & Christensen, 2022; Song & Kim, 2024). While most studies posit that citizens actively make a trade-off decision, Krishnarjan (2022) shows evidence for a partisan bias through which some actions are only perceived as undemocratic when taken by the opposition, but not by one’s own party.

This diverging perception is illustrative of a prevalent ‘democratic hypocrisy’ also identified in other studies (Simonovits et al., 2022). For example, U.S. partisans are more likely to oppose checks & balances if their own party governs, but to support them if they are in the opposition (Kingzette et al., 2021). An equivalent pattern was found for election winners and losers in Europe (Mazepus & Toshkov, 2021). Citizens further condemn democratic norm violations (e.g. police force against protests, limiting freedom of speech) against their own side but tolerate them against opponents (Lelkes & Westwood, 2017). Lastly, support for democracy-eroding policies rises when one’s own party is in power and falls when it is in the opposition – both in hypothetical scenarios (Simonovits et al., 2022) and studying real-world data (Littvay et al., 2024). Overall, these studies reveal a broad pattern of democratic hypocrisy where commitment to democratic norms is instrumental and conditional on how it affects one’s own political aspirations.

3.1.2 Democratic Norms under Polarization

A further common insight from multiple studies suggests that polarization can affect citizens’ democratic attitudes or behavior (e.g. Graham & Svulik, 2020; Kingzette et al., 2021). In their encompassing book *Democracies Divided*, Carothers and O’Donohue (2019b) argue that, while some level of ideological polarization is desirable in pluralist societies, sprawling polarization can corrode democratic systems. Building on multiple contributed case studies Carothers and O’Donohue conclude that “political polarization is tearing at the seams of democracies throughout the world” (2019a, p.257). More recently, Patkós and Plesz (2025) used ESS data

to demonstrate that higher ideological or partisan polarization in a country correlates with less democratic accountability measured through the World Bank's Voice and Accountability (VA) index that captures citizens' ability to freely participate in and speak freely about politics.

On an individual level, Graham and Svobik (2020) show that increasing polarization, measured via policy positions or partisan strength, makes Americans even more likely to prioritize policy or partisan considerations over democratic principles in their voting decision. They compare two counter-factual worlds: one only inhabited by 'policy centrists' and one by 'policy extremists' of both sides of an issue. While fictional candidates running on an undemocratic platform would lose about 12%-points and face "resounding defeat" in the first case, they are only predicted to lose 3 %-points in the latter (Graham & Svobik, 2020, p.399). Kingzette et al. (2021) equally find the democratic hypocrisy identified in their U.S. study to be enhanced by affective polarization.

These findings suggest that especially highly polarized issues possess the potential to weaken democratic norm support in a society. In a recent multi-country report, Herold et al. (2023) find that climate change, together with immigration, stood out as the two topics eliciting the highest issue-based affective polarization ratings across Europe. Comparing citizens who think climate policies 'still do not go far enough' with those thinking they 'go much too far', the authors also demonstrate that substantial animosity against the political opponent exists on both sides of cleavage – albeit slightly stronger within the pro climate-action camp (Herold et al., 2023, p.61). This report underscores both the need for more insights of the climate cleavage's impact on democratic norms and the importance of studying citizens on both sides of this issue simultaneously.

3.1.3 Democratic Norms in Times of Crises

Climate change is not only a highly polarized issue but also a profound societal crisis that can threaten citizens' livelihoods, well-being, or even survival (IPCC, 2023). Research on other crises shows that, beyond polarization, threatening circumstances can create additional incentives to sacrifice democratic norms in favor of security or stability.

The classic rally-round-the-flag literature demonstrates that acute, exogenous threats can temporarily increase support for governments and authoritarian values (Merolla & Zechmeister, 2019; Mueller, 1970). In the U.S., for instance, George W. Bush's approval ratings jumped after the 9/11 attacks, and citizens who felt threatened were more likely to support restrictions on civil liberties (Davis & Silver, 2003). Similar effects have been observed in Europe (Chowanietz, 2010).

By now, scholars begun to apply this idea to more ambiguous, longer-term crises without a clear adversary, most prominently the Covid-19 pandemic. The resulting insights can be divided into two related, but distinct strands. First, regarding government satisfaction and support, the evidence is mixed. Lockdowns across Europe seemingly produced short-lived boosts in satisfaction with democracy and trust in government (Bol et al., 2021), though this does not replicate in a parallel fielded study by Marbach et al. (2020). Mixed evidence is also found

by Kritzinger et al. (2021), who identify a rally round the flag effect in Austria, driven by individuals with higher health risks, but not in France.

Second, research focused on democratic resilience, citizens' affinity to authoritarian values and illiberal policies paints a more coherent picture. In a global study, Alsan et al. (2023) show that increased health insecurity during the pandemic relates to a higher willingness to sacrifice general and specific rights oneself and, importantly, to allow the government to curtail the rights of others. Other studies show similar shifts, with fear of Covid (Vasilopoulos et al., 2022) and prior attitudes towards democracy (A. Werner & Heinisch, 2024) being associated with greater acceptance of restrictions on civil liberties. In Germany, a majority of vaccinated citizens were in favor of restricting individual freedoms for security – but even more so if those restrictions only applied to the unvaccinated minority and not themselves (Hartmann et al., 2022).

Marbach et al. (2020) show that lockdown policies in the U.S. and Europe causally inflated citizens' authoritarian values and, to a limited degree, their support for autocracy. For Spain, Amat et al. (2025) document a comprehensive turn towards strong leadership, a growing willingness to sacrifice individual freedoms and rights, and an increased demand for technocratic governance in order to fight the Covid crisis. While the former faded quickly after the end of Covid, strengthened technocratic preferences remain a fundamental long-term effect of the pandemic. Aligning the insights from both research strands, Erhardt et al. (2022) find that Covid-induced fear increased democratic support, while support decreased for angry respondents.

3.2 Demand for Non-Democratic Climate Action

Overall, these findings highlight how the Covid-crisis shifted public attitudes towards authoritarian values, increased demand for illiberal policies, authoritarian or technocratic governance. Doing so, it provides an important backdrop for deriving expectations of the effects elicited by the climate crisis.

Similar to Covid-19, but different from terrorist attacks, there is no singular culprit for climate change and a lot of polarized conflict over its severity or even existence. This should affect the nature of a possible authoritarian response to the threat. While terrorist attacks might unite a country against an outside threat (e.g. 'Islamists'), a polarizing threat could turn citizens' authoritarianism against their co-citizens.

Existing literature in psychological science corroborates that climate change can elicit substantial feelings of threat by triggering some combination of personal uncertainty and loss of control, underscored by the most fundamental human desire: self-preservation (e.g. Barth et al., 2018; Jonas et al., 2014). Researchers further found that "climate change threat can subtly increase people's general readiness to aggress toward deviant groups that seem to threaten individuals' and society's safety" (Fritsche et al., 2012, p.6). Additionally, perceived climate threat can increase norm conformity and group-authoritarianism (aggression against in-group deviants and submissiveness) even in left-leaning and typically anti-authoritarian segments of society (Barth

et al., 2018).

This research strand provides empirical evidence that climate change can have a formative impact on citizens' authoritarian inter-group tendencies, but it does not translate its findings on a societal scale. In fact, despite the importance of climate politics, there is little to no research investigating its connection to democratic attitudes. So far, scholars seem either interested in whether democracies are best suited to face the challenge of climate change (Fiorino, 2018; Povitkina, 2018; von Stein, 2020) or discussing normative arguments about the interplay of climate protection and democratic values (Lazar & Wallace, 2025; Maloy, 2024; Mittiga, 2021). Most prominently of these authors, Ross Mittiga (2021) theorized if climate change poses a substantial threat to peoples' lives, this could pressure governments to enact authoritarian climate action to ensure their foundational legitimacy by keeping its citizens safe. This could legitimize the *supply* of non-democratic climate governance. Little is known, however, about citizens' *demand* for such non-democratic governance.

In a unique study, Isermann et al. (2024) study Germans' support for democratic norm violations *contextualized* with the violation's explicit pro-climate action goal. The authors implicitly acknowledged the inter-group dimension identified by the psychologists above by designing items reflecting non-democratic actions targeted at an out-group of climate action opponents. For example, they ask explicitly about justifying force against companies that emit excessive CO² or limiting the legal options to fight climate policies in court. Controlling for respondents' *abstract* support for the same democratic norms, they show that stronger concern about climate change is related to less contextualized support of all studied democratic norms (e.g. monopoly of violence & parliamentary control) (Isermann et al., 2024).

This provides first evidence that climate concern can motivate citizens to sacrifice democratic norms similar to the patterns identified in the candidate choice experiments above. However, the sole focus lies on those who feel threatened by climate change. Therefore, Isermann et al. (2024) only consider non-democratic measures to *prevent* or *mitigate* the crisis. Instead, I explicitly include opponents of climate action in my analysis to jointly examine the support for non-democratic measures to *prevent* further climate action.

3.3 Demand for Non-Democratic Climate Inaction

I argue, climate action in itself can feel threatening to individuals. For one, it can impose material costs, like higher energy prices or job shifts. Trade-off considerations between protecting the environment and financial costs of policies are regularly studied as one of the major deterrents of climate action support (Armingeon & Bürgisser, 2021; Böhmelt & Zhang, 2023; Conrad, 2019; Kellstedt et al., 2019; Kenny, 2019). In a 2022 survey wave of the German-wide Social Cohesion Panel, 40% of the 8.643 respondents at least rather agreed with being worried about lower living standards due to climate politics (tab. C.1). Slightly more respondents at least rather agreed to being worried about climate politics destroying more jobs than it creates. Additionally, climate action can be seen as a symbolic threat as it can require lifestyle changes

such as reduced flying, car use or dietary shifts. In Germany, especially populist and right-wing actors increasingly emphasize (hypothetical) financial burdens, an eradication of wealth and excessive bans and lifestyle restrictions to mobilize resistance against environmental policies (Quent et al., 2022).

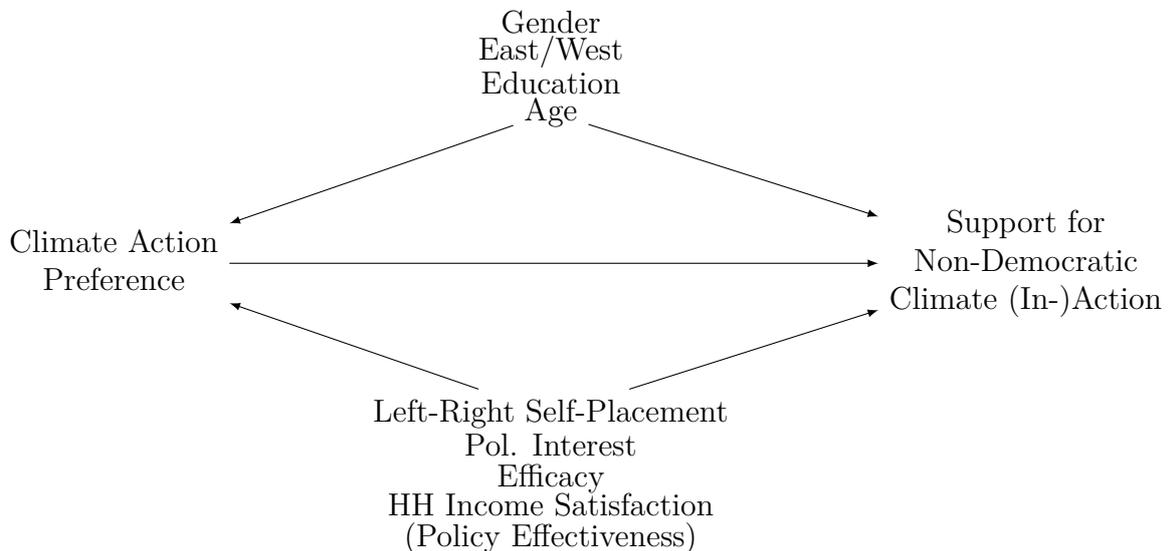
The origin of these economic and symbolic threats clearly differs conceptually from the threat climate action proponents perceive. Nevertheless, I argue it can motivate an erosion of democratic norms just as well as the threat of climate change impacts themselves.

Importantly, Germany possesses a relevant amount of highly polarized climate action opponents for which this mechanism could apply. In Herold et al.'s (2023) report, a third of the citizens exhibiting maximal polarization in the climate issue (i.e. rating their own side as 10, and the opposition as 0) were opposed to further climate action. Germany thus constitutes a prime case, where both sides of the climate cleavage are substantially large and polarized to warrant empirical investigation. Citizens themselves seem to agree, as nearly three quarters of the Social Cohesion Panel respondents were at least rather worried that climate politics will lead to more societal conflict (tab. C.1).

3.3.1 Main Hypotheses

The central arrow in figure 3.1 illustrates the straightforward proposition of my derived hypotheses H1a & H1b: Strong pro- (anti-)climate action preferences correlate with increased willingness to support non-democratic climate action (prevention).

Figure 3.1: Generalized Theoretical Framework



Hypothesis 1a Favoring *more* climate action is positively correlated to endorsing measures for climate protection even if they are at odds with democratic norms.

Hypothesis 1b Favoring *less* climate action is positively correlated to endorsing measures limiting climate protection even if they are at odds with democratic norms.

3.4 Falsifying Support for Democratic Norms

When assessing citizens' non-democratic attitudes, it is important to also consider the strong social norms underlying democratic support. Bischof et al. (2023) argue that Western democracies may be characterized less by genuine democratic consensus than by a consensual norm that creates social desirability to endorse democracy. Using survey mode variation in the 2017 European Value Study, they provide initial evidence for *fake* democrats as respondents reported significantly stronger support for democracy in face-to-face than in self-administered interviews. Contrary, a multi-country list experiment by Kaftan (2024) shows no sign of self-censorship when respondents are asked whether their country would be better off if it weren't a democracy. In the German case, close to 10 % of respondents are found to hold this view both in direct elicitation and the list experiment.

Beyond academia, the potential existence of such a bias carries important implications for the actual state and stability of democracies. Valentim (2024) warns that large numbers of *staged* democrats, who only act in accordance with norms of democracy to evade the social costs of breaching them could cause disruptions in democratic systems if the norm concealing their true attitudes suddenly crumbles. This greatly illustrates the importance of measuring the prevalence of 'fake' or 'staged' democrats as accurately as possible.

Given the diverging empirical findings, it is currently unclear to what extent social desirability introduces a bias in reported democratic support. I contribute to this debate and simultaneously improve my investigation of climate-related non-democratic attitudes by using two embedded list experiments that are suited to uncover the amount of 'hidden' agreement with non-democratic climate (in-)action. Specifically, I propose that:

Hypothesis 2a *Respondents hide their endorsement for measures for climate protection that are at odds with democratic norms.*

Hypothesis 2b *Respondents hide their endorsement for measures against climate protection that are at odds with democratic norms.*

3.5 Research Design

3.5.1 The German Case

As touched upon above, Germany is a relevant and 'likely' case for my research, as both sides of the climate cleavage are substantially large and polarized (Herold et al., 2023). On one side, Germany had the highest share of citizens either "extremely" or "very" concerned about climate change in both 2020 and 2023 amongst surveyed European countries (European Social Survey, 2020, 2023, 2024). On the other, climate policies championed by the Greens after their government-entry in 2021, such as a stronger commitment to heat pumps, created an intense backlash to comprehensive climate action (Sullivan-Thomsett et al., 2024). Compared to the

average European (5%), Germans were twice as likely (11%) to say the government combats climate change already too much in a recent Eurobarometer (European Commission, 2023).

This opposition was mobilized, in part, by right-wing actors (Quent et al., 2022). Fittingly, using GLES panel data (2016–2022), Coffé et al. (2024) identify increasing polarization in the economy-climate trade-off driven mainly by citizens on the right becoming more opposed to climate action. Extending their descriptive analysis with two additional panel waves from 2023 (fig. C.1), I find that this trend persists during the time of my data collection. In fact, the 25th GLES panel wave in late 2023 marks the first time in this time-series that more citizens prioritized economic growth (39%) over climate action (35%). Since both opposing camps are substantially large, German citizens might be especially incentivized to consider non-democratic ways to secure their favored climate governance.

I still expect the underlying arguments to generalize to other established European democracies. Germany’s level of climate issue-based polarization is close to the European average (Herold et al., 2023). For example, Italy and Spain show higher polarization and could thus exhibit an even larger demand for non-democratic solutions. Specific national patterns will, however, depend on countries’ ideological profiles. In Sweden (35%), Czechia (37%), and the Netherlands (47%), climate opponents form an even larger share of the maximally polarized (Herold et al., 2023), suggesting two-sided threats to democratic norms similar to Germany. By contrast, in Italy only 5% of maximally polarized citizens oppose climate action, and in France, Spain, or Portugal merely 2% think their government is already doing too much (European Commission, 2023). In these contexts, the potential for non-democratic *opposition* to climate action might be limited by its smaller base.

3.5.2 Data

For this paper, I employ cross-sectional survey data from Germany, collected in 2023 using an original, co-authored module within the Socio Economic Panel’s [SOEP] *Innovation Sample*. Data collection was carried out by the SOEP and infas, with further details provided in the SOEP’s annual report (Ponert et al., 2024).

The module was presented to 2.241 respondents. The SOEP requires that participants can answer ‘Don’t know’ or ‘I don’t want to say’, which I treat as missings. Excluding individuals with missing values in my core independent variable, their climate action preference, results in a final sample of 2.101 respondents. The module data is enriched with general measures from the 2023 Innovation Sample and additional data provided directly by the SOEP, like respondents’ East vs. West German residency.

Independent Variable & Control Strategy

The main independent variable is respondents’ climate action preference, measured on a scale from -5 (*Politics to combat climate change go way too far*) to +5 (*Politics must do much more to combat climate change*), with 0 labeled *Politics to combat climate change are just right*. I treat this as numeric.

To address potential confounding influences, I condition on socio-demographics (age, education, gender, East vs. West residency), political attitudes (left-right placement, political interest, efficacy), household income satisfaction and, for policy proposal outcomes, perceived policy effectiveness. My main inferences rely on these fully controlled models (fig. 3.1).

To ensure results are not driven by my control strategy, I conduct extreme bounds analyses (Leamer, 1985; Plümper & Traunmüller, 2020; Sala-I-Martin, 1997). Essentially, I estimate a series of regressions that always include the main predictor, climate action preference. But each model adds a unique combination of the main control variable set and some more plausible confounders: party identification, absolute ideological extremity, life satisfaction, risk aversion, and habitual worrying. Original question wordings and scales of all control variables are reported in table C.7, applied transformations in table C.8.

For one, this process allows me to estimate the average coefficient over all possible control strategies. More importantly, following Leamer (1985), I compute lower and upper bounds (Lower: $\beta_{\min} - z \times SE_{\min}$; Upper: $\beta_{\max} + z \times SE_{\max}$). I set z corresponding to a 95%-confidence interval. If the extreme bounds exclude 0, I consider results as very robust, as this indicates not a single composition of control variables produced an insignificant main coefficient.

Dependent Variables

Respondents' demand for non-democratic climate governance is measured with a series of abstract and specific items. Recent debates in the political violence literature (Kalmoe & Mason, 2022a, 2022b; Westwood et al., 2022) suggest that abstract support for radical measures differs from support for specific norm-violating behavior.

The benefit of specific items is that they “[remove] the need for respondents to speculate” (Westwood et al., 2022, p.8), limiting the danger of differential item interpretation. The drawback of specific items is that not all respondents will perceive them as equally ‘undemocratic’. Following Krishnarjan (2022), democratic transgressions aligned with one’s goals will be perceived as less undemocratic than those opposed to them.

Even without this bias, citizens demonstrably have a varying understanding of democracy (Chapman et al., 2023; Chu et al., 2024; Claassen et al., 2024; Kaftan, 2024; Kriesi et al., 2016) and different preferences about democratic procedures (König et al., 2022; Landwehr & Harms, 2019; Landwehr & Steiner, 2017; Wegscheider et al., 2023; H. Werner, 2019). Citizens’ heterogeneous understanding of democracy uncovered by these studies needs to be acknowledged when researching democratic resilience and backsliding, since citizens will uphold and defend only the aspects of democracy they personally consider essential (Kaftan & Gessler, 2024; Wunsch et al., 2025).

My approach to this dilemma is to combine survey items capturing abstract support for undemocratic means with multiple more fine-grained, norm-specific evaluations to best triangulate citizens’ demand for non-democratic climate governance. Table 3.1 lists these items, indicates which side of the cleavage and hypotheses they target, and which norm they conceptually

violate. Table C.2 expands on the democratic relevance of these norms.

Table 3.1: Different Measures of Non-Democratic Climate Governance

Item	Side	Norm
Direct Item & List Experiment		
If necessary, stronger climate protection measures should also be introduced through undemocratic means.	Pro (H1a & 2a)	Abstract
If necessary, stronger climate protection measures should also be prevented through undemocratic means.	Con (H1b & 2b)	Abstract
Direct Item Only		
Climate politics should be decided by scientists and experts instead of elected politicians.	Pro (H1a)	Technocracy
Politicians should only be allowed a mandate in the Bundestag if they publicly acknowledge that climate change exists and is human-made.	Pro (H1a)	Passive Voting Rights
Protests by climate activists that interfere with everyday life should be prohibited and activists should be prosecuted.	Con (H1b)	Freedom of Assembly & Speech
Even if courts judge that stronger climate protection measures have to be taken, politics should ignore this.	Con (H1b)	Checks & Balances
Policy Proposals		
Removing of all posts and comments in the internet and on social media which state there is no climate change	Pro (H1a)	Censorship
Granting new competencies for the government to nationalize land (private and commercial) to advance the expansion of renewable energy (e.g. wind or solar parks).	Pro (H1a)	(Private) Property Rights

See table C.2 for more detailed conceptualization of specific norms.

For one, I survey respondents' binary agreement with the *abstract* proposal that climate action should, if necessary, be [introduced / prevented] through undefined 'undemocratic means'. Each respondent was randomly shown only one of the two items, which also serve as the sensitive items in the two list experiments discussed later. Although the 'means' respondents think about here are unclear, they themselves must perceive them as 'undemocratic'. Agreement thus indicates a general willingness to trade away a self-defined democratic norm for the desired climate governance.

In addition, I probe support for four specific governance proposals (binary) and two illiberal climate policies, measured on five-point Likert scales from *Completely Disagree* to *Completely Agree*. I treat the later as numeric, but results remain robust when treating them as ordinal. These specific items are tailored to fit the German case, often relating to contemporary events in the country, but their underlying norms should be applicable to liberal democracies in general. For example, the *Freedom of Assembly & Speech* item echoes comments made by CDU-general secretary Mario Czaja (DPA/ZDF, 2022) and the *Checks & Balances* item relates to a ruling by the German Constitutional Court in 2021 that mandated the government to increase its commitment to climate action.

These specific items contextualize the captured abstract willingness with current examples, strengthening the study's insights and linking them to ongoing debates. Importantly, I do not claim that all specific items violate democratic principles to the same extent. Since using specific, real-world related examples reduces the comparability, agreement rates should not be

read as evidence that one side is generally more or less democratic. Only the abstract items, which are worded equivalently, permit a credible direct comparison between climate action proponents and opponents.

3.5.3 Modeling Approach & List Experiments

To test hypotheses 1a & 1b, I run separate regressions for all distinct outcome measures presented in table 3.1. I use logistic regression for agreement to the binary non-democratic climate governance proposals and OLS regression for citizens' policy support.

To ease interpretation, I employ post-estimation simulation using an observed value approach (Hanmer & Ozan Kalkan, 2013; King et al., 2000). Concretely, I define different scenarios setting the climate action preference to a range of different values for all respondents, but leaving all other co-variate values as observed. To simulate the estimation uncertainty, I take 1000 draws from a simulated sampling distribution based on the estimated model coefficients and their variance covariance matrix. Multiplying the set scenario with the sampled coefficients, I obtain 1000 predicted probabilities to agree with the outcome statement, per individual and scenario. These are then averaged over all respondents creating 1000 average predicated probabilities per scenario. From these simulated predicted probabilities, I report the median and the 2.5- and 97.5-percentiles.

To probe hypotheses 2a and 2b, I use two original list experiments. List experiments are used to reduce or quantify social desirability bias in surveys when dealing with sensitive issues such as racial attitudes (Kuklinski et al., 1997), support for the Taliban (Lyall et al., 2013), voter turnout (Ahlquist et al., 2014), or wartime sexual violence (Koos & Traunmüller, 2024).

Generally, for list experiments, respondents (i) are randomly assigned to a treatment or control group ($T_i \in \{0, 1\}$). The control group ($T_i = 0$) gets presented J control statements, while the treatment group ($T_i = 1$) sees the same plus one sensitive item ($J + 1$). All respondents are then asked with *how many*, but not which statements they agree with ($Y_i \in \{0, \dots, J + 1\}$). Under certain assumptions the two groups' values of Y_i should only differ due to the inclusion of the sensitive item (fig. 3.2). This makes the difference in group means ($\bar{Y}_{T_i=1} - \bar{Y}_{T_i=0}$) an unbiased estimate of the share of respondents agreeing with the sensitive item (Imai, 2011).

Figure 3.2: List experiment logic following notation by Eady (2017).

$$Y_i = \begin{cases} Y_i^* & \text{if } T_i = 0, \\ Y_i^* + Z_i^* & \text{if } T_i = 1, \end{cases}$$

with $Y_i^* \in \{0, \dots, J\}$ and $Z_i^* \in \{0, 1\}$ being the latent responses to the J control statements and the sensitive statement, respectively.

Control List Construction

Importantly, list experiments reduce social desirability bias only because asking indirectly about joint support for $J + 1$ statements grants respondents an additional level of confidentiality. But

this does not hold if respondents agree with all or none of the items. In this case, their stance on the sensitive statement becomes fully revealed, which may again induce misreporting (Blair & Imai, 2012). The common recommendation to minimize such ceiling or floor effects is to select control items J that are weakly or even negatively correlated (Blair & Imai, 2012; Glynn, 2013; Kuklinski et al., 1997). With this in mind, I selected two sets of three items (tab. 3.2) from the 2021 GLES Pre-Election Survey (GLES, 2023) so that only 0.5% (5%) of original respondents fully agreed or disagreed with all items in control list I (II).

Table 3.2: Item Selection for Control Lists

Controls I	Controls II
<ul style="list-style-type: none"> • In emergency situations, it is justified for the state to restrict citizens' civil liberties. • The government should implement a nationwide rent cap. • The state should refrain from getting involved in the economy. 	<ul style="list-style-type: none"> • In times of a pandemic like Corona, there should be a universal vaccination requirement. • The government should take action to reduce income inequality. • European integration should not be advanced any further.

Experimental Setup

To run my two experiments, respondents were randomly assigned into 'Pro' and 'Against' conditions. Figure C.2 visualizes the experimental setup. At the beginning of the module, group 'Pro' received control list I plus the *Abstract (Pro)* item, while group 'Against' received control list II with the *Abstract (Con)* item. Afterwards, each group saw the respective other's control list without sensitive statements, thus serving as control for each other. To minimize priming, the open elicitation of respondents' support for their respective sensitive item, as well as the other non-democratic governance proposals were placed at the end of the module.

List Experiment Estimators

Today many different variants, designs and statistical estimators for list experiments exist (e.g. Aronow et al., 2015; Corstange, 2009; Eady, 2017; Glynn, 2013; Imai, 2011; Riambau & Ostwald, 2021). Most notably, Imai (2011) and Blair and Imai (2012) have introduced three multivariate estimators to obtain prevalences of sensitive attitudes: the simple linear Difference-in-Means estimator (DiM or LM) is most robust but least efficient; Maximum Likelihood (ML) is most efficient but very sensitive to distributional assumptions (Ahlquist, 2017); and Nonlinear Least Squares (NLS) sits in the middle of those two (Blair et al., 2019). Section C.3 in the appendix discusses the (dis-)advantages of these estimators in more depth.

In short, I largely follow the recommendations laid out by Blair et al. (2019), which brings together recent advances and addresses key concerns voiced by other researchers (foremost Ahlquist (2017)). I use DiM as a baseline, but contrast it with the other estimators. Also, I test key assumptions (i.e. *Randomization of the Treatment, No Design Effect, No Liars*) using, amongst other, diagnostics proposed in Blair and Imai (2012), and the model misspecification test developed by Blair et al. (2019).

To assess the social desirability bias hypothesized in H2a and H2b, I then follow the framework

of Blair and Imai (2012). Here, social desirability is simply modeled as the difference between the predicted probability of openly agreeing to the sensitive item and the predicted probability of ‘truthfully’ agreeing with the sensitive item in the list experiment given the same set of co-variates. The former is estimated from the logit model of the open item, the later through the multivariate list estimators discussed above.

Non-Strategic Misreporting

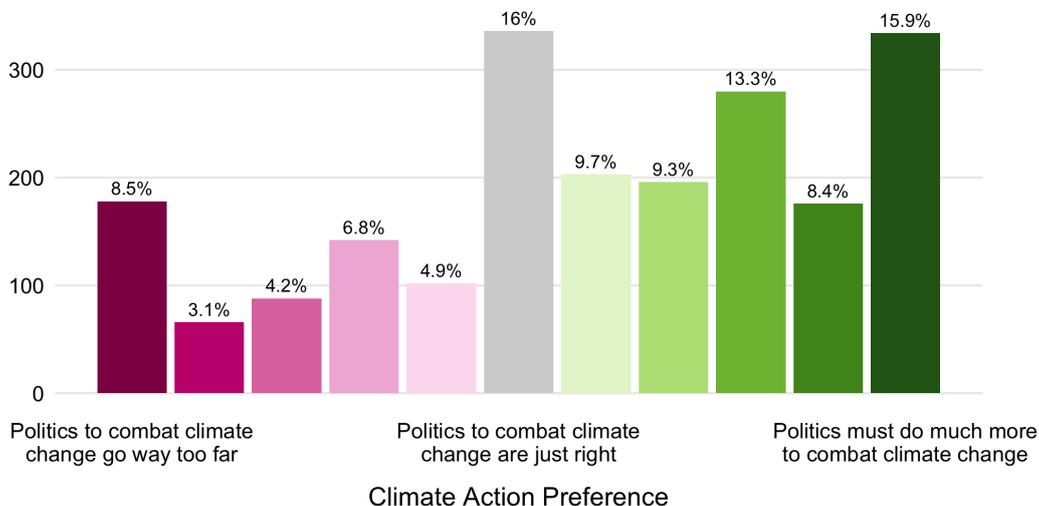
While list experiments reduce strategic misreporting, their cognitively demanding nature makes them prone to non-strategic misreporting – errors arising from misunderstanding, random responding, or satisficing to minimize cognitive effort (Agerberg & Tannenbergh, 2021; Alvarez et al., 2019; Kuhn & Vivyan, 2021; Riambau & Ostwald, 2021). There is no panacea to prevent this type of misreporting, but Kuhn and Vivyan (2021) show that excluding likely survey satisficers improves the external validity of list experiments. In absence of a trap question, I rely an inattentiveness measure based on behavior such as (illogical) straight lining and completion speed (tab. C.3). Section C.3 in the appendix discusses non-strategic misreporting and this inattentiveness measure in more detail. Because simply dropping inattentive respondents could also skew results (Alvarez et al., 2019), I estimate all subsequent results once using the full sample and once restricting it to likely attentive respondents.

3.6 Analysis

3.6.1 Descriptives

Starting the analysis, figure 3.3 displays the distribution of respondents’ climate action preferences. While there is a lot of variation, a majority (56.6 %) is leaning towards favoring more policies combating climate change. 16 % report satisfaction with the current status quo, and about 27.5 % favor less climate action.

Figure 3.3: Climate Action Preferences



Moving to the outcome variables, the *Censorship* and *Property Rights* policies are generally

disliked (fig. 3.4). However, while roughly $\frac{1}{3}$ still at least rather support censoring climate change denial, only around 14% support expropriation for renewable energy production. The bars in figure 3.5 illustrate the share of respondents' (dis-)agreeing with each non-democratic governance proposal. The top-most bars show that a majority of respondents disagree with the abstract propositions to use undemocratic means. However, still substantial 22.1% (14.3%) openly support introducing (preventing) climate protection measures through undemocratic means, if necessary.

Figure 3.4: Agreement with Policy Proposals

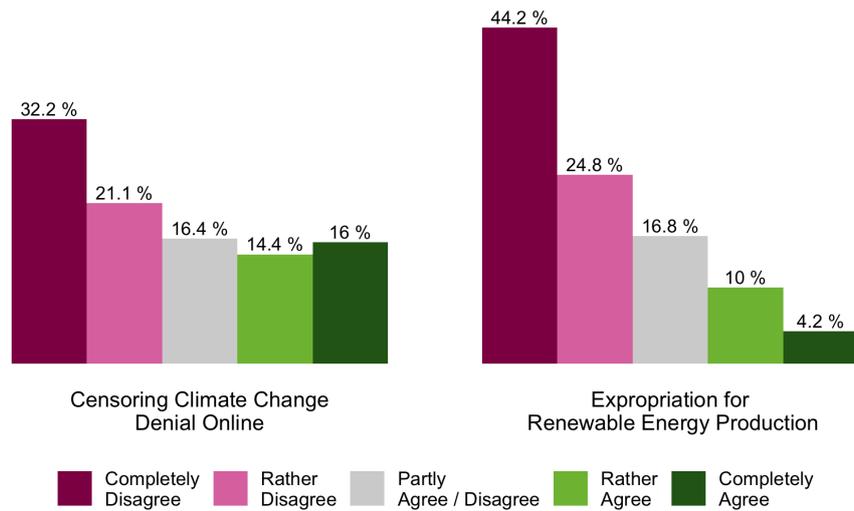
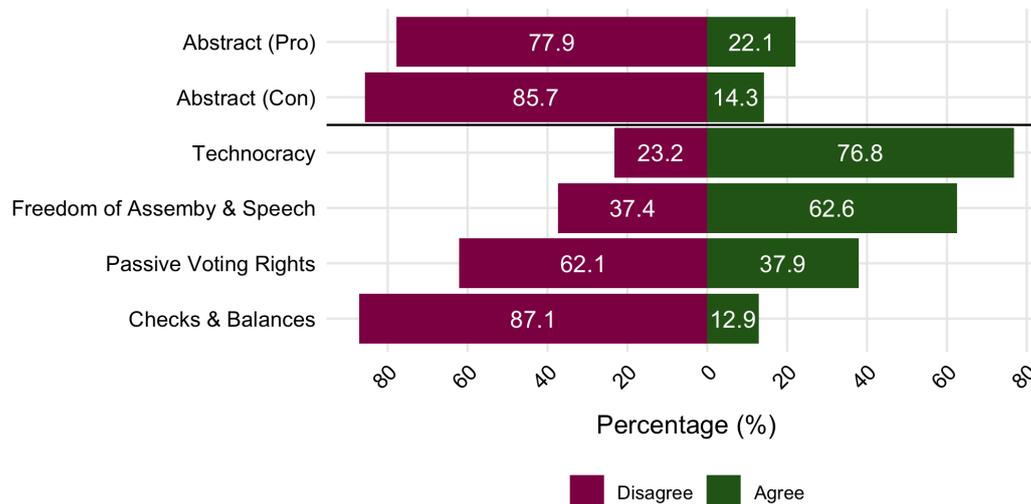


Figure 3.5: Agreement with Non-Democratic Governance Proposals



Meanwhile, support for the explicit governance proposals varies strongly. Only 12.9% agree that politics should ignore pro-environmental court rulings, hinting at a rather strong norm to safeguard *Checks & Balances* and a separation of power within German democracy. More than $\frac{1}{3}$ support conditioning *Passive Voting Rights* on a public acknowledgment of human-made climate change's existence. Prohibiting climate activism that interferes with everyday life and prosecuting the responsible activists, an encroachment on citizens' *Freedom of Assembly*

Speech is favored by a majority (62.6%), while over $\frac{3}{4}$ of respondents want to turn climate politics decision-making over to scientists and experts. The strong demand for technocracy exceeds measures by Bertou and Pastorella (2016), in which 60% of Germans saw experts making decisions as a *very* or *fairly good* way to govern in general.

Such a technocratic turn is conceptually at odds with representative democratic rule (see tab. C.2). But its strong support suggests that either citizens do not perceive it as inherently undemocratic or that they hope experts can provide more ‘objective’ solutions within an increasingly hostile and polarized conflict. Hibbing and Theiss-Morse (2002) already stated that sizable portions of society can be considered ‘stealth democrats’, who value orderly governance over active citizen participation.

3.6.2 The Demand for Non-Democratic Climate Action

Turning towards testing hypothesis 1a, table 3.3 shows the five relationships between respondents’ climate action preference and their demand for non-democratic climate action based on the fully controlled models. All relationships are statistically significant² in the expected direction. This grants strong support for H1a. Figure 3.6 displays the simulated policy support and probability to agree with each governance proposal obtained via observed value simulation.

Table 3.3: H1a Main Models

	Censorship	Property Rights	Abstract (Pro)	Pass. Voting Rights	Technocracy
	(1)	(2)	(3)	(4)	(5)
Climate Action Pref: Pro	0.06*** (0.01)	0.05*** (0.01)	0.24*** (0.03)	0.15*** (0.02)	0.05* (0.02)
Full Controls	✓	✓	✓	✓	✓
Model Type	OLS	OLS	Logistic	Logistic	Logistic
Observations	1,827	1,830	951	1,860	1,891
Adjusted R ²	0.36	0.38			
Akaike Inf. Crit.			939.98	2,331.56	1,951.05

* (**, ***) shows $p < 0.05$ (0.01; 0.001)

Controls: gender, age, east, education, political interest, left-right placement, efficacy, risk aversion, household income satisfaction (, and for policy items: policy effectiveness).

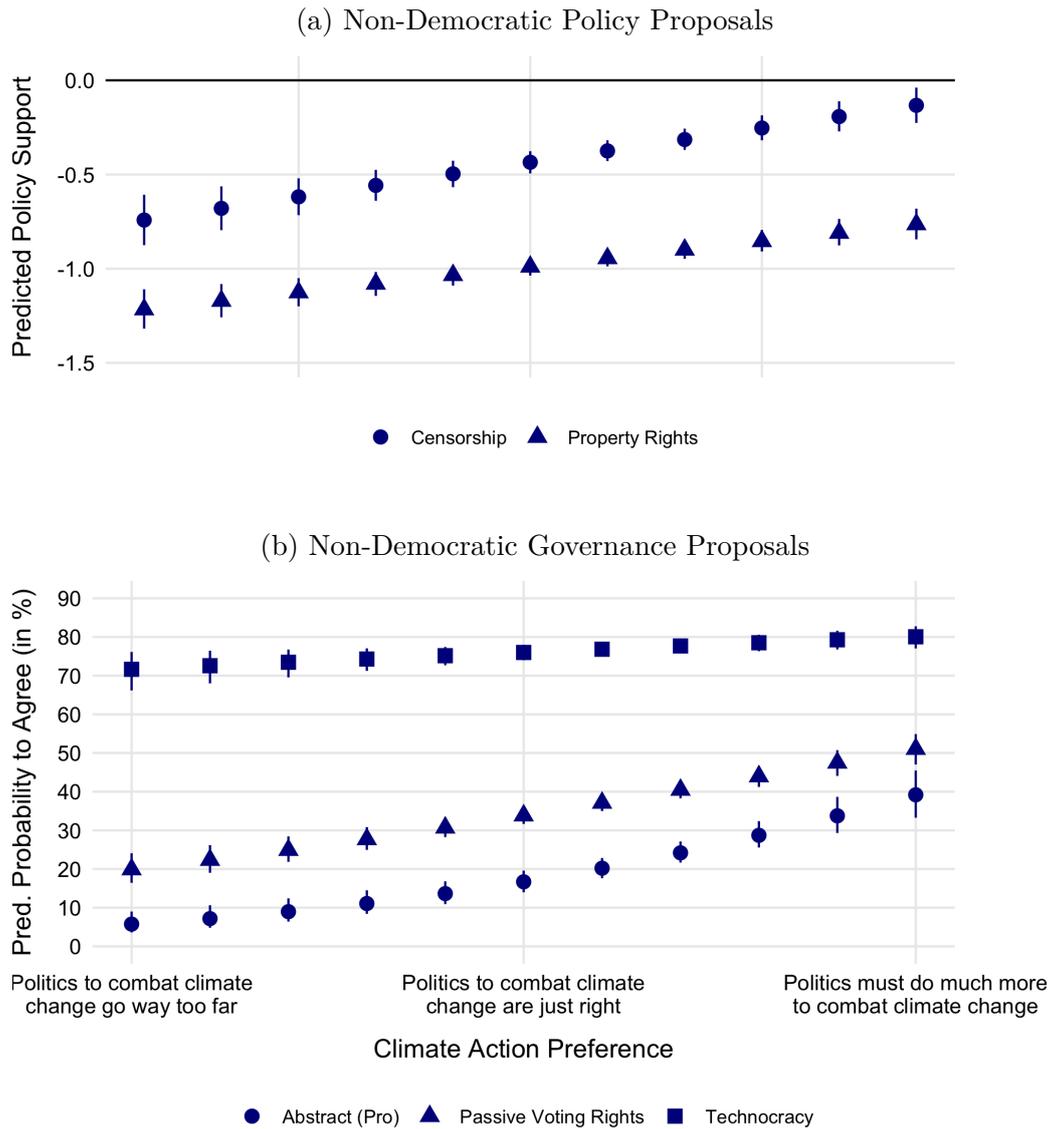
The upper panel (fig. 3.6a) underscores the general unpopularity of both policies. Regardless of the simulated climate action preferences, median predicted support always stays below 0 (neutral). Still, strongly favoring more climate action significantly increases citizens’ tolerance of *Censorship*. In a scenario, where all respondents favor the status quo, median support for censoring climate denial is predicted at -0.34. But if all fully favor more action, this opposition decreases to merely -0.07. By contrast, despite a significant relationship, predicted support for expropriation remains very low across all scenarios.

Panel 3.6b shows stark differences between the binary proposals. Throughout all scenarios, the

² Any reference to statistical significance in this paper relates to a 0.05 α -level.

demand for *Technocracy* varies by less than 10%-points, always exceeding 70%. By contrast, support for the *Abstract* use of undemocratic means quadruples from below 10% if everyone were fully against climate action to about 40% assuming everyone were fully in favor of it. Similarly, support for restricting *Passive Voting Rights* rises by about 30 %-points between those scenarios. In summary, although all relationships are significant, their implications differ as support for *Abstract* undemocratic means and *Passive Voting Rights* is much more strongly affected by climate attitudes than a seemingly ubiquitous demand for *Technocracy*.

Figure 3.6: Simulations based on H1a main models



Robustness Checks

The results provide strong evidence for H1a. To evaluate their sensitivity to research design choices, I run multiple robustness checks: First, I re-model policy support using ordered logit, revealing no substantial differences (tab. C.9). Second, restricting the sample to likely attentive respondents slightly decreases the *Technocracy* coefficient (from 0.05 to 0.03) rendering it

insignificant (C.10). The other four coefficients remain stable.

Third, estimating models for every possible control combination in an extreme bounds analysis yields 8.192 coefficients per governance proposal and 16.384 per policy proposal (tab. C.11). Again, only the *Technocracy* fails this high bar for robustness with only $\approx 65\%$ of possible regressions estimating a significantly positive relationship. For all other outcomes, every single regression coefficient is significant and in line with H1a.

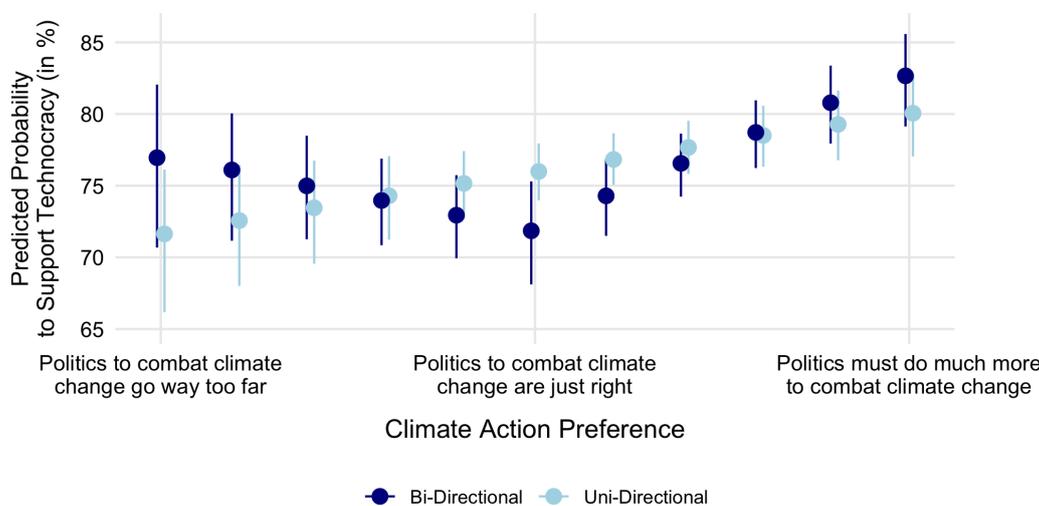
Fourth, I restrict the sample to respondents with climate action preferences from 0 (status quo) to 5 (much more action). As H1a states that wanting *more* climate action is the driver of the assumed relationship, I want to rule out that results are driven solely by strong opponents of climate action. Table C.12 shows that only the effect on *Property Rights* loses significance. This indicates that the original relationship did not manifest because of climate action proponents favoring expropriation more than neutral citizens. Instead, it is because of climate action opponents more strongly opposing it. The exercise reveals another surprise, as the estimated relationship for *Technocracy* roughly triples in strength compared to the main model ($\beta = 0.14$ vs. 0.05).

In summary, my analyses provide strong evidence for the overall assertion that a stronger pro-climate action preference is an important predictor for respondents' demand of non-democratic climate governance (H1a). Beyond that, the results show that the type of behavior under consideration matters, as effect sizes vary substantially. Overall, these results prove to be overwhelmingly robust – except for the demand for *Technocracy* which failed multiple robustness checks and varied strongly in effect size.

Exploring the Demand for Technocracy

To understand the inconsistent results regarding citizens' demand for technocracy, I further explore this relationship.

Figure 3.7: Predicted Support for Technocracy



Plot shows medians and 2.5/97.5 percentiles obtained from observed value simulation

Specifically, I re-estimate my original models, now including respondents' absolute distance to being satisfied with the status quo as a predictor. This measure captures only *how strongly* respondents want a change from the status quo, but not its direction. Table C.13 shows that three models (a) without controls, (b) conditioning on the full control set, and (c) focusing only on attentive respondents all show significant correlations between demand for *Technocracy* and the *strength*, but not the *direction* of climate action preferences.

Figure 3.7 contrasts the simulated probability to support technocratic climate governance of the original model with the improved model containing preference strength as predictor. This illustrates that, as hypothesized, strong proponents are predicted to be most in favor of *Technocracy*. But unexpectedly, strong opponents are also much more open to it than respondents satisfied with the status quo.

Related research has shown that citizens are more in favor of direct democratic practices like referendums, if they favor a change in the status quo and think that the majority agrees with them (e.g. Landwehr & Harms, 2019; H. Werner, 2019). Potentially, the underlying mechanism is similar here, with both sides of the cleavage desiring a change and expecting that the eventual experts in charge would share their vision of climate governance.

3.6.3 The Demand for Non-Democratic Climate Inaction

Moving to H1b, I repeat the previous analytical steps for the three proposals appealing to climate action opponents. Table 3.4 again shows consistent significant support for the hypothesis in all main models. The observed value simulation additionally reveals three distinct patterns.

Table 3.4: H1b Main Models

	Abstract (Con)	Freedom of Assembly & Speech	Checks & Balances
	(1)	(2)	(3)
Climate Action Pref: Pro	-0.08* (0.03)	-0.22*** (0.02)	-0.22*** (0.03)
Full Controls	✓	✓	✓
Model Type	Logistic	Logistic	Logistic
Observations	962	1,905	1,860
Akaike Inf. Crit.	753.59	2,047.02	1,258.43

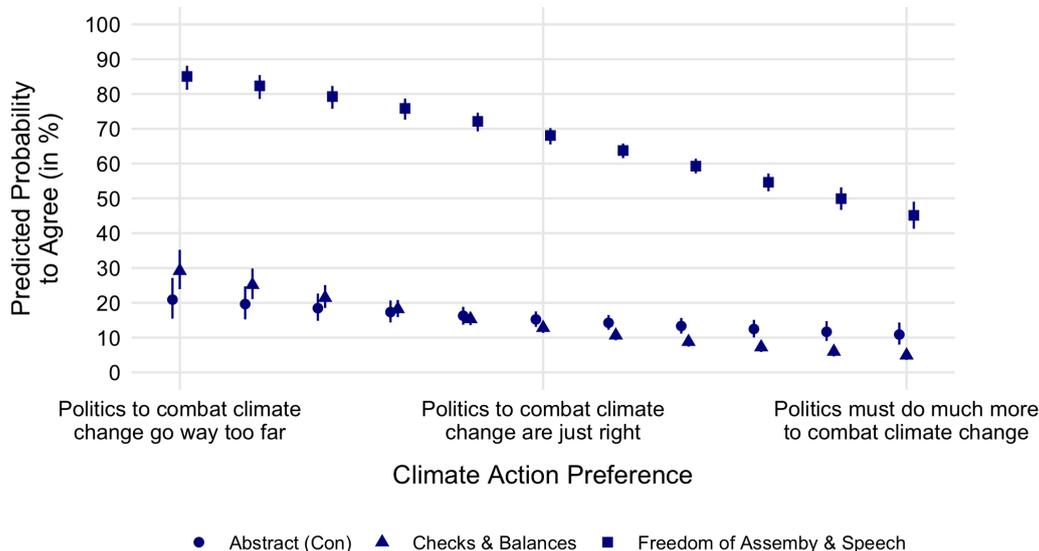
* (**, ***) shows $p < 0.05$ (0.01; 0.001)

Controls: gender, age, east, education, political interest, left-right placement, efficacy, household income satisfaction.

First, support for limiting the *Freedom of Assembly & Speech* to restrict disruptive climate activism is very high across all simulated climate action preferences. Even in a scenario where everyone wants much more climate action, support is still predicted at about 45%. The survey coincided with continuing disruptive protests by the activist group *Last Generation*. Respondents' attitudes could thus reflect a perception that the group itself violated democratic norms such as the rule of law, providing a potential justification to restrict one value for safeguard-

ing another. Or, following the narrative of instrumental and stealth democrats, many citizens simply viewed roadblocks and flight disruptions as inconvenient, making targeted restrictions an attractive trade-off.

Figure 3.8: Simulations based on H1b main models



Plot shows medians and 2.5/97.5 percentiles obtained from observed value simulation.

Second, climate action preferences are much more relevant for the specific than the abstract non-democratic proposal. Compared to the 45% discussed above, simulated support for restricting *Freedom of Assembly & Speech* nearly doubles ($\approx 85\%$) if everyone were to think that climate action already goes too far. Similarly, agreement with politicians ignoring pro-climate court rulings (*Checks & Balances*) strongly falls from roughly 29 to 5% across these scenarios. Meanwhile, support for *Abstract* undemocratic means declines more modestly from about 20 to 11%.

Third, comparing these values to figure 3.6b, we can infer that support for the surveyed anti-climate action items is overall somewhat smaller than that of the pro-climate action items. For example, simulated support for abstract means to implement climate action in a scenario with full action-proponents is about twice as high (40 vs 20%) as support for abstract means to prevent climate action in a scenario with only action-opponents.

Robustness Checks & Further Exploration

Again, these analyses show strong evidence in line with H1b. Re-running the main models with likely attentive respondents, slightly increases coefficient strength but does not meaningfully change any results (tab. C.14). Second, both specific item’s coefficients are robust to extreme bounds analysis (tab. C.15). The abstract proposal closely misses Leamer’s high bar, with ‘only’ 92.25% of the 8.192 possible control strategies yielding significant results.

Third, I restrict the sample to respondents with climate action preferences from 0 (status quo) to -5 (politics go already too far) to rule out that results are driven solely by strong proponents

of climate action. Table C.16 again demonstrates robustness for the two specific proposals, while the effect for the abstract item loses its significance ($p = 0.09$). Its coefficient, however, actually increases compared to the main model (0.12 vs. 0.08) and the failure of this robustness check can, at least in partly, be attributed to the small sample size ($N = 391$).

Summarized, the evidence in line with H1b is largely robust, albeit less so for the *Abstract* item. Generally though, the more citizens oppose climate action, the higher their demand for non-democratic governance preventing it.

Finally, I noticed that all insignificant control strategies in the *Abstract* EBA include party identification as predictor. To investigate this further, table C.17 describes party differences in support levels. It shows that AfD-identifiers exhibit the highest support for all anti-climate action items with nearly a third in favor of ignoring pro-climate court rulings (27.9%) and preventing climate action through undemocratic means (28.3%). In both cases, this is roughly twice the sample average (14.3%, 12.9%). On the pro-climate side, party differences are smaller. Still, Green-identifiers are most supportive of implementing climate action through undemocratic means (36.2%) and conditioning *Passive Voting Rights* (44.3%), while identifiers of the governing parties at the time (Greens, SPD, FDP) are least supportive of handing decisions to experts.

3.6.4 Estimating Hidden Demand through List Experiments

Moving to the list experiments, I first probe their core assumptions (Imai, 2011): *Randomization of the Treatment*, *No Design Effect* (i.e. inclusion of the sensitive item does not affect responses to the control items), and *No Liars* (i.e. respondents answer truthfully when asked indirectly about the sensitive item). Since I compare list and open questions, I additionally assume *Treatment Independence* stating that respondents' treatment condition does not affect open responses to the sensitive statement (Aronow et al., 2015).

First, randomization checks (tab. C.18) show balance across covariates, with the exception of a small gender imbalance. Overall, the experimental treatment seems sufficiently balanced to proceed. Second, the *No Design Effect* test (Blair & Imai, 2012) shows no significant violations in either experiment (tab. C.19).

Third, *No Liars* can be violated through both non-strategic and strategic misreporting, for example due to ceiling or floor effects. Descriptively, the constructed lists display mild potential for these effects. Throughout the experiments $< 6\%$ affirm all items and $< 12\%$ agree with zero items. These levels are similar or even lower than those in other published list experiments (compare Kuhn & Vivyan, 2021, p.392). Additionally, I follow Glynn (2013) in comparing cumulative proportions of respondents reporting $Y_i \geq \{0 \dots J\}$ between treatment and control groups. Here, the *No Liars* assumption holds, as cumulative proportions in the treatment group are never significantly lower than those in the control condition (tab. C.20).

Fourth, each *Abstract* proposal was only directly elicited of respondents who received it as treatment (fig. C.2) making a direct test of *Treatment Independence* impossible. Instead, I

regress all six other dependent variables and respondents’ climate action preference on treatment status to see whether a systematic influence is visible. With the exception of the *Checks & Balance* proposal, all coefficients are small and insignificant (tab. C.21).

Evidence for a Hidden Demand of Non-Democratic Climate (In-)Action

Beginning the substantial analysis, table 3.5 compares open agreement with the estimated ‘true’ prevalence from an intercept-only model using the LM-estimator (Imai, 2011). The list experiments suggest that actually 35–38% of respondents support each of the respective *Abstract* non-democratic proposals. For both sides, this proportion is substantially higher than the openly revealed support, which provides first evidence for social desirability in line with H2a & 2b.

Table 3.5: Comparing Open and ‘True’ Agreement

	Abstract (Pro)		Abstract (Con)		Observations	
	<i>Full Sample</i>	<i>Attentive Only</i>	<i>Full Sample</i>	<i>Attentive Only</i>	<i>Full Sample</i>	<i>Attentive Only</i>
Open Agreement	0.22	0.22	0.14	0.14	1007/1030	871/907
List: Sensitive Item	0.36 (0.04)	0.35 (0.04)	0.37 (0.04)	0.38 (0.04)	2083/2088	1815/1817
List: Control Items	1.45 (0.02)	1.46 (0.02)	1.36 (0.02)	1.34 (0.03)	2083/2088	1815/1817

I then estimate all three multivariate estimators (LM, ML, NLS), adjusting for the same covariates as before (tab. C.23 & C.25). This allows me to estimate social desirability (tab. C.24 & C.26) by contrasting the resulting predicted probabilities with those from the direct item estimates (Blair & Imai, 2012).

I also run the Hausman misspecification test proposed by Blair et al. (2019), which exploits that NLS and ML estimates should be indistinguishable if all modeling assumptions hold. The test is also suited to detect non-strategic misreporting, for example due to inattentiveness. Results indicate misspecification of the ML models in both experiments when applied to the full sample (tab. C.22a) and in the ‘Pro’ experiment when applied to attentive-only sample (tab. C.22b). I refrain from visualizing the three misspecified models and focus instead on the more robust LM & NLS estimators.

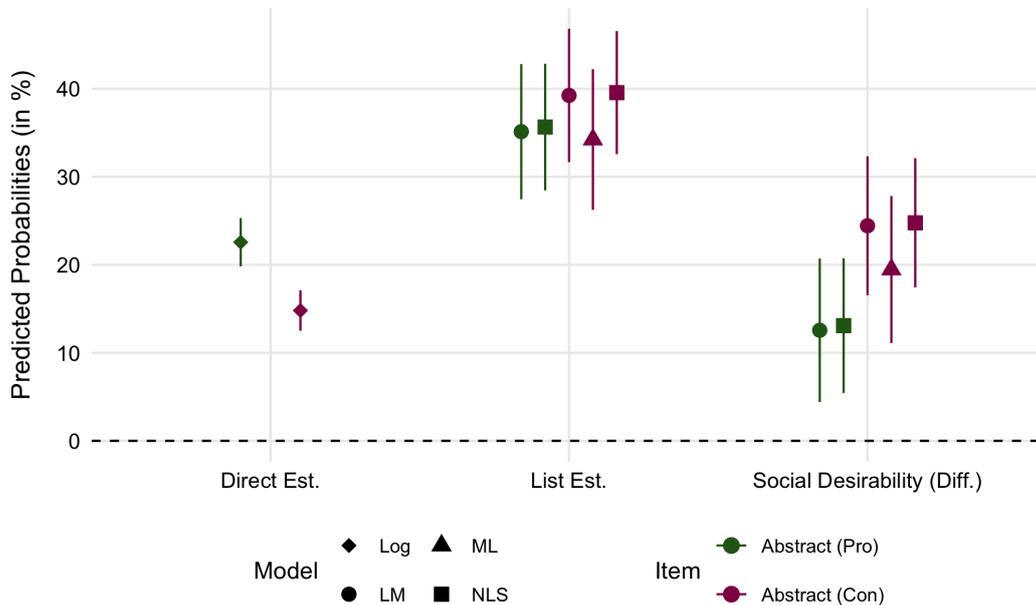
Figure 3.9 visualizes results for the attentive-only and figure C.3 for the full sample, which are substantively similar. The multivariate linear and NLS regressions predict fairly similar ‘true’ prevalences in both list experiments with $\approx 35\%$ supporting undemocratic implementation, and close to 40% supporting undemocratic prevention of further climate action. For the later, the ML estimator predicts slightly lower agreement ($\approx 34\%$).

The right side of figure 3.9 suggests that the differences between the predicted support in list and direct estimates are substantial and significant. Focusing on the NLS results, 13.1% of respondents are estimated to hide their true demand for non-democratic climate action. Conversely, almost twice as much (24.7%) hide their true demand for non-democratic prevention of climate action.

The analysis first of all provides strong evidence for both social desirability hypotheses (H2a & 2b). Second, the list experiments also suggest that earlier predictions based on the other openly

asked non-democratic governance proposals or policies should be interpreted as conservative estimates of their true prevalence in society.

Figure 3.9: Predicted Probabilities & Social Desirability



Estimation based on the attentive-only sample. List regression coefficients reported in table C.23 – ‘Pro’ ML model not plotted due to evident misspecification (tab. C.22b). Numerical values of estimated probabilities and social desirability reported in table C.24. Predictions rely on the *list* package’s average-case approach (covariates set to their mean).

Beyond corroborating my hypotheses, the rather similar estimated prevalence rates from both experiments support the study’s underlying claim that focusing only on climate action proponents underestimates the threat to democratic governance inherent in the climate action debate. Climate action opponents, though a numerically smaller group, seem in no way more opposed to undemocratic means.

The much higher non-disclosure rate amongst those opponents suggests that this attitude is seen as even less accepted in society. Potentially, this results from an interplay of two social norms: to favor democracy and to favor climate action itself. Citizens could be more willing to openly express support for non-democratic climate action if pro-environmental attitudes are itself perceived as morally virtuous. In contrast, opposing climate action at the cost of democratic procedures, for example for economic reasons, may be perceived as selfish and thus gets hidden more often.

3.7 Conclusion & Outlook

In summary, this study demonstrates that strong preferences – whether for or against climate action – are closely linked to a willingness to circumvent various democratic norms. Using original 2023 survey data from Germany (N = 2.101) and including both abstract and direct questions, as well as two novel list experiments, the findings reveal that a significant portion of

citizens are open to non-democratic governance when it aligns with their climate policy stance. Proponents of stronger climate action are, for example, more open to the censorship of climate change denial and more likely to support conditioning *Passive Voting Rights*. Meanwhile, strong opponents of climate action exhibit an increased openness to restricting climate activism or overriding court-mandated climate action.

Interestingly, respondents with strong preferences on both sides of the cleavage are more likely to support technocratic governance, suggesting that they believe experts and technocrats would agree with their personal views. This aligns well with findings by Amat et al. (2025) who identify technocratic attitudes as a long-term consequence of the Covid-crisis.

The two list experiments additionally suggest that hidden support for abstract undemocratic measures, both promoting or preventing climate action, is even higher than openly expressed agreement. Between 35 and 40% of respondents secretly endorse such undemocratic governance when shielded by indirect questioning. Thus, about 13% of respondents hide their true demand for non-democratic climate action and about 25% hide their approval of non-democratic prevention of climate action. This adds further evidence for the existence of ‘fake’ democrats (Bischof et al., 2023; Kaftan, 2024).

These findings contribute to a growing body of literature on democratic resilience and the conditionality of citizens’ commitment to democratic norms and procedures – with a specific focus on the climate crisis. The limited previous research on the climate-democracy nexus predominantly focused on proponents of climate action (Isermann et al., 2024). My study reveals that ignoring climate action opponents runs the risk of underestimating the eroding impact of climate change’s issue-based polarization on democratic norms. This is especially true, as these citizens seem even more likely to hide their true demand for non-democratic governance due to compounding pro-democracy and pro-climate norms.

Looking ahead, further research should explore whether these patterns hold across different countries with varying political cultures and climate policy debates. Likely cases with similar climate-ideological profiles are, for example, Sweden, Czechia and the Netherlands (Herold et al., 2023). I also encourage replications using different elicitation methods or question wording. My abstract items include the phrase “if necessary”. Potentially, some respondents see this phrase as an escape from making a hard trade-off decision between upholding democratic rules and furthering their own agenda. Therefore, a stricter wording might lead to lower estimated prevalence measures.

On a broader level, this paper underscores the importance of studying climate attitudes not just in terms of policy preferences but also their implications for democratic governance. It illustrates how political polarization – especially in times of crises and revolving around highly salient issues like climate change – can foster non-democratic tendencies on both ends of the ideological spectrum. Doing so, it serves as a reminder that democratic erosion is not the exclusive domain of any single political faction but can emerge whenever pressing societal concerns override existing norms. Further research should be devoted to better understand

which specific threats climate action opponents experience (e.g. economic or symbolic) that motivate them to trade away democratic norms. Recognizing these dynamics is essential for safeguarding both climate action progress and democratic integrity in an era of increasing political polarization and democratic backsliding.

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III Synthesis & Outlook

Across its three studies, this dissertation investigates how climate change, as both an existential and politicized threat, shapes citizens' democratic attitudes. Taken together, my findings reveal that growing concerns and dissatisfaction with climate governance can put a strain on citizens' democratic evaluations. They establish that climate change and the polarization within the climate-issue needs to be taken seriously as a potential threat for democratic resilience.

Any further synthesis of the empirical analyses needs to begin with a reconciliation of the diverging results in Studies 1 & 2. These differences are likely context-bound. A sign for different underlying dynamics is, as mentioned above, that during Study 1 concerns and satisfaction are overall increasing, and in Study 2 decreasing. The hunch that an asymmetry in the relationship between climate concern and SWD affects Study 2's results could not be corroborated, even though the effect was somewhat more strongly driven by joint *decreases*. I also re-estimate the sub-sample models from the first study using the same first-difference asymmetrical modeling approach (tab. D.27). While the models suggest slightly larger negative effects by concern *increases* than reversed, just like Study 2, the Wald-tests do not support the idea that asymmetry fully explains the diverging results.

In fact, one could argue that I identify not two, but three different patterns: During the 2010s, our study finds a weaker and less robust negative democratic impact of climate concern increases. The eroding impact becomes much more substantial at the turn of the decade when climate salience was highest due to frequently ongoing protests, to then seemingly reverse right after during a state of polycrisis. Future research is needed to further disentangle which of these patterns reflect genuine differences, for example due to varying issue salience, and which stem from potential short-term confounding by concurrent crises.

Personally, I argue that the first study provides a more robust and generalizable account of the climate–democracy relationship. It mostly benefits from a broader set of contextually and theoretically relevant time-varying controls, foremost the concerns about numerous other issues. This makes its identification strategy less susceptible to omitted variable bias, which sensitivity analysis reveal to be a relevant concern in the second study. Assuming the logic of Bayesian updating, I began working on this dissertation with a theoretically motivated prior that climate concern can decrease democratic satisfaction. Due to its robust study design, Study 1 then strongly moves this prior towards an acceptance of this proposition, while the evidence of Study 2 subsequently motivates a weaker updating in the opposite direction. In sum, these two analyses should strengthen the posterior conviction that increasing climate concern can indeed worsen democratic satisfaction, but caution to carefully consider the broader political context and its impact on both the true effect and scientific investigations into it.

A related limitation of the present dissertation is that Study 2 was originally designed to test whether specific evaluations influence diffuse democratic support indirectly, via satisfaction with democracy, as found by Claassen and Magalhães (2022) for objective measures of violent crime. While my results instead point to rather direct associations between changes in climate concern and democratic support, these effects should be interpreted with caution, as they may also be

subject to omitted variable bias. Consequently, the question of whether climate concern can erode democratic support independently of motivated trade-offs demands further investigation. When promised a climate political gain, however, Study 3 strongly supports and extends the findings of Isermann et al. (2024).

I demonstrate that both strong proponents and opponents of climate action display a greater willingness to circumvent democratic norms when doing so aligns with their policy preferences. This highlights that threats to democratic integrity within the climate domain can originate in both sides of its cleavage. By taking the growing affective polarization (Herold et al., 2023) and policy contestation from right-leaning citizens (Coffé et al., 2024) within the climate debate seriously, the study addresses an important gap in the literature and, for the first time, shines a light on the (non-)democratic sentiment associated with stronger climate action opposition. These findings carry relevant implications for policy makers – especially since my list experiments reveal that both sides tend to hide their willingness for non-democratic means. Following Valentim (2024), this hidden readiness is problematic because further erosion of specific democratic norms – such as governments disregarding pro-climate court rulings – could reveal unexpectedly high public support for such transgressions, thereby accelerating the very democratic backsliding these norms are meant to prevent.

Finally, the strong support for technocratic governance in the *SOEP-IS* sample deserves attention. Its significant rise at both ends of the climate-policy spectrum suggests that citizens across the ideological divide view current climate governance as overly politicized. Whether these preferences simply reflect discontent with political elites or whether greater expert involvement could indeed de-polarize and enhance acceptance of climate action without undermining democratic accountability is uncertain. As Amat et al. (2025) also find an enduring technocratic turn following the Covid-pandemic in Spain, this demand might be a more general outcome for strongly polarized crises. In any case, studying these climate technocratic attitudes may help identify ways to reduce issue-based polarization and to strengthen democratic legitimacy and support.

To summarize, while the first two studies, in their sum, indicate that concern about climate impacts can undermine democratic evaluations, the third study shows that discontent with climate action can motivate an erosion from democratic principles. Both mechanisms underscore the urgency for scholars and civil society to scrutinize how the polarized climate issue interacts with citizens' democratic commitments. As climate change and the conflict over climate politics jointly intensify, democracies must confront the difficult dual task of implementing transformative policy change and safeguarding democratic integrity. Recognizing how affective concerns about climate change and discontent about climate action affect citizens' democratic evaluations and support is thus an essential first step to safely guide democracies through a climate crisis that will be shape political realities for the foreseeable future.

Looking forward, my initial research into the democratic consequences of climate change should thus be extended and broadened. My dissertation focuses exclusively on Germany. In this

country, the newly introduced German Longitudinal Environmental Study, a 12-year panel (Auspurg et al., 2024), provides a unique opportunity to replicate, reevaluate and extend on the findings uncovered in my work. For this, my studies provide important practical insights about relevant measurements, such as time-varying salience, efficacy, and competing concerns, as well as more nuanced measurements of political support, issue-based polarization and responsibility attribution.

Beyond that, the impact of climate change on political support needs to be evaluated in a comparative fashion. Its eroding effect should generally be stronger amongst countries outside of Europe and communities already experiencing negative climate change impacts more severely (IPCC, 2023). But also within Europe, citizens in France, Portugal, Italy and Spain are comparatively more disapproving of their governments' climate action (European Commission, 2023). While the latter two also exhibit overall more issue-based affective polarization than Germany, climate action opponents exhibit especially high polarization levels in countries like Sweden, Czechia and the Netherlands (Herold et al., 2023). In these countries, we can reasonably expect to find similar relationships between specific climate (action) grievances and declines in political support. While there are panel studies in some countries, including New Zealand, Norway and Sweden, that jointly contain some relevant measurements of political support and climate attitudes, there is no standardization that makes them truly comparable. I thus strongly advocate for more international cooperation amongst researchers to understand the global scope, to identify national patterns, and to find potential remedies for the threat to democratic commitment posed by the climate divide.

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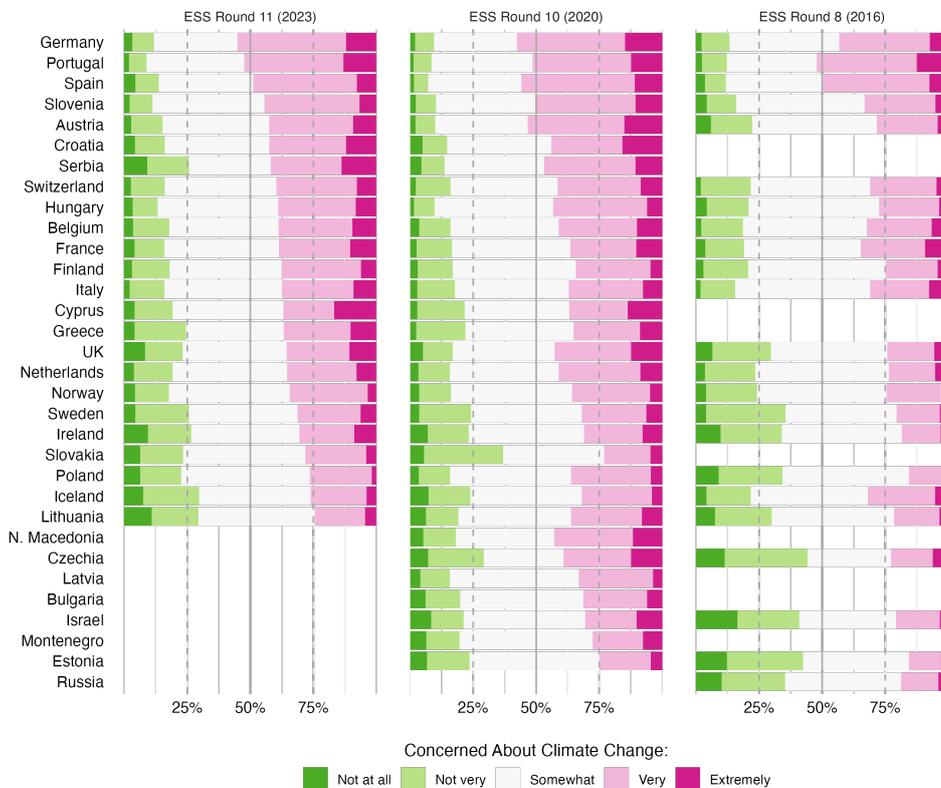
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IV Appendices

A Appendix for Study 1

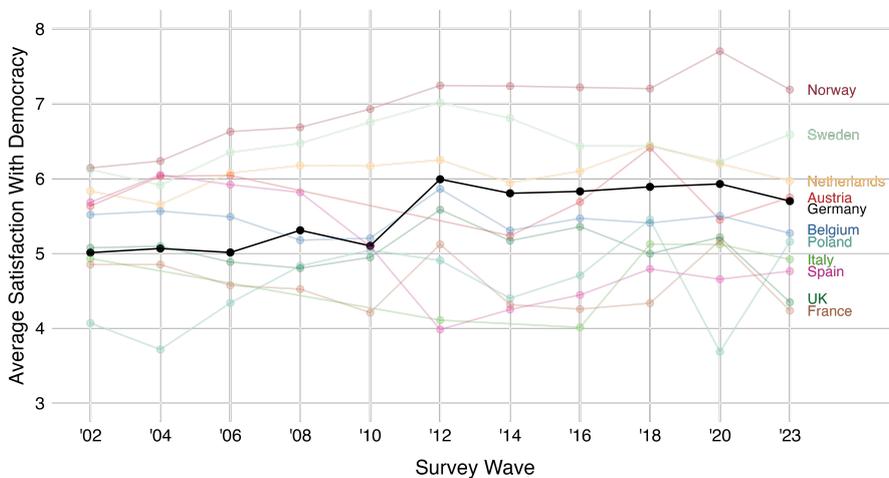
A.1 Introducing the German Case

Figure A.1: Climate Concern Levels in European Comparison



The plot displays climate concern levels across European countries in 2016, 2020, and 2023. Climate concern is measured on a 5-point Likert-scale ranging from ‘Not at all’ to ‘Extremely’ concerned. Based on raw data from the European Social Survey (2020, 2023a, 2023b, 2024).

Figure A.2: Satisfaction with Democracy in European Comparison



Average satisfaction with democracy over time – measured on an 11-point scale from 0 to 10. Based on data from the European Social Survey (2012, 2018a, 2018b, 2018c, 2018d, 2018e, 2020, 2021, 2023a, 2023b, 2023c, 2024).

A.2 SOEP Data Description

Table A.1: Respondent Distribution over Waves in Main Data Set

Years Participated	Absolute No.	Sample Share
2010 and 2016	3802	15.78
2010 and 2020	130	0.54
2010 and 2021	70	0.29
2010, 2016 and 2020	2755	11.44
2010, 2016 and 2021	334	1.39
2010, 2020 and 2021	223	0.93
2016 and 2020	2363	9.81
2016 and 2021	436	1.81
2016, 2020 and 2021	3853	15.99
2020 and 2021	5092	21.14
All Main Waves	5032	20.89

Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023).

Table A.2: Comparison between Sample and General Population

	2005	2010	2016	2020	2021
Age Categories					
< 26 years	-2.03	-5.12	-4.57	-2.91	-2.96
26-35 years	-1.08	2.70	-2.17	-2.91	-2.52
36-45 years	0.89	4.18	5.88	2.55	1.87
46-55 years	3.39	0.83	3.02	4.50	4.97
56-65 years	3.22	0.36	0.24	1.23	1.70
> 65 years	-4.40	-2.96	-2.38	-2.46	-3.08
Region					
West	-7.37	-6.45	-4.97	-4.72	-4.96
East	7.64	6.89	5.54	4.82	4.79
Berlin	-0.25	-0.41	-0.54	-0.09	0.19
Sex					
Female	1.49	3.11	4.09	2.91	2.55
Education*					
Low	-10.07	-6.59	-12.54	-11.98	-15.06
Medium	0.61	-1.06	2.44	0.12	0.43
High	9.47	6.65	10.42	12.09	14.73

Table shows differences between shares of survey respondents and general population in percentage points. Positive values indicate overrepresentation. Sample shares are calculated using the full data set (2005, 2010, 2016, 2020, 2021) (Goebel et al., 2023) with described data transformations. Official statistics for age categories, region and sex are obtained from (German Federal Statistical Office, 2023a, 2023b, 2023c). Where necessary, we set the 31st of December of the previous year as date of reference.

We consistently use the ISCED 1997 classification in our analyses. However, official statistics provide this value only until 2012 (Federal Ministry of Education and Research, 2014) – switching to ISCED 2011 afterwards (Federal Ministry of Education and Research, 2023). Thus, for the 2016, 2020, and 2021 waves the comparison is based on ISCED 11 values. We recode both variables in line with the EU commission’s recommendation to make them comparable (Eurostat, 2023). Moreover, official statistics only consider citizens between 25 and 64 years of age, further obscuring the comparison based on education levels.

Table A.3: Robustness: Weighted Models

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.14*** (0.02)	-0.05* (0.03)	-0.05* (0.03)	-0.22*** (0.03)
Climate Concern (Between)	0.13*** (0.02)	0.01 (0.03)	0.09*** (0.03)	0.14*** (0.02)
Female	0.03 (0.02)	0.03 (0.04)	0.01 (0.03)	0.03 (0.03)
Age: 26-35	-0.39*** (0.04)	-0.33*** (0.06)	-0.28*** (0.06)	-0.41*** (0.06)
Age: 36-45	-0.48*** (0.04)	-0.41*** (0.07)	-0.34*** (0.06)	-0.51*** (0.06)
Age: 46-55	-0.67*** (0.04)	-0.66*** (0.07)	-0.45*** (0.06)	-0.56*** (0.05)
Age: 56-65	-0.85*** (0.04)	-0.82*** (0.07)	-0.69*** (0.07)	-0.75*** (0.05)
Age: > 65	-0.89*** (0.04)	-0.78*** (0.07)	-0.76*** (0.06)	-0.83*** (0.05)
Education: Medium	-0.47*** (0.02)	-0.62*** (0.04)	-0.62*** (0.04)	-0.28*** (0.03)
Education: Low	-0.67*** (0.03)	-0.90*** (0.06)	-0.88*** (0.05)	-0.52*** (0.04)
East Germany	-0.71*** (0.03)	-0.87*** (0.04)	-0.93*** (0.04)	-0.47*** (0.04)
PID: Left	-0.26*** (0.05)	-0.46*** (0.08)	-0.14* (0.08)	-0.21*** (0.07)
PID: Greens	0.54*** (0.03)	0.87*** (0.06)	0.78*** (0.05)	0.42*** (0.04)
PID: SPD	0.51*** (0.03)	0.64*** (0.05)	0.67*** (0.05)	0.37*** (0.04)
PID: CDU	0.78*** (0.03)	0.98*** (0.04)	0.94*** (0.04)	0.62*** (0.04)
PID: CSU	0.44*** (0.06)	0.51*** (0.09)	0.56*** (0.09)	0.45*** (0.08)
PID: FDP	0.46*** (0.06)	0.76*** (0.09)	0.44*** (0.11)	0.35*** (0.08)
PID: AfD	-1.51*** (0.06)	-1.92*** (0.12)	-1.86*** (0.09)	-1.37*** (0.09)
PID: Others	-0.70*** (0.08)	-1.32*** (0.13)	-0.76*** (0.12)	-0.12 (0.12)
Constant	6.20*** (0.05)	6.31*** (0.08)	6.58*** (0.07)	6.84*** (0.06)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Survey Weights	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	283,315.00	103,664.90	121,068.50	122,298.60

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Using weights created with *anesrake* in *R* using iterative proportional fitting (Pasek, 2018). Weights were created on a yearly basis and capped to 5. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.4: SOEP Item Wordings

Items	SOEP.Code	Dataset	Years	Original.Scale	Wording
Satisfaction with Democracy	plh0152_v2	pl	05/10/16/20	Numerical 0–10 (Completely (Dis)-satisfied)	How satisfied are you today with the following areas of your life? With democracy as it exists in Germany
Concern about Consequences of Climate Change	plh0037	pl	10/16/20	Categorical 1 (Very), 2 (Somewhat), 3 (Not at all)	How concerned are you about the following issues? The impacts of climate change
Concern about Environment	plh0036	pl	05/10/16/20	Categorical 1 (Very), 2 (Somewhat), 3 (Not at all)	How concerned are you about the following issues? Environmental protection
Concern about Own Finances	plh0033	pl	05/10/16/20	Categorical 1 (Very), 2 (Somewhat), 3 (Not at all)	How concerned are you about the following issues? Your own economic situation
Concern about Economy in General	plh0032	pl	05/10/16/20	Categorical 1 (Very), 2 (Somewhat), 3 (Not at all)	How concerned are you about the following issues? The economy in general
Concern about Maintaining Peace	plh0038	pl	05/10/16/20	Categorical 1 (Very), 2 (Somewhat), 3 (Not at all)	How concerned are you about the following issues? Maintaining Peace
Concern about Own Health	plh0035	pl	05/10/16/20	Categorical 1 (Very), 2 (Somewhat), 3 (Not at all)	How concerned are you about the following issues? Own Health
Concern about Crime in Germany	plh0040	pl	05/10/16/20	Categorical 1 (Very), 2 (Somewhat), 3 (Not at all)	How concerned are you about the following issues? Crime in Germany
Concern about Immigration to Germany	plj0046	pl	05/10/16/20	Categorical 1 (Very), 2 (Somewhat), 3 (Not at all)	How concerned are you about the following issues? Immigration to Germany
Concern about Violence against Foreigners	plj0047	pl	05/10/16/20	Categorical 1 (Very), 2 (Somewhat), 3 (Not at all)	How concerned are you about the following issues? Hostility towards foreigners or minorities in Germany
Life Satisfaction	plh0182	pl	10/16/20	Numerical 0–10 (Low – High)	How satisfied are you with your life, all things considered?
Angry Last 4 Weeks	plh0184	pl	10/16/20	Categorical 1–5 (Very Rarely – Very Often)	How often have you experienced the following feelings in the last four weeks. How often have you felt – angry?
Worried Last 4 Weeks	plh0185	pl	10/16/20	Categorical 1–5 (Very Rarely – Very Often)	How often have you experienced the following feelings in the last four weeks. How often have you felt – worried?
Happy Last 4 Weeks	plh0186	pl	10/16/20	Categorical 1–5 (Very Rarely – Very Often)	How often have you experienced the following feelings in the last four weeks. How often have you felt – happy?
Sad Last 4 Weeks	plh0187	pl	10/16/20	Categorical 1–5 (Very Rarely – Very Often)	How often have you experienced the following feelings in the last four weeks. How often have you felt – sad?
Sex	pla0009_v2, pla0009_v3	pl	05/10/16/20	Categorical 1 (Male), 2 (Female), 3 (Diverse)	We have the following information about you Sex (Suggests to indicate if correct)
Birth Year	ple0010_h	pl	05/10/16/20	Numerical 1910 – 1992	We have the following information about you Birth Year (Suggests to indicate if correct)
Party Identification	plh0012_v6	pl	05/10/16/20	Open Question Format	Which party do you lean toward? You can't have everything at once – and that applies to politics, too.
Peace and Order	plh0054	pl	2016	Ranking-Task 1st – 4th Place	In the following, we will state four possible goals that politicians might pursue. If you had to choose, which of these goals would be most important? Please rank them in order of importance starting with the first. Maintaining peace and order in this country
Citizen Influence	plh0056	pl	2016	Ranking-Task 1st – 4th Place	Joint with task above Increasing citizen influence on government decisions
Fight Against Inflation	plh0058	pl	2016	Ranking-Task 1st – 4th Place	Joint with task above Fighting against inflation
Freedom of Speech	plh0061	pl	2016	Ranking-Task 1st – 4th Place	Joint with task above Protecting the right to free speech
Education: ISCED-1997-Classification	pgisced97	pgen	05/10/16/20	Categorical (0) In School – (6) Higher Education	Variable is generated by the SOEP based on multiple indicators of school leaving certificates and obtained degrees.
Sample Region	sampreg	ppathl	05/10/16/20	Categorical 1 (West-), 2 (East-Germany)	Recorded by Person Carrying out the Survey

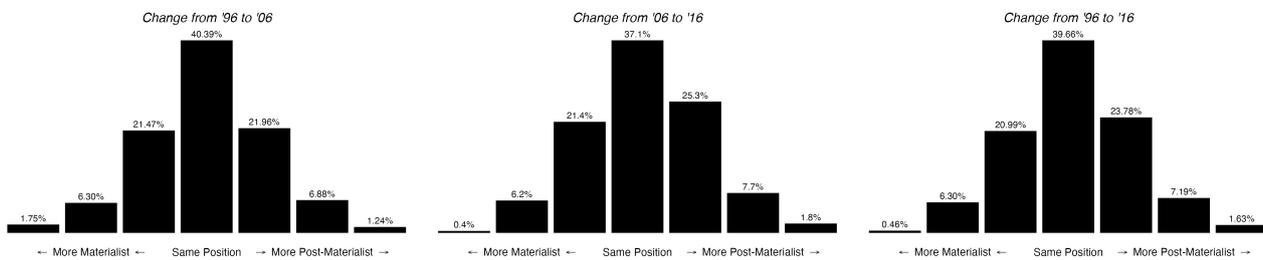
Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023).

Table A.5: Applied Recodings

Items	Recoding
Satisfaction with Democracy	To Numerical Variable (0-10)
Concern about Consequences of Climate Change	To Numerical Variable (0-2) & De-Meaned to get Intra-Person Deviations
Concern about the Environment	To Numerical Variable (0-2) & De-Meaned to get Intra-Person Deviations
Concern about Own Financial Situation	To Numerical Variable (0-2) & De-Meaned to get Intra-Person Deviations
Concern about Economy in General	To Numerical Variable (0-2) & De-Meaned to get Intra-Person Deviations
Concern about Maintaining Peace	To Numerical Variable (0-2) & De-Meaned to get Intra-Person Deviations
Concern about Own Health	To Numerical Variable (0-2) & De-Meaned to get Intra-Person Deviations
Concern about Crime in Germany	To Numerical Variable (0-2) & De-Meaned to get Intra-Person Deviations
Concern about Immigration to Germany	To Numerical Variable (0-2) & De-Meaned to get Intra-Person Deviations
Concern about Violence against Foreigners	To Numerical Variable (0-2) & De-Meaned to get Intra-Person Deviations
Angry Last 4 Weeks	To Numerical Variable (1-5) & De-Meaned to get Intra-Person Deviations
Worried Last 4 Weeks	To Numerical Variable (1-5) & De-Meaned to get Intra-Person Deviations
Sad Last 4 Weeks	To Numerical Variable (1-5) & De-Meaned to get Intra-Person Deviations
Happy Last 4 Weeks	To Numerical Variable (1-5) & De-Meaned to get Intra-Person Deviations
Sex	To Dummy: 1 (Female), 0 (Non-Female)
Birth Year	To Categories via subtracting Birthyear from Survey-Year (Below 26, 26-35, 36-45, 46-55, 56-65, Above 65)
Party Identification	To Categories (None, Linke, Greens, SPD, CDU, CSU, FDP, AfD, Others) & Denoting 'Green Partisanship' over all survey waves (Always, Sometimes, Never) To Categories based on Inglehart's Rules:
Inglehart: Peace and Order	Materialist if 1st & 2nd are Peace/Order and Inflation,
Inglehart: Citizen Influence	Rather Materialist if 1st is Peace/Order or Inflation, but 2nd is not,
Inglehart: Fight Against Inflation	Rather Post-Materialist if 1st is Citizen Influence or Free Speech, but 2nd is not,
Inglehart: Freedom of Speech	Post-Materialist if 1st & 2nd = Citizen Influence and Free Speech
Education: ISCED 1997	To Categories 'Low', 'Medium', and 'High' Education based on EU commission recommendation (Eurostat, 2023)
Sample Region	To Dummy: 1 (East), 0 (West)

Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023).

Figure A.3: Description: Stability of Value Orientations between Waves



Based on raw data from 3 waves (1996, 2006, 2016) of the SOEP-Panel (Goebel et al., 2023) recoded in line with the traditional four-step Inglehart value orientation measure. Graph shows changes in respondents' value orientations between waves ($N_{96&06} = ; N_{06&16} = ; N_{96&16} =)$

Table A.6: Descriptives: Climate Concern Changes Between Waves

	Change from Prior Wave				
	-2	-1	0	1	2
2016	1.2	17.4	58.8	21.1	1.5
2020	1.0	13.0	58.9	25.1	2.0
2021	0.8	13.6	63.7	20.3	1.6

Table shows share of respondents with respective change in climate concern levels from wave t_{-1} to t Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations.

Table A.7: Main Data Set Descriptives: Satisfaction with Democracy & Concerns

Variable	Survey Year	Q ₁	Mean	Q ₃	SD
Satisfaction with Democracy	2010	4	5.5	7	2.3
	2016	4	5.7	8	2.4
	2020	5	6.2	8	2.3
	2021	7	7.6	9	1.8
Climate Concern	2010	1	1.1	2	0.7
	2016	1	1.2	2	0.7
	2020	1	1.3	2	0.7
	2021	1	1.4	2	0.7
Financial Concern	2010	0	1.0	1	0.7
	2016	0	0.7	1	0.7
	2020	0	0.7	1	0.7
	2021	0	0.6	1	0.7
Environmental Concern	2010	1	1.2	2	0.6
	2016	1	1.2	2	0.6
	2020	1	1.3	2	0.6
	2021	1	1.4	2	0.6
Peace Concern	2010	1	1.2	2	0.7
	2016	1	1.5	2	0.6
	2020	1	1.3	2	0.7
	2021	1	1.4	2	0.6
Health Concern	2010	0	0.9	1	0.7
	2016	0	0.9	1	0.7
	2020	0	0.8	1	0.7
	2021	0	0.9	1	0.7
Crime Concern	2010	1	1.2	2	0.7
	2016	1	1.4	2	0.7
	2020	1	1.0	2	0.7
	2021	1	1.1	2	0.7
Immigration Concern	2010	0	0.8	1	0.7
	2016	1	1.3	2	0.7
	2020	0	0.9	1	0.8
	2021	0	0.8	1	0.8
Economic Concern	2010	1	1.3	2	0.6
	2016	0	0.9	1	0.6
	2020	1	1.1	2	0.7
	2021	1	1.0	1	0.6
Xenophobia Concern	2010	1	1.0	1	0.7
	2016	1	1.4	2	0.7
	2020	1	1.2	2	0.7
	2021	1	1.2	2	0.6
Life Satisfaction	2010	7	7.3	8	1.7
	2016	7	7.4	8	1.7
	2020	7	7.6	9	1.6
	2021	7	7.5	8	1.6
Angry Last 4 Weeks	2010	2	2.7	3	1.0
	2016	2	2.8	3	1.0
	2020	2	2.7	3	1.0
	2021	2	2.6	3	1.0
Worried Last 4 Weeks	2010	1	1.9	2	0.9
	2016	1	2.0	3	1.0
	2020	1	2.1	3	1.0
	2021	1	1.9	2	1.0
Sad Last 4 Weeks	2010	2	2.3	3	1.0
	2016	2	2.3	3	1.0
	2020	2	2.3	3	1.0
	2021	2	2.3	3	1.0
Happy Last 4 Weeks	2010	3	3.5	4	0.8
	2016	3	3.6	4	0.8
	2020	3	3.6	4	0.8
	2021	3	3.7	4	0.8

Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations.

Table A.8: Main Data Set Descriptives: Concern Deviations

Variable	Survey Year	Q ₁	Mean	Q ₃	SD
Climate Concern (Dev.)	2010	-0.3	-0.1	0.0	0.4
	2016	-0.3	-0.1	0.0	0.4
	2020	0.0	0.0	0.3	0.4
	2021	0.0	0.1	0.3	0.4
Financial Concern (Dev.)	2010	0.0	0.2	0.5	0.4
	2016	-0.3	0.0	0.0	0.4
	2020	-0.3	0.0	0.0	0.4
	2021	-0.3	-0.1	0.0	0.4
Environmental Concern (Dev.)	2010	-0.2	0.0	0.0	0.4
	2016	-0.3	-0.1	0.0	0.4
	2020	0.0	0.0	0.2	0.4
	2021	0.0	0.1	0.3	0.4
Peace Concern (Dev.)	2010	-0.5	-0.2	0.0	0.4
	2016	0.0	0.2	0.5	0.4
	2020	-0.3	-0.1	0.0	0.4
	2021	-0.2	0.0	0.2	0.4
Health Concern (Dev.)	2010	-0.3	0.0	0.0	0.4
	2016	-0.2	0.0	0.2	0.4
	2020	-0.2	0.0	0.2	0.4
	2021	0.0	0.0	0.2	0.4
Crime Concern (Dev.)	2010	-0.3	-0.1	0.2	0.4
	2016	0.0	0.1	0.5	0.4
	2020	-0.3	-0.1	0.0	0.4
	2021	-0.2	0.0	0.2	0.4
Immigration Concern (Dev.)	2010	-0.5	-0.2	0.0	0.5
	2016	0.0	0.3	0.5	0.4
	2020	-0.3	0.0	0.0	0.4
	2021	-0.3	-0.1	0.0	0.4
Economic Concern (Dev.)	2010	0.0	0.2	0.5	0.4
	2016	-0.5	-0.2	0.0	0.4
	2020	-0.2	0.0	0.3	0.4
	2021	-0.2	0.0	0.2	0.4
Xenophobia Concern (Dev.)	2010	-0.5	-0.2	0.0	0.5
	2016	0.0	0.2	0.5	0.4
	2020	-0.3	0.0	0.2	0.4
	2021	-0.2	0.0	0.2	0.4
Life Satisfaction (Dev.)	2010	-0.5	0.0	0.5	1.0
	2016	-0.5	0.0	0.5	1.0
	2020	-0.5	0.0	0.5	0.9
	2021	-0.5	0.0	0.5	1.0
Angry Last 4 Weeks (Dev.)	2010	-0.3	0.1	0.5	0.6
	2016	-0.3	0.0	0.5	0.6
	2020	-0.3	0.0	0.5	0.6
	2021	-0.5	-0.1	0.3	0.6
Worried Last 4 Weeks (Dev.)	2010	-0.5	0.0	0.3	0.6
	2016	-0.3	0.0	0.3	0.6
	2020	-0.3	0.1	0.5	0.6
	2021	-0.5	-0.1	0.2	0.6
Sad Last 4 Weeks (Dev.)	2010	-0.5	0.0	0.5	0.7
	2016	-0.3	0.0	0.3	0.6
	2020	-0.3	0.0	0.5	0.6
	2021	-0.5	0.0	0.3	0.6
Happy Last 4 Weeks (Dev.)	2010	-0.2	0.0	0.3	0.5
	2016	-0.2	0.0	0.3	0.5
	2020	-0.3	0.0	0.2	0.5
	2021	-0.3	0.0	0.3	0.5

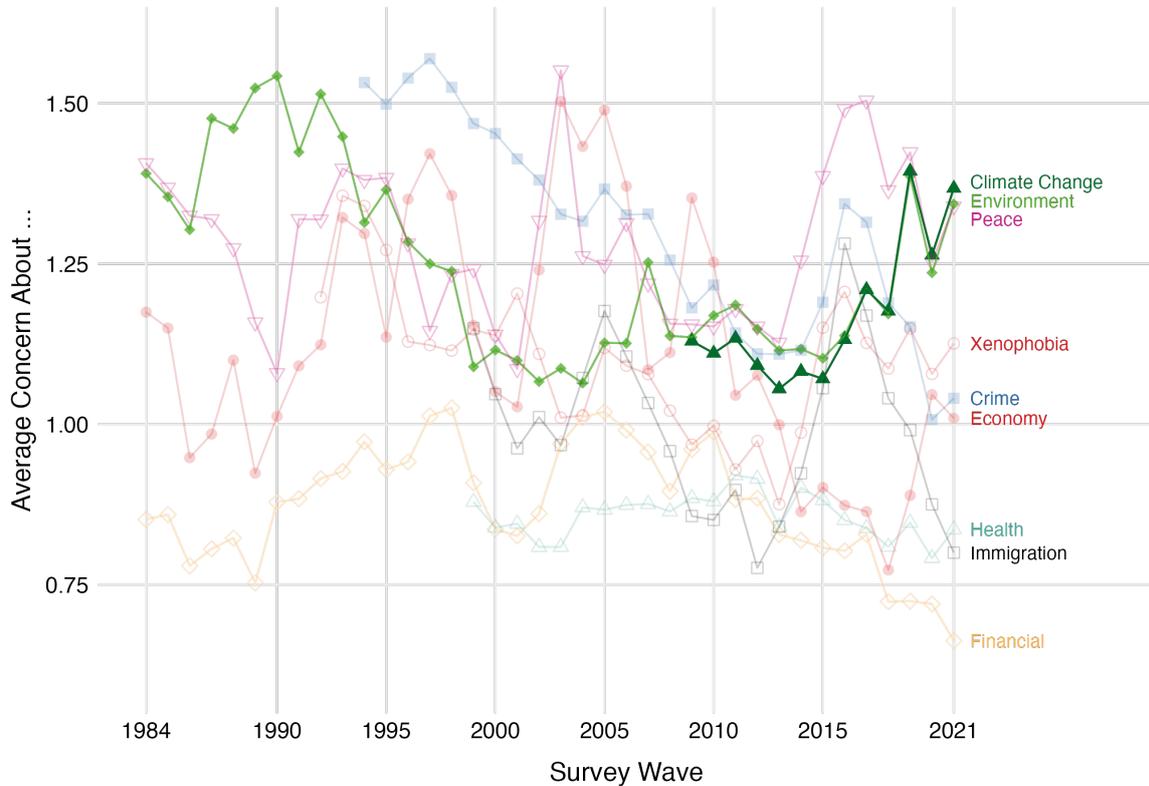
Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations.

Table A.9: Main Data Set Descriptives: Categorical Variables

Variable	Levels	n ₂₀₁₀	% ₂₀₁₀	Σ % ₂₀₁₀	n ₂₀₁₆	% ₂₀₁₆	Σ % ₂₀₁₆	n ₂₀₂₀	% ₂₀₂₀	Σ % ₂₀₂₀	n ₂₀₂₁	% ₂₀₂₁	Σ % ₂₀₂₁	n _{all}	% _{all}	Σ % _{all}
Female	No	5562	45.0	45.0	8407	45.3	45.3	9030	46.4	46.4	7036	46.8	46.8	30035	45.9	45.9
	Yes	6784	55.0	100.0	10168	54.7	100.0	10418	53.6	100.0	8004	53.2	100.0	35374	54.1	100.0
Age	Below 26	815	6.6	6.6	1159	6.2	6.2	1452	7.5	7.5	1095	7.3	7.3	4521	6.9	6.9
	26-35	2276	18.4	25.0	2430	13.1	19.3	2421	12.4	19.9	1921	12.8	20.1	9048	13.8	20.7
	36-45	3076	24.9	50.0	3819	20.6	39.9	3325	17.1	37.0	2496	16.6	36.7	12716	19.4	40.2
	46-55	2428	19.7	69.6	4230	22.8	62.6	4356	22.4	59.4	3339	22.2	58.9	14353	21.9	62.1
	56-65	1788	14.5	84.1	2999	16.1	78.8	3599	18.5	77.9	2917	19.4	78.2	11303	17.3	79.4
	Above 65	1963	15.9	100.0	3938	21.2	100.0	4295	22.1	100.0	3272	21.8	100.0	13468	20.6	100.0
Education	High	4057	32.9	32.9	6143	33.1	33.1	7072	36.4	36.4	5993	39.9	39.9	23265	35.6	35.6
	Medium	7021	56.9	89.7	10338	55.7	88.7	10341	53.2	89.5	7789	51.8	91.6	35489	54.3	89.8
	Low	1268	10.3	100.0	2094	11.3	100.0	2035	10.5	100.0	1258	8.4	100.0	6655	10.2	100.0
East/West German	West	9315	75.5	75.5	14408	77.6	77.6	15271	78.5	78.5	11812	78.5	78.5	50806	77.7	77.7
	East	3031	24.6	100.0	4167	22.4	100.0	4177	21.5	100.0	3228	21.5	100.0	14603	22.3	100.0
Party ID	None	6244	50.6	50.6	10767	58.0	58.0	10512	54.0	54.0	7766	51.6	51.6	35289	54.0	54.0
	Linke	501	4.1	54.6	559	3.0	61.0	723	3.7	57.8	506	3.4	55.0	2289	3.5	57.5
	Greens	966	7.8	62.5	1287	6.9	67.9	2328	12.0	69.7	1997	13.3	68.3	6578	10.1	67.5
	SPD	1758	14.2	76.7	2095	11.3	79.2	1724	8.9	78.6	1490	9.9	78.2	7067	10.8	78.3
	CDU	1954	15.8	92.5	2515	13.5	92.7	2558	13.2	91.8	1853	12.3	90.5	8880	13.6	91.9
	CSU	379	3.1	95.6	530	2.9	95.6	528	2.7	94.5	426	2.8	93.3	1863	2.9	94.7
	FDP	406	3.3	98.9	234	1.3	96.8	384	2.0	96.4	512	3.4	96.7	1536	2.4	97.1
	AfD	0	0.0	98.9	417	2.2	99.1	505	2.6	99.0	315	2.1	98.8	1237	1.9	99.0
	Others	138	1.1	100.0	171	0.9	100.0	186	1.0	100.0	175	1.2	100.0	670	1.0	100.0
	Value Orientation	Post-Materialist	2066	19.1	19.1	3374	19.8	19.8	2748	20.7	20.7	2018	21.8	21.8	10206	20.2
R. Post-Materialist		2924	27.0	46.1	4629	27.2	47.0	3656	27.5	48.1	2612	28.2	50.0	13821	27.4	47.7
R. Materialist		4755	43.9	90.0	7324	43.0	90.1	5658	42.5	90.7	3814	41.2	91.2	21551	42.8	90.4
Materialist		1085	10.0	100.0	1688	9.9	100.0	1241	9.3	100.0	814	8.8	100.0	4828	9.6	100.0
Green Partisanship	Always	510	4.1	4.1	805	4.3	4.3	1191	6.1	6.1	1056	7.0	7.0	3562	5.5	5.5
	Sometimes	1143	9.3	13.4	1716	9.2	13.6	1952	10.0	16.2	1702	11.3	18.3	6513	10.0	15.4
	Never	10693	86.6	100.0	16054	86.4	100.0	16305	83.8	100.0	12282	81.7	100.0	55334	84.6	100.0

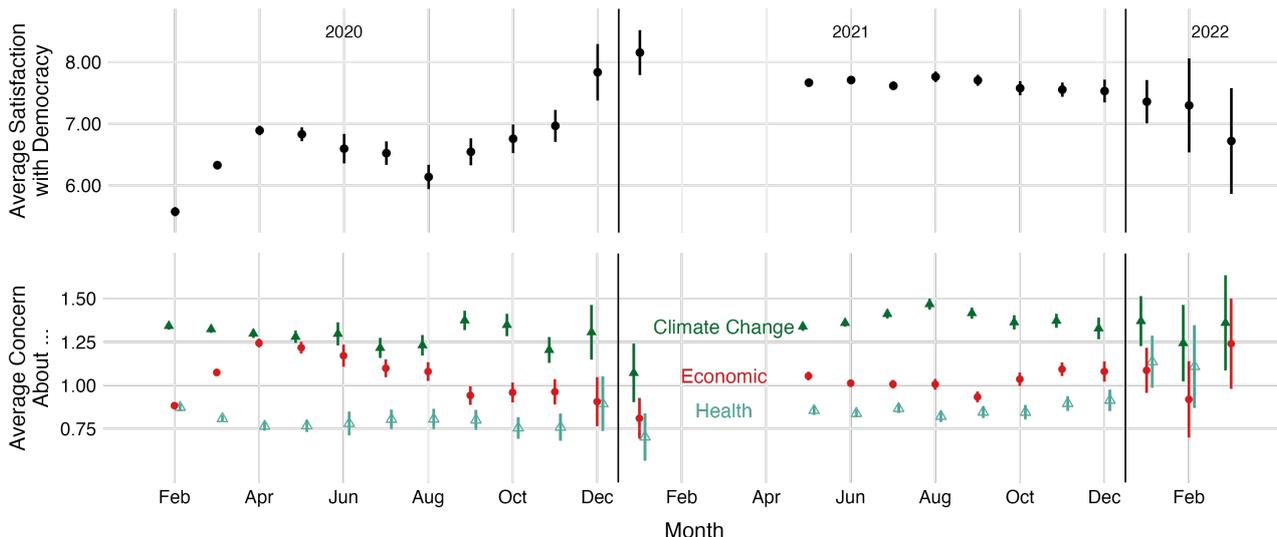
Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations.

Figure A.4: Average Concerns over Waves – Full Range



Based on raw data from the SOEP-Panel (Goebel et al., 2023). Concern variables are treated as numeric with ‘not concerned at all’ equaling 0, ‘somewhat concerned’ resulting in 1, and ‘very concerned’ corresponding to 2. Exact wording of concern items is provided in tab. B.1.

Figure A.5: Average Satisfaction with Democracy & selected Concerns by Month



Based on the 2020/2021 sub-sample created based on the SOEP-Panel (Goebel et al., 2023) with described data transformations.

A.3 Main & Sub-Sample Concern Models

Table A.10: Main Models: Concern about Consequences from Climate Change

	Basic	SES	Party ID	Full
Climate Concern (Within)	-0.13*** (0.02)	-0.13*** (0.02)	-0.15*** (0.02)	-0.14*** (0.02)
Climate Concern (Between)	0.30*** (0.02)	0.21*** (0.02)	0.18*** (0.02)	0.13*** (0.02)
Female		0.04* (0.02)		0.03 (0.02)
Age: 26-35		-0.39*** (0.04)		-0.38*** (0.04)
Age: 36-45		-0.47*** (0.04)		-0.48*** (0.04)
Age: 46-55		-0.62*** (0.04)		-0.67*** (0.04)
Age: 56-65		-0.76*** (0.04)		-0.84*** (0.04)
Age: > 65		-0.73*** (0.04)		-0.89*** (0.04)
Education: Medium		-0.57*** (0.02)		-0.47*** (0.02)
Education: Low		-0.88*** (0.04)		-0.73*** (0.04)
East Germany		-0.86*** (0.03)		-0.71*** (0.03)
PID: Left			-0.37*** (0.05)	-0.24*** (0.05)
PID: Greens			0.69*** (0.03)	0.53*** (0.03)
PID: SPD			0.51*** (0.03)	0.52*** (0.03)
PID: CDU			0.77*** (0.03)	0.78*** (0.03)
PID: CSU			0.49*** (0.06)	0.42*** (0.06)
PID: FDP			0.54*** (0.06)	0.45*** (0.06)
PID: AfD			-1.59*** (0.06)	-1.49*** (0.06)
PID: Others			-0.60*** (0.08)	-0.66*** (0.08)
Constant	5.20*** (0.03)	6.41*** (0.05)	5.07*** (0.03)	6.18*** (0.05)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	65,409	65,409	65,409
Akaike Inf. Crit.	282,669.30	280,650.60	280,611.20	278,841.80

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.11: Main Models: Concern about the Environment

	Basic	SES	Party ID	Full
Environmental Concern (Within)	-0.16*** (0.02)	-0.16*** (0.02)	-0.18*** (0.02)	-0.17*** (0.02)
Environmental Concern (Between)	0.15*** (0.02)	0.08*** (0.02)	0.05** (0.02)	0.01 (0.02)
Female		0.05** (0.02)		0.05** (0.02)
Age: 26-35		-0.40*** (0.04)		-0.39*** (0.04)
Age: 36-45		-0.48*** (0.04)		-0.49*** (0.04)
Age: 46-55		-0.63*** (0.04)		-0.67*** (0.04)
Age: 56-65		-0.76*** (0.04)		-0.84*** (0.04)
Age: > 65		-0.73*** (0.04)		-0.89*** (0.04)
Education: Medium		-0.58*** (0.02)		-0.48*** (0.02)
Education: Low		-0.90*** (0.04)		-0.74*** (0.04)
East Germany		-0.88*** (0.03)		-0.73*** (0.03)
PID: Left			-0.35*** (0.05)	-0.22*** (0.05)
PID: Greens			0.74*** (0.03)	0.57*** (0.03)
PID: SPD			0.53*** (0.03)	0.53*** (0.03)
PID: CDU			0.77*** (0.03)	0.78*** (0.03)
PID: CSU			0.49*** (0.06)	0.42*** (0.06)
PID: FDP			0.53*** (0.06)	0.43*** (0.06)
PID: AfD			-1.61*** (0.06)	-1.51*** (0.06)
PID: Others			-0.60*** (0.08)	-0.66*** (0.08)
Constant	5.38*** (0.03)	6.59*** (0.05)	5.24*** (0.03)	6.34*** (0.05)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	65,409	65,409	65,409
Akaike Inf. Crit.	282,807.00	280,723.80	280,669.20	278,868.00

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.12: Main Models: Concern about the Economy in General

	Basic	SES	Party ID	Full
Economy Concern (Within)	-0.13*** (0.02)	-0.13*** (0.02)	-0.12*** (0.02)	-0.12*** (0.02)
Economy Concern (Between)	-0.95*** (0.02)	-0.88*** (0.02)	-0.88*** (0.02)	-0.82*** (0.02)
Female		0.12*** (0.02)		0.11*** (0.02)
Age: 26-35		-0.30*** (0.04)		-0.29*** (0.04)
Age: 36-45		-0.33*** (0.04)		-0.35*** (0.04)
Age: 46-55		-0.43*** (0.04)		-0.49*** (0.04)
Age: 56-65		-0.57*** (0.04)		-0.66*** (0.04)
Age: > 65		-0.55*** (0.04)		-0.73*** (0.04)
Education: Medium		-0.51*** (0.02)		-0.42*** (0.02)
Education: Low		-0.84*** (0.04)		-0.69*** (0.04)
East Germany		-0.88*** (0.02)		-0.73*** (0.02)
PID: Left			-0.38*** (0.05)	-0.24*** (0.05)
PID: Greens			0.64*** (0.03)	0.47*** (0.03)
PID: SPD			0.52*** (0.03)	0.52*** (0.03)
PID: CDU			0.77*** (0.03)	0.78*** (0.03)
PID: CSU			0.52*** (0.06)	0.44*** (0.05)
PID: FDP			0.57*** (0.06)	0.49*** (0.06)
PID: AfD			-1.50*** (0.06)	-1.39*** (0.06)
PID: Others			-0.58*** (0.08)	-0.63*** (0.08)
Constant	6.62*** (0.03)	7.42*** (0.05)	6.28*** (0.03)	7.06*** (0.05)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	65,409	65,409	65,409
Akaike Inf. Crit.	281,138.60	279,197.20	279,098.30	277,457.20

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.13: Main Models: Concern about Own Financial Situation

	Basic	SES	Party ID	Full
Financial Concern (Within)	-0.18*** (0.02)	-0.20*** (0.02)	-0.18*** (0.02)	-0.19*** (0.02)
Financial Concern (Between)	-0.93*** (0.02)	-0.89*** (0.02)	-0.80*** (0.02)	-0.81*** (0.02)
Female		0.11*** (0.02)		0.09*** (0.02)
Age: 26-35		-0.27*** (0.04)		-0.26*** (0.04)
Age: 36-45		-0.34*** (0.04)		-0.36*** (0.04)
Age: 46-55		-0.52*** (0.04)		-0.57*** (0.04)
Age: 56-65		-0.74*** (0.04)		-0.81*** (0.04)
Age: > 65		-0.86*** (0.04)		-1.00*** (0.04)
Education: Medium		-0.41*** (0.02)		-0.33*** (0.02)
Education: Low		-0.60*** (0.04)		-0.48*** (0.04)
East Germany		-0.79*** (0.02)		-0.65*** (0.02)
PID: Left			-0.39*** (0.05)	-0.23*** (0.05)
PID: Greens			0.57*** (0.03)	0.43*** (0.03)
PID: SPD			0.42*** (0.03)	0.47*** (0.03)
PID: CDU			0.64*** (0.03)	0.70*** (0.03)
PID: CSU			0.36*** (0.06)	0.35*** (0.05)
PID: FDP			0.40*** (0.06)	0.36*** (0.06)
PID: AfD			-1.58*** (0.06)	-1.47*** (0.06)
PID: Others			-0.60*** (0.08)	-0.67*** (0.08)
Constant	6.32*** (0.02)	7.15*** (0.04)	6.01*** (0.03)	6.84*** (0.05)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	65,409	65,409	65,409
Akaike Inf. Crit.	280,553.80	278,630.90	278,864.70	277,033.70

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.14: Main Models: Concern about Maintaining Peace

	Basic	SES	Party ID	Full
Peace Concern (Within)	-0.17*** (0.02)	-0.17*** (0.02)	-0.17*** (0.02)	-0.17*** (0.02)
Peace Concern (Between)	-0.35*** (0.02)	-0.29*** (0.02)	-0.38*** (0.02)	-0.31*** (0.02)
Female		0.11*** (0.02)		0.10*** (0.02)
Age: 26-35		-0.41*** (0.04)		-0.38*** (0.04)
Age: 36-45		-0.48*** (0.04)		-0.48*** (0.04)
Age: 46-55		-0.61*** (0.04)		-0.65*** (0.04)
Age: 56-65		-0.73*** (0.04)		-0.80*** (0.04)
Age: > 65		-0.68*** (0.04)		-0.83*** (0.04)
Education: Medium		-0.58*** (0.02)		-0.47*** (0.02)
Education: Low		-0.91*** (0.04)		-0.74*** (0.04)
East Germany		-0.88*** (0.03)		-0.72*** (0.03)
PID: Left			-0.30*** (0.05)	-0.18*** (0.05)
PID: Greens			0.78*** (0.03)	0.59*** (0.03)
PID: SPD			0.56*** (0.03)	0.55*** (0.03)
PID: CDU			0.78*** (0.03)	0.79*** (0.03)
PID: CSU			0.50*** (0.06)	0.43*** (0.06)
PID: FDP			0.50*** (0.06)	0.42*** (0.06)
PID: AfD			-1.63*** (0.06)	-1.51*** (0.06)
PID: Others			-0.59*** (0.08)	-0.64*** (0.08)
Constant	6.00*** (0.04)	7.00*** (0.05)	5.76*** (0.04)	6.68*** (0.05)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	65,409	65,409	65,409
Akaike Inf. Crit.	282,597.20	280,539.50	280,366.80	278,651.50

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.15: Main Models: Concern about Violence against Foreigners (Xenophobia)

	Basic	SES	Party ID	Full
Xenophobia Concern (Within)	-0.06*** (0.02)	-0.06*** (0.02)	-0.08*** (0.02)	-0.08*** (0.02)
Xenophobia Concern (Between)	0.14*** (0.02)	0.09*** (0.02)	0.03 (0.02)	0.01 (0.02)
Female		0.05** (0.02)		0.05** (0.02)
Age: 26-35		-0.41*** (0.04)		-0.39*** (0.04)
Age: 36-45		-0.49*** (0.04)		-0.49*** (0.04)
Age: 46-55		-0.63*** (0.04)		-0.67*** (0.04)
Age: 56-65		-0.77*** (0.04)		-0.85*** (0.04)
Age: > 65		-0.74*** (0.04)		-0.89*** (0.04)
Education: Medium		-0.58*** (0.02)		-0.48*** (0.02)
Education: Low		-0.90*** (0.04)		-0.75*** (0.04)
East Germany		-0.88*** (0.03)		-0.73*** (0.03)
PID: Left			-0.35*** (0.05)	-0.22*** (0.05)
PID: Greens			0.74*** (0.03)	0.57*** (0.03)
PID: SPD			0.53*** (0.03)	0.53*** (0.03)
PID: CDU			0.77*** (0.03)	0.78*** (0.03)
PID: CSU			0.49*** (0.06)	0.42*** (0.06)
PID: FDP			0.53*** (0.06)	0.43*** (0.06)
PID: AfD			-1.62*** (0.06)	-1.51*** (0.06)
PID: Others			-0.59*** (0.08)	-0.65*** (0.08)
Constant	5.39*** (0.03)	6.57*** (0.05)	5.25*** (0.03)	6.33*** (0.05)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	65,409	65,409	65,409
Akaike Inf. Crit.	282,882.50	280,779.30	280,746.30	278,934.30

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.16: Main Models: Concern about Own Health

	Basic	SES	Party ID	Full
Health Concern (Within)	-0.17*** (0.02)	-0.17*** (0.02)	-0.18*** (0.02)	-0.18*** (0.02)
Health Concern (Between)	-0.86*** (0.02)	-0.71*** (0.02)	-0.81*** (0.02)	-0.66*** (0.02)
Female		0.10*** (0.02)		0.08*** (0.02)
Age: 26-35		-0.31*** (0.04)		-0.30*** (0.04)
Age: 36-45		-0.33*** (0.04)		-0.34*** (0.04)
Age: 46-55		-0.41*** (0.04)		-0.47*** (0.04)
Age: 56-65		-0.50*** (0.04)		-0.60*** (0.04)
Age: > 65		-0.43*** (0.04)		-0.61*** (0.04)
Education: Medium		-0.49*** (0.02)		-0.40*** (0.02)
Education: Low		-0.72*** (0.04)		-0.58*** (0.04)
East Germany		-0.82*** (0.03)		-0.67*** (0.02)
PID: Left			-0.33*** (0.05)	-0.21*** (0.05)
PID: Greens			0.63*** (0.03)	0.49*** (0.03)
PID: SPD			0.53*** (0.03)	0.52*** (0.03)
PID: CDU			0.76*** (0.03)	0.76*** (0.03)
PID: CSU			0.49*** (0.05)	0.41*** (0.05)
PID: FDP			0.45*** (0.06)	0.38*** (0.06)
PID: AfD			-1.62*** (0.06)	-1.52*** (0.06)
PID: Others			-0.66*** (0.08)	-0.69*** (0.08)
Constant	6.33*** (0.03)	7.03*** (0.05)	6.02*** (0.03)	6.70*** (0.05)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	65,409	65,409	65,409
Akaike Inf. Crit.	281,023.80	279,479.40	278,912.70	277,684.00

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.17: Main Models: Concern about Crime in Germany

	Basic	SES	Party ID	Full
Crime Concern (Within)	-0.25*** (0.02)	-0.25*** (0.02)	-0.24*** (0.02)	-0.24*** (0.02)
Crime Concern (Between)	-0.99*** (0.02)	-0.85*** (0.02)	-0.93*** (0.02)	-0.79*** (0.02)
Female		0.14*** (0.02)		0.13*** (0.02)
Age: 26-35		-0.24*** (0.04)		-0.25*** (0.04)
Age: 36-45		-0.25*** (0.04)		-0.29*** (0.04)
Age: 46-55		-0.35*** (0.04)		-0.42*** (0.04)
Age: 56-65		-0.42*** (0.04)		-0.53*** (0.04)
Age: > 65		-0.28*** (0.04)		-0.49*** (0.04)
Education: Medium		-0.36*** (0.02)		-0.29*** (0.02)
Education: Low		-0.61*** (0.04)		-0.50*** (0.04)
East Germany		-0.77*** (0.02)		-0.64*** (0.02)
PID: Left			-0.45*** (0.05)	-0.31*** (0.05)
PID: Greens			0.42*** (0.03)	0.33*** (0.03)
PID: SPD			0.47*** (0.03)	0.46*** (0.03)
PID: CDU			0.80*** (0.03)	0.79*** (0.03)
PID: CSU			0.51*** (0.05)	0.42*** (0.05)
PID: FDP			0.43*** (0.06)	0.38*** (0.06)
PID: AfD			-1.38*** (0.06)	-1.30*** (0.06)
PID: Others			-0.68*** (0.08)	-0.70*** (0.08)
Constant	6.76*** (0.03)	7.23*** (0.05)	6.45*** (0.03)	6.92*** (0.05)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	65,409	65,409	65,409
Akaike Inf. Crit.	279,866.50	278,629.80	278,006.90	277,013.20

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.18: Main Models: Concern about Immigration to Germany

	Basic	SES	Party ID	Full
Immigration Concern (Within)	-0.28*** (0.02)	-0.28*** (0.02)	-0.27*** (0.02)	-0.27*** (0.02)
Immigration Concern (Between)	-1.09*** (0.02)	-0.95*** (0.02)	-1.01*** (0.02)	-0.89*** (0.02)
Female		0.09*** (0.02)		0.09*** (0.02)
Age: 26-35		-0.20*** (0.04)		-0.22*** (0.04)
Age: 36-45		-0.20*** (0.04)		-0.24*** (0.04)
Age: 46-55		-0.30*** (0.04)		-0.37*** (0.04)
Age: 56-65		-0.38*** (0.04)		-0.49*** (0.04)
Age: > 65		-0.30*** (0.04)		-0.50*** (0.04)
Education: Medium		-0.29*** (0.02)		-0.25*** (0.02)
Education: Low		-0.53*** (0.04)		-0.45*** (0.04)
East Germany		-0.73*** (0.02)		-0.60*** (0.02)
PID: Left			-0.60*** (0.05)	-0.44*** (0.05)
PID: Greens			0.30*** (0.03)	0.23*** (0.03)
PID: SPD			0.37*** (0.03)	0.38*** (0.03)
PID: CDU			0.75*** (0.03)	0.76*** (0.03)
PID: CSU			0.56*** (0.05)	0.49*** (0.05)
PID: FDP			0.43*** (0.06)	0.38*** (0.06)
PID: AfD			-1.18*** (0.06)	-1.13*** (0.06)
PID: Others			-0.61*** (0.08)	-0.64*** (0.08)
Constant	6.61*** (0.03)	7.05*** (0.04)	6.34*** (0.03)	6.80*** (0.05)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	65,409	65,409	65,409
Akaike Inf. Crit.	278,661.90	277,593.90	277,050.10	276,156.20

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.19: Sub-Sample Models: Concern about Consequences from Climate Change

	10/16	16/20	20/21	Balanced (10-21)
Climate Concern (Within)	-0.06** (0.03)	-0.04 (0.03)	-0.21*** (0.03)	-0.13*** (0.03)
Climate Concern (Between)	0.01 (0.03)	0.09*** (0.03)	0.14*** (0.02)	0.16*** (0.04)
Female	0.04 (0.03)	0.02 (0.03)	0.04* (0.02)	0.01 (0.04)
Age: 26-35	-0.40*** (0.08)	-0.34*** (0.07)	-0.37*** (0.06)	-0.44*** (0.11)
Age: 36-45	-0.51*** (0.08)	-0.41*** (0.07)	-0.48*** (0.05)	-0.53*** (0.12)
Age: 46-55	-0.77*** (0.08)	-0.50*** (0.07)	-0.52*** (0.05)	-0.75*** (0.12)
Age: 56-65	-0.93*** (0.08)	-0.74*** (0.07)	-0.72*** (0.05)	-0.90*** (0.12)
Age: > 65	-0.90*** (0.08)	-0.83*** (0.07)	-0.82*** (0.05)	-0.85*** (0.12)
Education: Medium	-0.63*** (0.04)	-0.63*** (0.03)	-0.28*** (0.03)	-0.46*** (0.04)
Education: Low	-1.01*** (0.06)	-0.94*** (0.06)	-0.55*** (0.05)	-0.89*** (0.09)
East Germany	-0.88*** (0.04)	-0.95*** (0.04)	-0.44*** (0.03)	-0.63*** (0.05)
PID: Left	-0.40*** (0.08)	-0.14* (0.08)	-0.21*** (0.07)	-0.34*** (0.08)
PID: Greens	0.86*** (0.06)	0.77*** (0.05)	0.43*** (0.04)	0.47*** (0.06)
PID: SPD	0.68*** (0.05)	0.65*** (0.05)	0.41*** (0.04)	0.58*** (0.05)
PID: CDU	1.00*** (0.04)	0.92*** (0.04)	0.64*** (0.04)	0.77*** (0.05)
PID: CSU	0.51*** (0.09)	0.54*** (0.09)	0.41*** (0.08)	0.42*** (0.10)
PID: FDP	0.70*** (0.09)	0.41*** (0.11)	0.37*** (0.07)	0.54*** (0.10)
PID: AfD	-1.79*** (0.12)	-1.87*** (0.08)	-1.42*** (0.08)	-1.18*** (0.12)
PID: Others	-1.42*** (0.14)	-0.67*** (0.13)	-0.12 (0.12)	-0.73*** (0.16)
Constant	6.41*** (0.09)	6.65*** (0.08)	6.81*** (0.06)	6.17*** (0.13)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	23,846	28,006	28,400	20,128
Akaike Inf. Crit.	102,055.80	119,103.20	119,502.40	84,360.31

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.20: Sub-Sample Models: Concern about the Environment

	05/10	10/16	16/20	20/21	Balanced (10-21)
Environmental Concern (Within)	-0.14*** (0.03)	-0.15*** (0.03)	-0.09*** (0.03)	-0.20*** (0.04)	-0.16*** (0.03)
Environmental Concern (Between)	-0.36*** (0.03)	-0.12*** (0.03)	-0.04 (0.03)	0.05** (0.02)	-0.02 (0.05)
Female	0.12*** (0.03)	0.05 (0.03)	0.04 (0.03)	0.05** (0.03)	0.02 (0.04)
Age: 26-35	-0.26*** (0.06)	-0.39*** (0.08)	-0.34*** (0.07)	-0.38*** (0.06)	-0.43*** (0.11)
Age: 36-45	-0.46*** (0.07)	-0.50*** (0.08)	-0.41*** (0.07)	-0.49*** (0.05)	-0.51*** (0.12)
Age: 46-55	-0.63*** (0.07)	-0.75*** (0.08)	-0.49*** (0.07)	-0.53*** (0.05)	-0.74*** (0.12)
Age: 56-65	-0.69*** (0.07)	-0.91*** (0.08)	-0.73*** (0.07)	-0.73*** (0.05)	-0.88*** (0.12)
Age: > 65	-0.74*** (0.07)	-0.88*** (0.08)	-0.82*** (0.07)	-0.82*** (0.05)	-0.82*** (0.12)
Education: Medium	-0.47*** (0.04)	-0.63*** (0.04)	-0.63*** (0.03)	-0.29*** (0.03)	-0.47*** (0.04)
Education: Low	-0.74*** (0.06)	-1.01*** (0.06)	-0.95*** (0.06)	-0.56*** (0.05)	-0.89*** (0.09)
East Germany	-1.16*** (0.04)	-0.89*** (0.04)	-0.95*** (0.04)	-0.45*** (0.03)	-0.65*** (0.05)
PID: Left	-0.61*** (0.08)	-0.39*** (0.08)	-0.12 (0.08)	-0.19*** (0.07)	-0.32*** (0.08)
PID: Greens	0.76*** (0.07)	0.89*** (0.06)	0.81*** (0.05)	0.47*** (0.04)	0.51*** (0.06)
PID: SPD	0.62*** (0.04)	0.69*** (0.05)	0.66*** (0.05)	0.42*** (0.04)	0.59*** (0.05)
PID: CDU	0.71*** (0.04)	1.00*** (0.04)	0.92*** (0.04)	0.64*** (0.04)	0.77*** (0.05)
PID: CSU	0.20** (0.09)	0.51*** (0.09)	0.54*** (0.09)	0.41*** (0.08)	0.42*** (0.10)
PID: FDP	0.46*** (0.09)	0.69*** (0.09)	0.39*** (0.11)	0.36*** (0.07)	0.52*** (0.10)
PID: AfD		-1.80*** (0.12)	-1.89*** (0.08)	-1.46*** (0.08)	-1.19*** (0.12)
PID: Others	-1.21*** (0.13)	-1.43*** (0.14)	-0.67*** (0.13)	-0.11 (0.12)	-0.74*** (0.16)
Constant	6.39*** (0.08)	6.54*** (0.09)	6.79*** (0.08)	6.94*** (0.06)	6.37*** (0.13)
Wave Fix. Eff.	✓	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓	✓
Observations	24,986	23,846	28,006	28,400	20,128
Akaike Inf. Crit.	106,895.20	102,022.90	119,102.00	119,543.30	84,366.27

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.21: Sub-Sample Models: Concern about the Economy in General

	05/10	10/16	16/20	20/21	Balanced (10-21)
Economic Concern (Within)	-0.40*** (0.03)	-0.35*** (0.03)	-0.10*** (0.02)	0.10*** (0.03)	-0.12*** (0.03)
Economic Concern (Between)	-0.92*** (0.04)	-0.93*** (0.03)	-0.98*** (0.03)	-0.47*** (0.02)	-1.03*** (0.05)
Female	0.09*** (0.03)	0.07** (0.03)	0.11*** (0.03)	0.10*** (0.02)	0.11*** (0.04)
Age: 26-35	-0.16** (0.06)	-0.29*** (0.07)	-0.24*** (0.07)	-0.32*** (0.06)	-0.34*** (0.11)
Age: 36-45	-0.31*** (0.07)	-0.35*** (0.08)	-0.26*** (0.07)	-0.40*** (0.05)	-0.37*** (0.11)
Age: 46-55	-0.45*** (0.07)	-0.56*** (0.08)	-0.33*** (0.07)	-0.42*** (0.05)	-0.56*** (0.12)
Age: 56-65	-0.54*** (0.07)	-0.71*** (0.08)	-0.56*** (0.07)	-0.62*** (0.05)	-0.70*** (0.12)
Age: > 65	-0.60*** (0.07)	-0.68*** (0.08)	-0.70*** (0.07)	-0.74*** (0.05)	-0.67*** (0.12)
Education: Medium	-0.44*** (0.04)	-0.54*** (0.04)	-0.54*** (0.04)	-0.26*** (0.03)	-0.37*** (0.04)
Education: Low	-0.75*** (0.06)	-0.88*** (0.06)	-0.86*** (0.05)	-0.54*** (0.05)	-0.73*** (0.09)
East Germany	-1.14*** (0.04)	-0.89*** (0.04)	-0.98*** (0.04)	-0.45*** (0.03)	-0.65*** (0.05)
PID: Left	-0.56*** (0.08)	-0.38*** (0.08)	-0.17** (0.07)	-0.21*** (0.06)	-0.35*** (0.08)
PID: Greens	0.58*** (0.07)	0.74*** (0.06)	0.69*** (0.05)	0.40*** (0.04)	0.38*** (0.05)
PID: SPD	0.59*** (0.04)	0.66*** (0.04)	0.62*** (0.05)	0.41*** (0.04)	0.55*** (0.05)
PID: CDU	0.76*** (0.04)	0.98*** (0.04)	0.91*** (0.04)	0.63*** (0.04)	0.75*** (0.05)
PID: CSU	0.27*** (0.08)	0.50*** (0.08)	0.57*** (0.08)	0.43*** (0.07)	0.46*** (0.10)
PID: FDP	0.50*** (0.09)	0.71*** (0.09)	0.47*** (0.11)	0.41*** (0.07)	0.56*** (0.10)
PID: AfD		-1.68*** (0.12)	-1.78*** (0.08)	-1.34*** (0.08)	-1.09*** (0.11)
PID: Others	-1.12*** (0.13)	-1.35*** (0.14)	-0.64*** (0.13)	-0.10 (0.12)	-0.70*** (0.16)
Constant	7.19*** (0.08)	7.27*** (0.09)	7.47*** (0.07)	7.39*** (0.06)	7.25*** (0.12)
Wave Fix. Eff.	✓	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓	✓
Observations	24,986	23,846	28,006	28,400	20,128
Akaike Inf. Crit.	106,188.50	101,166.80	118,071.10	119,170.90	83,894.24

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.22: Sub-Sample Models: Concern about Own Financial Situation

	05/10	10/16	16/20	20/21	Balanced (10-21)
Financial Concern (Within)	-0.28*** (0.03)	-0.27*** (0.03)	-0.17*** (0.03)	-0.12*** (0.03)	-0.23*** (0.03)
Financial Concern (Between)	-0.90*** (0.03)	-0.82*** (0.03)	-0.81*** (0.03)	-0.63*** (0.02)	-1.07*** (0.04)
Female	0.08** (0.03)	0.07** (0.03)	0.08*** (0.03)	0.10*** (0.02)	0.08** (0.04)
Age: 26-35	-0.20*** (0.06)	-0.32*** (0.07)	-0.24*** (0.07)	-0.29*** (0.05)	-0.34*** (0.11)
Age: 36-45	-0.41*** (0.07)	-0.44*** (0.08)	-0.30*** (0.07)	-0.41*** (0.05)	-0.45*** (0.11)
Age: 46-55	-0.62*** (0.07)	-0.73*** (0.08)	-0.41*** (0.07)	-0.47*** (0.05)	-0.72*** (0.12)
Age: 56-65	-0.84*** (0.07)	-0.98*** (0.08)	-0.72*** (0.07)	-0.70*** (0.05)	-0.96*** (0.12)
Age: > 65	-1.02*** (0.07)	-1.08*** (0.08)	-0.96*** (0.07)	-0.93*** (0.05)	-1.07*** (0.12)
Education: Medium	-0.31*** (0.04)	-0.46*** (0.04)	-0.48*** (0.03)	-0.20*** (0.03)	-0.26*** (0.04)
Education: Low	-0.45*** (0.06)	-0.69*** (0.06)	-0.67*** (0.06)	-0.36*** (0.05)	-0.47*** (0.09)
East Germany	-0.99*** (0.04)	-0.78*** (0.04)	-0.89*** (0.04)	-0.42*** (0.03)	-0.51*** (0.04)
PID: Left	-0.61*** (0.08)	-0.40*** (0.08)	-0.14* (0.07)	-0.21*** (0.06)	-0.33*** (0.08)
PID: Greens	0.51*** (0.07)	0.72*** (0.06)	0.68*** (0.05)	0.34*** (0.04)	0.37*** (0.05)
PID: SPD	0.53*** (0.04)	0.64*** (0.04)	0.61*** (0.05)	0.35*** (0.04)	0.52*** (0.05)
PID: CDU	0.62*** (0.04)	0.92*** (0.04)	0.83*** (0.04)	0.56*** (0.04)	0.68*** (0.05)
PID: CSU	0.13 (0.08)	0.42*** (0.08)	0.46*** (0.08)	0.36*** (0.07)	0.39*** (0.10)
PID: FDP	0.37*** (0.09)	0.62*** (0.09)	0.33*** (0.11)	0.29*** (0.07)	0.47*** (0.10)
PID: AfD		-1.78*** (0.12)	-1.85*** (0.08)	-1.38*** (0.08)	-1.11*** (0.11)
PID: Others	-1.15*** (0.13)	-1.39*** (0.14)	-0.68*** (0.13)	-0.14 (0.11)	-0.69*** (0.16)
Constant	6.80*** (0.07)	7.00*** (0.08)	7.17*** (0.07)	7.34*** (0.05)	6.99*** (0.12)
Wave Fix. Eff.	✓	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓	✓
Observations	24,986	23,846	28,006	28,400	20,128
Akaike Inf. Crit.	105,990.00	101,181.30	118,230.10	118,761.10	83,631.36

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.23: Sub-Sample Models: Concern about Maintaining Peace

	05/10	10/16	16/20	20/21	Balanced (10-21)
Peace Concern (Within)	-0.19*** (0.03)	-0.17*** (0.03)	-0.21*** (0.03)	-0.19*** (0.03)	-0.10*** (0.03)
Peace Concern (Between)	-0.40*** (0.03)	-0.39*** (0.03)	-0.42*** (0.03)	-0.14*** (0.02)	-0.34*** (0.04)
Female	0.15*** (0.03)	0.10*** (0.03)	0.10*** (0.03)	0.08*** (0.03)	0.08*** (0.04)
Age: 26-35	-0.26*** (0.06)	-0.38*** (0.08)	-0.34*** (0.07)	-0.38*** (0.06)	-0.43*** (0.11)
Age: 36-45	-0.48*** (0.07)	-0.48*** (0.08)	-0.39*** (0.07)	-0.49*** (0.05)	-0.50*** (0.12)
Age: 46-55	-0.63*** (0.07)	-0.73*** (0.08)	-0.46*** (0.07)	-0.52*** (0.05)	-0.71*** (0.12)
Age: 56-65	-0.69*** (0.07)	-0.87*** (0.08)	-0.68*** (0.07)	-0.71*** (0.05)	-0.84*** (0.12)
Age: > 65	-0.72*** (0.07)	-0.82*** (0.08)	-0.74*** (0.07)	-0.79*** (0.05)	-0.75*** (0.12)
Education: Medium	-0.46*** (0.04)	-0.61*** (0.04)	-0.63*** (0.03)	-0.29*** (0.03)	-0.46*** (0.04)
Education: Low	-0.71*** (0.06)	-0.98*** (0.06)	-0.95*** (0.06)	-0.56*** (0.05)	-0.87*** (0.09)
East Germany	-1.11*** (0.04)	-0.87*** (0.04)	-0.95*** (0.04)	-0.45*** (0.03)	-0.64*** (0.05)
PID: Left	-0.60*** (0.08)	-0.36*** (0.08)	-0.07 (0.07)	-0.15** (0.07)	-0.29*** (0.08)
PID: Greens	0.69*** (0.07)	0.89*** (0.06)	0.84*** (0.05)	0.50*** (0.04)	0.52*** (0.06)
PID: SPD	0.61*** (0.04)	0.70*** (0.05)	0.69*** (0.05)	0.43*** (0.04)	0.60*** (0.05)
PID: CDU	0.72*** (0.04)	1.00*** (0.04)	0.93*** (0.04)	0.64*** (0.04)	0.76*** (0.05)
PID: CSU	0.20** (0.09)	0.52*** (0.09)	0.55*** (0.09)	0.40*** (0.08)	0.44*** (0.10)
PID: FDP	0.45*** (0.09)	0.69*** (0.09)	0.38*** (0.11)	0.34*** (0.07)	0.51*** (0.10)
PID: AfD		-1.78*** (0.12)	-1.89*** (0.08)	-1.47*** (0.08)	-1.17*** (0.12)
PID: Others	-1.22*** (0.13)	-1.41*** (0.14)	-0.66*** (0.13)	-0.09 (0.12)	-0.73*** (0.16)
Constant	6.43*** (0.08)	6.81*** (0.09)	7.28*** (0.08)	7.16*** (0.06)	6.72*** (0.13)
Wave Fix. Eff.	✓	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓	✓
Observations	24,986	23,846	28,006	28,400	20,128
Akaike Inf. Crit.	106,816.00	101,882.10	118,866.30	119,513.30	84,323.71

* (**,***) shows $p < 0.1$ (0.05, 0.01). Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.24: Sub-Sample Models: Concern about Violence against Foreigners (Xenophobia)

	05/10	10/16	16/20	20/21	Balanced (10-21)
Xenophobia Concern (Within)	-0.09*** (0.03)	-0.03 (0.03)	-0.12*** (0.03)	-0.13*** (0.03)	-0.07** (0.03)
Xenophobia Concern (Between)	-0.08*** (0.03)	0.06* (0.03)	-0.02 (0.03)	0.01 (0.02)	0.15*** (0.05)
Female	0.09*** (0.03)	0.03 (0.03)	0.03 (0.03)	0.06** (0.03)	0.01 (0.04)
Age: 26-35	-0.28*** (0.06)	-0.40*** (0.08)	-0.34*** (0.07)	-0.38*** (0.06)	-0.44*** (0.11)
Age: 36-45	-0.48*** (0.07)	-0.51*** (0.08)	-0.41*** (0.07)	-0.49*** (0.05)	-0.52*** (0.12)
Age: 46-55	-0.65*** (0.07)	-0.77*** (0.08)	-0.50*** (0.07)	-0.53*** (0.05)	-0.75*** (0.12)
Age: 56-65	-0.73*** (0.07)	-0.93*** (0.08)	-0.74*** (0.07)	-0.73*** (0.05)	-0.90*** (0.12)
Age: > 65	-0.78*** (0.07)	-0.90*** (0.08)	-0.82*** (0.07)	-0.82*** (0.05)	-0.84*** (0.12)
Education: Medium	-0.48*** (0.04)	-0.63*** (0.04)	-0.63*** (0.03)	-0.29*** (0.03)	-0.47*** (0.04)
Education: Low	-0.74*** (0.06)	-1.00*** (0.06)	-0.95*** (0.06)	-0.56*** (0.05)	-0.89*** (0.09)
East Germany	-1.15*** (0.04)	-0.88*** (0.04)	-0.95*** (0.04)	-0.45*** (0.03)	-0.64*** (0.05)
PID: Left	-0.61*** (0.08)	-0.41*** (0.08)	-0.11 (0.08)	-0.18*** (0.07)	-0.34*** (0.08)
PID: Greens	0.68*** (0.07)	0.85*** (0.06)	0.81*** (0.05)	0.48*** (0.04)	0.49*** (0.06)
PID: SPD	0.61*** (0.04)	0.68*** (0.05)	0.67*** (0.05)	0.43*** (0.04)	0.58*** (0.05)
PID: CDU	0.73*** (0.04)	1.00*** (0.04)	0.92*** (0.04)	0.64*** (0.04)	0.77*** (0.05)
PID: CSU	0.23*** (0.09)	0.51*** (0.09)	0.54*** (0.09)	0.41*** (0.08)	0.43*** (0.10)
PID: FDP	0.49*** (0.09)	0.70*** (0.09)	0.40*** (0.11)	0.35*** (0.07)	0.53*** (0.10)
PID: AfD		-1.79*** (0.12)	-1.89*** (0.08)	-1.46*** (0.08)	-1.17*** (0.12)
PID: Others	-1.21*** (0.13)	-1.41*** (0.14)	-0.67*** (0.13)	-0.10 (0.12)	-0.72*** (0.16)
Constant	6.12*** (0.08)	6.35*** (0.09)	6.79*** (0.08)	7.00*** (0.06)	6.18*** (0.13)
Wave Fix. Eff.	✓	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓	✓
Observations	24,986	23,846	28,006	28,400	20,128
Akaike Inf. Crit.	107,019.10	102,055.70	119,092.80	119,563.20	84,377.95

* (**,***) shows $p < 0.1$ (0.05, 0.01). Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.25: Sub-Sample Models: Concern about Own Health

	05/10	10/16	16/20	20/21	Balanced (10-21)
Health Concern (Within)	-0.12*** (0.03)	-0.09*** (0.03)	-0.16*** (0.03)	-0.23*** (0.03)	-0.15*** (0.03)
Health Concern (Between)	-0.65*** (0.03)	-0.61*** (0.03)	-0.67*** (0.03)	-0.61*** (0.02)	-0.87*** (0.04)
Female	0.11*** (0.03)	0.05 (0.03)	0.07** (0.03)	0.09*** (0.02)	0.06 (0.04)
Age: 26-35	-0.18*** (0.06)	-0.32*** (0.07)	-0.26*** (0.07)	-0.31*** (0.05)	-0.33*** (0.11)
Age: 36-45	-0.31*** (0.07)	-0.37*** (0.08)	-0.25*** (0.07)	-0.36*** (0.05)	-0.34*** (0.11)
Age: 46-55	-0.41*** (0.07)	-0.57*** (0.08)	-0.28*** (0.07)	-0.37*** (0.05)	-0.50*** (0.12)
Age: 56-65	-0.42*** (0.07)	-0.68*** (0.08)	-0.48*** (0.07)	-0.52*** (0.05)	-0.59*** (0.12)
Age: > 65	-0.40*** (0.07)	-0.60*** (0.08)	-0.54*** (0.07)	-0.59*** (0.05)	-0.49*** (0.12)
Education: Medium	-0.40*** (0.04)	-0.56*** (0.04)	-0.55*** (0.03)	-0.22*** (0.03)	-0.36*** (0.04)
Education: Low	-0.59*** (0.06)	-0.83*** (0.06)	-0.78*** (0.06)	-0.42*** (0.05)	-0.67*** (0.09)
East Germany	-1.08*** (0.04)	-0.82*** (0.04)	-0.88*** (0.04)	-0.41*** (0.03)	-0.55*** (0.05)
PID: Left	-0.62*** (0.08)	-0.39*** (0.08)	-0.13* (0.07)	-0.17*** (0.06)	-0.32*** (0.08)
PID: Greens	0.62*** (0.07)	0.80*** (0.06)	0.73*** (0.05)	0.40*** (0.04)	0.45*** (0.05)
PID: SPD	0.58*** (0.04)	0.67*** (0.05)	0.64*** (0.05)	0.40*** (0.04)	0.57*** (0.05)
PID: CDU	0.70*** (0.04)	0.98*** (0.04)	0.89*** (0.04)	0.60*** (0.04)	0.75*** (0.05)
PID: CSU	0.22** (0.09)	0.49*** (0.09)	0.53*** (0.09)	0.39*** (0.07)	0.44*** (0.10)
PID: FDP	0.44*** (0.09)	0.65*** (0.09)	0.35*** (0.11)	0.28*** (0.07)	0.48*** (0.10)
PID: AfD		-1.80*** (0.12)	-1.88*** (0.08)	-1.43*** (0.08)	-1.12*** (0.11)
PID: Others	-1.21*** (0.13)	-1.42*** (0.14)	-0.69*** (0.13)	-0.16 (0.11)	-0.73*** (0.16)
Constant	6.30*** (0.07)	6.71*** (0.08)	7.06*** (0.07)	7.30*** (0.05)	6.80*** (0.12)
Wave Fix. Eff.	✓	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓	✓
Observations	24,986	23,846	28,006	28,400	20,128
Akaike Inf. Crit.	106,570.60	101,639.70	118,515.20	118,780.60	83,899.49

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.26: Sub-Sample Models: Concern about Crime in Germany

	05/10	10/16	16/20	20/21	Balanced (10-21)
Crime Concern (Within)	-0.22*** (0.03)	-0.33*** (0.03)	-0.26*** (0.03)	-0.29*** (0.03)	-0.20*** (0.03)
Crime Concern (Between)	-0.73*** (0.03)	-0.85*** (0.03)	-1.08*** (0.03)	-0.47*** (0.02)	-0.90*** (0.04)
Female	0.14*** (0.03)	0.12*** (0.03)	0.14*** (0.03)	0.11*** (0.02)	0.12*** (0.04)
Age: 26-35	-0.19*** (0.06)	-0.28*** (0.07)	-0.17*** (0.07)	-0.31*** (0.06)	-0.29*** (0.11)
Age: 36-45	-0.34*** (0.07)	-0.35*** (0.08)	-0.16** (0.07)	-0.37*** (0.05)	-0.31*** (0.11)
Age: 46-55	-0.47*** (0.07)	-0.57*** (0.08)	-0.19*** (0.07)	-0.38*** (0.05)	-0.49*** (0.12)
Age: 56-65	-0.49*** (0.07)	-0.68*** (0.08)	-0.36*** (0.07)	-0.54*** (0.05)	-0.57*** (0.12)
Age: > 65	-0.47*** (0.07)	-0.56*** (0.08)	-0.35*** (0.07)	-0.56*** (0.05)	-0.41*** (0.12)
Education: Medium	-0.34*** (0.04)	-0.43*** (0.04)	-0.36*** (0.03)	-0.18*** (0.03)	-0.23*** (0.04)
Education: Low	-0.61*** (0.06)	-0.74*** (0.06)	-0.63*** (0.05)	-0.40*** (0.05)	-0.53*** (0.09)
East Germany	-1.08*** (0.04)	-0.82*** (0.04)	-0.80*** (0.04)	-0.39*** (0.03)	-0.51*** (0.05)
PID: Left	-0.64*** (0.08)	-0.47*** (0.08)	-0.28*** (0.07)	-0.26*** (0.06)	-0.43*** (0.08)
PID: Greens	0.47*** (0.07)	0.60*** (0.06)	0.48*** (0.05)	0.31*** (0.04)	0.29*** (0.06)
PID: SPD	0.55*** (0.04)	0.61*** (0.04)	0.56*** (0.04)	0.36*** (0.04)	0.49*** (0.05)
PID: CDU	0.75*** (0.04)	1.02*** (0.04)	0.93*** (0.04)	0.62*** (0.04)	0.78*** (0.05)
PID: CSU	0.21** (0.09)	0.50*** (0.08)	0.55*** (0.08)	0.40*** (0.07)	0.45*** (0.10)
PID: FDP	0.41*** (0.09)	0.63*** (0.09)	0.32*** (0.11)	0.32*** (0.07)	0.50*** (0.10)
PID: AfD		-1.65*** (0.12)	-1.64*** (0.08)	-1.25*** (0.08)	-1.00*** (0.11)
PID: Others	-1.14*** (0.13)	-1.39*** (0.14)	-0.72*** (0.13)	-0.17 (0.12)	-0.79*** (0.16)
Constant	6.70*** (0.08)	7.13*** (0.09)	7.55*** (0.07)	7.25*** (0.05)	6.97*** (0.12)
Wave Fix. Eff.	✓	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓	✓
Observations	24,986	23,846	28,006	28,400	20,128
Akaike Inf. Crit.	106,420.00	101,158.80	117,468.20	119,014.20	83,801.36

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.27: Sub-Sample Models: Concern about Immigration to Germany

	05/10	10/16	16/20	20/21	Balanced (10-21)
Immigration Concern (Within)	-0.24*** (0.03)	-0.32*** (0.03)	-0.27*** (0.03)	-0.31*** (0.03)	-0.21*** (0.03)
Immigration Concern (Between)	-0.85*** (0.03)	-0.97*** (0.03)	-1.13*** (0.02)	-0.58*** (0.02)	-0.99*** (0.04)
Female	0.07** (0.03)	0.06** (0.03)	0.08*** (0.03)	0.09*** (0.02)	0.08** (0.04)
Age: 26-35	-0.18*** (0.06)	-0.31*** (0.07)	-0.16** (0.07)	-0.26*** (0.05)	-0.29*** (0.11)
Age: 36-45	-0.34*** (0.07)	-0.38*** (0.08)	-0.13** (0.07)	-0.29*** (0.05)	-0.32*** (0.11)
Age: 46-55	-0.47*** (0.07)	-0.59*** (0.08)	-0.17** (0.07)	-0.31*** (0.05)	-0.50*** (0.12)
Age: 56-65	-0.52*** (0.07)	-0.71*** (0.08)	-0.34*** (0.07)	-0.45*** (0.05)	-0.60*** (0.12)
Age: > 65	-0.54*** (0.07)	-0.65*** (0.08)	-0.40*** (0.07)	-0.52*** (0.05)	-0.51*** (0.12)
Education: Medium	-0.26*** (0.04)	-0.37*** (0.04)	-0.33*** (0.03)	-0.15*** (0.03)	-0.19*** (0.04)
Education: Low	-0.54*** (0.06)	-0.67*** (0.06)	-0.58*** (0.05)	-0.36*** (0.05)	-0.49*** (0.09)
East Germany	-1.08*** (0.04)	-0.80*** (0.04)	-0.78*** (0.04)	-0.35*** (0.03)	-0.50*** (0.04)
PID: Left	-0.74*** (0.08)	-0.60*** (0.08)	-0.44*** (0.07)	-0.39*** (0.06)	-0.54*** (0.08)
PID: Greens	0.36*** (0.07)	0.50*** (0.06)	0.37*** (0.05)	0.21*** (0.04)	0.18*** (0.06)
PID: SPD	0.50*** (0.04)	0.53*** (0.04)	0.44*** (0.04)	0.28*** (0.04)	0.41*** (0.05)
PID: CDU	0.76*** (0.04)	0.99*** (0.04)	0.87*** (0.04)	0.59*** (0.04)	0.76*** (0.05)
PID: CSU	0.31*** (0.08)	0.57*** (0.08)	0.62*** (0.08)	0.44*** (0.07)	0.49*** (0.10)
PID: FDP	0.44*** (0.09)	0.62*** (0.09)	0.27** (0.11)	0.32*** (0.07)	0.47*** (0.10)
PID: AfD		-1.53*** (0.12)	-1.46*** (0.08)	-1.04*** (0.08)	-0.86*** (0.11)
PID: Others	-1.00*** (0.13)	-1.24*** (0.13)	-0.66*** (0.13)	-0.17 (0.11)	-0.70*** (0.16)
Constant	6.64*** (0.07)	7.07*** (0.08)	7.55*** (0.07)	7.22*** (0.05)	6.86*** (0.12)
Wave Fix. Eff.	✓	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓	✓
Observations	24,986	23,846	28,006	28,400	20,128
Akaike Inf. Crit.	105,992.40	100,754.40	117,044.90	118,646.60	83,588.48

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Monthly Fixed Effects Models

Table A.28: Monthly FE: Concern about the Economy as a Whole

	Full (10-21)	05/10	10/16	16/20	20/21
Economic Concern (Within)	-0.18*** (0.02)	-0.40*** (0.03)	-0.34*** (0.03)	-0.19*** (0.02)	0.01 (0.03)
Economic Concern (Between)	-0.83*** (0.02)	-0.92*** (0.04)	-0.93*** (0.03)	-1.02*** (0.03)	-0.52*** (0.02)
Female	0.11*** (0.02)	0.09*** (0.03)	0.08** (0.03)	0.12*** (0.03)	0.11*** (0.02)
Age: 26-35	-0.30*** (0.04)	-0.16** (0.06)	-0.31*** (0.07)	-0.27*** (0.07)	-0.28*** (0.06)
Age: 36-45	-0.32*** (0.04)	-0.31*** (0.07)	-0.33*** (0.08)	-0.26*** (0.07)	-0.36*** (0.05)
Age: 46-55	-0.45*** (0.04)	-0.46*** (0.07)	-0.52*** (0.08)	-0.31*** (0.07)	-0.37*** (0.05)
Age: 56-65	-0.60*** (0.04)	-0.55*** (0.07)	-0.68*** (0.08)	-0.52*** (0.07)	-0.51*** (0.05)
Age: > 65	-0.62*** (0.04)	-0.61*** (0.07)	-0.66*** (0.08)	-0.58*** (0.07)	-0.58*** (0.05)
Education: Medium	-0.41*** (0.02)	-0.44*** (0.04)	-0.53*** (0.04)	-0.53*** (0.03)	-0.25*** (0.03)
Education: Low	-0.69*** (0.04)	-0.75*** (0.06)	-0.87*** (0.06)	-0.87*** (0.05)	-0.54*** (0.05)
East Germany	-0.69*** (0.02)	-1.14*** (0.04)	-0.87*** (0.04)	-0.91*** (0.04)	-0.42*** (0.03)
PID: Left	-0.25*** (0.05)	-0.56*** (0.08)	-0.38*** (0.08)	-0.19** (0.07)	-0.23*** (0.06)
PID: Greens	0.46*** (0.03)	0.59*** (0.07)	0.73*** (0.06)	0.70*** (0.05)	0.38*** (0.04)
PID: SPD	0.52*** (0.03)	0.59*** (0.04)	0.66*** (0.04)	0.63*** (0.04)	0.40*** (0.04)
PID: CDU	0.77*** (0.03)	0.76*** (0.04)	0.98*** (0.04)	0.89*** (0.04)	0.59*** (0.04)
PID: CSU	0.43*** (0.05)	0.26*** (0.08)	0.50*** (0.08)	0.57*** (0.08)	0.40*** (0.07)
PID: FDP	0.50*** (0.06)	0.49*** (0.09)	0.72*** (0.09)	0.48*** (0.11)	0.40*** (0.07)
PID: AfD	-1.35*** (0.06)		-1.67*** (0.12)	-1.75*** (0.08)	-1.30*** (0.08)
PID: Others	-0.61*** (0.08)	-1.12*** (0.13)	-1.35*** (0.14)	-0.61*** (0.13)	-0.07 (0.11)
Constant	6.29*** (0.73)	7.84*** (0.49)	6.84*** (0.73)	6.79*** (0.19)	8.44*** (1.37)
Month Fix. Eff.	✓	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓	✓
Observations	65,192	24,986	23,846	27,900	28,235
Akaike Inf. Crit.	275,442.40	106,203.00	101,195.90	117,096.80	117,620.70

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 5 waves (2005, 2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.29: Monthly FE: Concern about the Consequences of Climate Change

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.13*** (0.02)	-0.06** (0.03)	-0.04 (0.03)	-0.19*** (0.03)
Climate Concern (Between)	0.13*** (0.02)	0.01 (0.03)	0.10*** (0.03)	0.15*** (0.02)
Female	0.04* (0.02)	0.04 (0.03)	0.02 (0.03)	0.05* (0.02)
Age: 26-35	-0.39*** (0.04)	-0.42*** (0.08)	-0.37*** (0.07)	-0.34*** (0.06)
Age: 36-45	-0.46*** (0.04)	-0.49*** (0.08)	-0.42*** (0.07)	-0.44*** (0.05)
Age: 46-55	-0.63*** (0.04)	-0.72*** (0.08)	-0.49*** (0.07)	-0.48*** (0.05)
Age: 56-65	-0.78*** (0.04)	-0.90*** (0.08)	-0.72*** (0.07)	-0.64*** (0.05)
Age: > 65	-0.78*** (0.04)	-0.88*** (0.08)	-0.73*** (0.07)	-0.67*** (0.05)
Education: Medium	-0.47*** (0.02)	-0.63*** (0.04)	-0.62*** (0.03)	-0.27*** (0.03)
Education: Low	-0.74*** (0.04)	-0.99*** (0.06)	-0.95*** (0.06)	-0.55*** (0.05)
East Germany	-0.67*** (0.03)	-0.86*** (0.04)	-0.89*** (0.04)	-0.41*** (0.03)
PID: Left	-0.24*** (0.05)	-0.39*** (0.08)	-0.15** (0.07)	-0.22*** (0.07)
PID: Greens	0.53*** (0.03)	0.85*** (0.06)	0.78*** (0.05)	0.41*** (0.04)
PID: SPD	0.52*** (0.03)	0.68*** (0.05)	0.65*** (0.05)	0.41*** (0.04)
PID: CDU	0.77*** (0.03)	1.00*** (0.04)	0.89*** (0.04)	0.60*** (0.04)
PID: CSU	0.41*** (0.05)	0.51*** (0.09)	0.54*** (0.09)	0.38*** (0.07)
PID: FDP	0.46*** (0.06)	0.71*** (0.09)	0.41*** (0.11)	0.36*** (0.07)
PID: AfD	-1.46*** (0.06)	-1.78*** (0.12)	-1.85*** (0.08)	-1.40*** (0.08)
PID: Others	-0.65*** (0.08)	-1.41*** (0.14)	-0.64*** (0.13)	-0.09 (0.12)
Constant	5.39*** (0.74)	5.95*** (0.74)	5.97*** (0.19)	7.75*** (1.38)
Month Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,192	23,846	27,900	28,235
Akaike Inf. Crit.	276,963.00	102,075.90	118,280.10	118,037.10

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Further Robustness Checks

Table A.30: Climate Concern Robustness: Numeric Age

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.14*** (0.02)	-0.06* (0.03)	-0.04 (0.03)	-0.22*** (0.03)
Climate Concern (Between)	0.14*** (0.02)	0.01 (0.03)	0.10*** (0.03)	0.15*** (0.02)
Female	0.03 (0.02)	0.03 (0.03)	0.01 (0.03)	0.04 (0.02)
Age (Numeric)	-0.02*** (0.001)	-0.01*** (0.001)	-0.02*** (0.001)	-0.01*** (0.001)
Education: Medium	-0.45*** (0.02)	-0.62*** (0.04)	-0.62*** (0.03)	-0.26*** (0.03)
Education: Low	-0.67*** (0.04)	-0.93*** (0.06)	-0.92*** (0.06)	-0.50*** (0.05)
East Germany	-0.70*** (0.03)	-0.87*** (0.04)	-0.94*** (0.04)	-0.44*** (0.03)
PID: Left	-0.23*** (0.05)	-0.40*** (0.08)	-0.13* (0.08)	-0.20*** (0.07)
PID: Greens	0.53*** (0.03)	0.86*** (0.06)	0.77*** (0.05)	0.44*** (0.04)
PID: SPD	0.54*** (0.03)	0.69*** (0.05)	0.66*** (0.05)	0.43*** (0.04)
PID: CDU	0.81*** (0.03)	1.02*** (0.04)	0.94*** (0.04)	0.66*** (0.04)
PID: CSU	0.45*** (0.06)	0.54*** (0.09)	0.56*** (0.09)	0.43*** (0.08)
PID: FDP	0.46*** (0.06)	0.72*** (0.09)	0.43*** (0.11)	0.40*** (0.07)
PID: AfD	-1.50*** (0.06)	-1.81*** (0.12)	-1.87*** (0.08)	-1.43*** (0.08)
PID: Others	-0.66*** (0.08)	-1.43*** (0.14)	-0.67*** (0.13)	-0.11 (0.12)
Constant	6.31*** (0.05)	6.45*** (0.07)	6.85*** (0.07)	6.92*** (0.06)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,821.40	102,071.60	119,062.50	119,478.70

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations, but including age as continuous predictor. The reference categories for categorical predictors are ‘Non-Female’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.31: Climate Concern Robustness: Numeric Education

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.14*** (0.02)	-0.06** (0.03)	-0.04 (0.03)	-0.21*** (0.03)
Climate Concern (Between)	0.13*** (0.02)	0.01 (0.03)	0.09*** (0.03)	0.14*** (0.02)
Female	0.03 (0.02)	0.03 (0.03)	0.01 (0.03)	0.04 (0.02)
Age: 26-35	-0.42*** (0.04)	-0.46*** (0.07)	-0.39*** (0.07)	-0.39*** (0.06)
Age: 36-45	-0.52*** (0.04)	-0.56*** (0.08)	-0.46*** (0.07)	-0.49*** (0.05)
Age: 46-55	-0.70*** (0.04)	-0.81*** (0.08)	-0.54*** (0.07)	-0.53*** (0.05)
Age: 56-65	-0.87*** (0.04)	-0.97*** (0.08)	-0.77*** (0.07)	-0.73*** (0.05)
Age: > 65	-0.91*** (0.04)	-0.93*** (0.08)	-0.86*** (0.07)	-0.82*** (0.05)
ISCED 1997 (Numeric)	0.18*** (0.01)	0.25*** (0.01)	0.25*** (0.01)	0.12*** (0.01)
East Germany	-0.70*** (0.03)	-0.87*** (0.04)	-0.94*** (0.04)	-0.43*** (0.03)
PID: Left	-0.25*** (0.05)	-0.43*** (0.08)	-0.16** (0.08)	-0.22*** (0.07)
PID: Greens	0.51*** (0.03)	0.83*** (0.06)	0.74*** (0.05)	0.41*** (0.04)
PID: SPD	0.52*** (0.03)	0.68*** (0.05)	0.64*** (0.05)	0.41*** (0.04)
PID: CDU	0.78*** (0.03)	0.99*** (0.04)	0.91*** (0.04)	0.64*** (0.04)
PID: CSU	0.43*** (0.06)	0.52*** (0.09)	0.54*** (0.09)	0.41*** (0.08)
PID: FDP	0.44*** (0.06)	0.68*** (0.09)	0.38*** (0.11)	0.36*** (0.07)
PID: AfD	-1.49*** (0.06)	-1.79*** (0.12)	-1.87*** (0.08)	-1.41*** (0.08)
PID: Others	-0.66*** (0.08)	-1.41*** (0.14)	-0.67*** (0.13)	-0.13 (0.12)
Constant	5.17*** (0.05)	5.02*** (0.09)	5.26*** (0.08)	6.14*** (0.06)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,754.20	101,990.80	119,002.00	119,480.10

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations, but including education (ISCED 1997) as continuous predictor. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘West Germany’ & ‘PID: None’.

Table A.32: Climate Concern Robustness: Numeric Age & Education

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.14*** (0.02)	-0.06* (0.03)	-0.04 (0.03)	-0.22*** (0.03)
Climate Concern (Between)	0.14*** (0.02)	0.01 (0.03)	0.10*** (0.03)	0.15*** (0.02)
Female	0.02 (0.02)	0.02 (0.03)	0.01 (0.03)	0.04 (0.02)
Age (Numeric)	-0.02*** (0.001)	-0.01*** (0.001)	-0.01*** (0.001)	-0.01*** (0.001)
ISCED 1997 (Numeric)	0.17*** (0.01)	0.24*** (0.01)	0.24*** (0.01)	0.11*** (0.01)
East Germany	-0.70*** (0.03)	-0.86*** (0.04)	-0.93*** (0.04)	-0.43*** (0.03)
PID: Left	-0.24*** (0.05)	-0.42*** (0.08)	-0.15** (0.07)	-0.21*** (0.07)
PID: Greens	0.52*** (0.03)	0.83*** (0.06)	0.74*** (0.05)	0.43*** (0.04)
PID: SPD	0.53*** (0.03)	0.68*** (0.05)	0.66*** (0.05)	0.43*** (0.04)
PID: CDU	0.80*** (0.03)	1.01*** (0.04)	0.93*** (0.04)	0.66*** (0.04)
PID: CSU	0.45*** (0.06)	0.54*** (0.09)	0.57*** (0.09)	0.43*** (0.08)
PID: FDP	0.46*** (0.06)	0.70*** (0.09)	0.41*** (0.11)	0.39*** (0.07)
PID: AfD	-1.50*** (0.06)	-1.80*** (0.12)	-1.87*** (0.08)	-1.42*** (0.08)
PID: Others	-0.66*** (0.08)	-1.42*** (0.14)	-0.68*** (0.13)	-0.11 (0.12)
Constant	5.32*** (0.05)	5.08*** (0.08)	5.45*** (0.07)	6.28*** (0.06)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,748.20	102,011.10	118,966.70	119,461.00

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations, but including age and education (ISCED 1997) as continuous predictor. The reference categories for categorical predictors are ‘Non-Female’, ‘West Germany’ & ‘PID: None’.

Table A.33: Climate Concern Robustness: Categorical IV

	Full (10-21)	10/16	16/20	20/21
Climate Concern: Somewhat (Within)	-0.07** (0.03)	0.01 (0.05)	0.03 (0.05)	-0.17** (0.07)
Climate Concern: Very (Within)	-0.26*** (0.04)	-0.09 (0.06)	-0.05 (0.06)	-0.41*** (0.08)
Climate Concern: Somewhat (Between)	0.53*** (0.04)	0.44*** (0.06)	0.51*** (0.06)	0.57*** (0.05)
Climate Concern: Very (Between)	0.42*** (0.04)	0.15** (0.06)	0.35*** (0.06)	0.51*** (0.05)
Female	0.02 (0.02)	0.02 (0.03)	0.01 (0.03)	0.04 (0.02)
Age: 26-35	-0.38*** (0.04)	-0.41*** (0.08)	-0.35*** (0.07)	-0.37*** (0.06)
Age: 36-45	-0.49*** (0.04)	-0.53*** (0.08)	-0.43*** (0.07)	-0.48*** (0.05)
Age: 46-55	-0.68*** (0.04)	-0.79*** (0.08)	-0.52*** (0.07)	-0.53*** (0.05)
Age: 56-65	-0.85*** (0.04)	-0.95*** (0.08)	-0.76*** (0.07)	-0.73*** (0.05)
Age: > 65	-0.90*** (0.04)	-0.91*** (0.08)	-0.85*** (0.07)	-0.83*** (0.05)
Education: Medium	-0.48*** (0.02)	-0.63*** (0.04)	-0.63*** (0.03)	-0.28*** (0.03)
Education: Low	-0.73*** (0.04)	-0.99*** (0.06)	-0.94*** (0.06)	-0.54*** (0.05)
East Germany	-0.71*** (0.03)	-0.88*** (0.04)	-0.94*** (0.04)	-0.44*** (0.03)
PID: Left	-0.23*** (0.05)	-0.40*** (0.08)	-0.13* (0.08)	-0.20*** (0.07)
PID: Greens	0.55*** (0.03)	0.87*** (0.06)	0.79*** (0.05)	0.45*** (0.04)
PID: SPD	0.52*** (0.03)	0.68*** (0.05)	0.64*** (0.05)	0.40*** (0.04)
PID: CDU	0.78*** (0.03)	1.00*** (0.04)	0.91*** (0.04)	0.62*** (0.04)
PID: CSU	0.41*** (0.06)	0.51*** (0.09)	0.54*** (0.09)	0.40*** (0.08)
PID: FDP	0.45*** (0.06)	0.72*** (0.09)	0.42*** (0.11)	0.37*** (0.07)
PID: AfD	-1.46*** (0.06)	-1.77*** (0.12)	-1.84*** (0.08)	-1.37*** (0.08)
PID: Others	-0.64*** (0.08)	-1.38*** (0.14)	-0.66*** (0.13)	-0.12 (0.12)
Constant	5.94*** (0.06)	6.15*** (0.09)	6.39*** (0.08)	6.53*** (0.07)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,735.60	101,994.10	119,051.40	119,435.50

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations, but using climate concern deviations as categorical predictor. The reference categories for categorical predictors are ‘Climate Concen: None (Within)’, ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.34: Climate Concern Robustness: Two-Way Fixed Effects Models

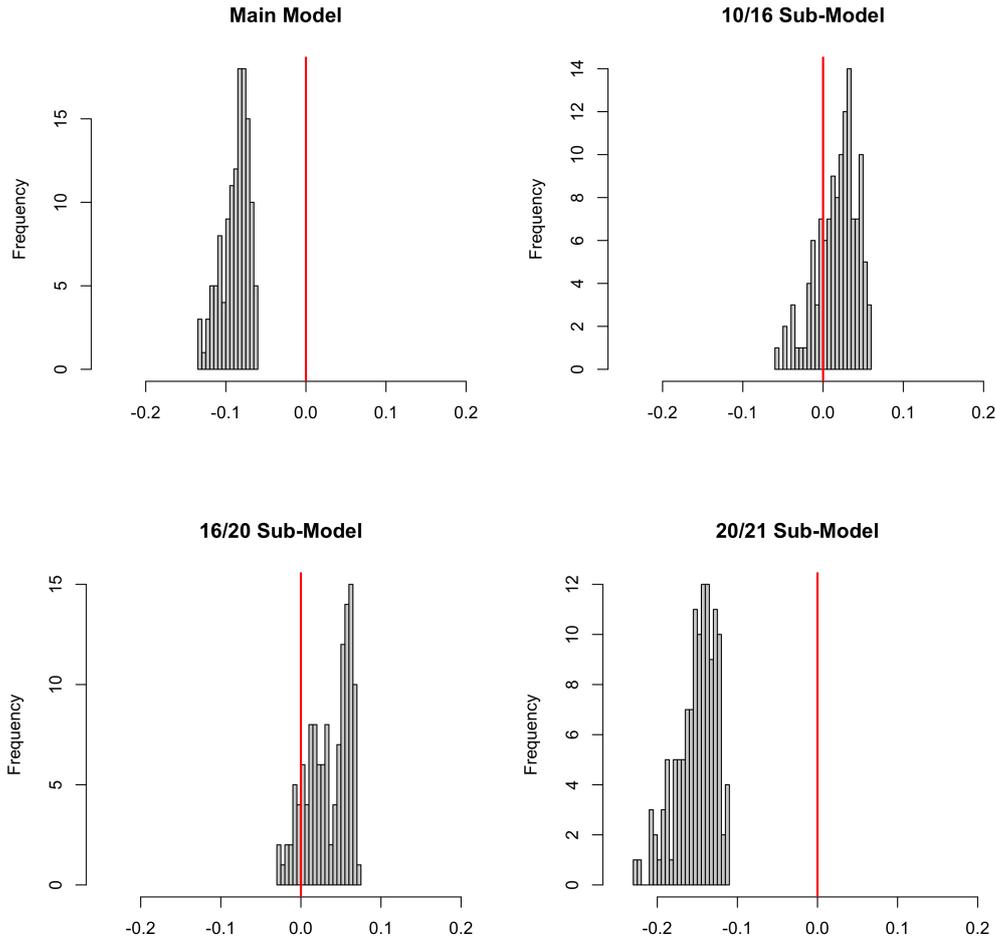
	Full (10-21)	10/16	16/20	20/21
Climate Concern	-0.11*** (0.02)	-0.05* (0.03)	-0.02 (0.03)	-0.20*** (0.03)
Female	-1.22* (0.65)		-1.39 (1.08)	-1.16 (0.85)
Age: 26-35	0.03 (0.07)	-0.23** (0.10)	0.14 (0.11)	0.27 (0.21)
Age: 36-45	-0.03 (0.09)	-0.41*** (0.13)	0.19 (0.13)	0.03 (0.29)
Age: 46-55	-0.12 (0.11)	-0.52*** (0.15)	0.38** (0.16)	-0.15 (0.34)
Age: 56-65	-0.13 (0.13)	-0.53*** (0.18)	0.41** (0.18)	-0.24 (0.37)
Age: > 65	0.02 (0.15)	-0.43** (0.22)	0.45** (0.20)	0.06 (0.41)
Education: Medium	0.17** (0.08)	-0.23* (0.13)	0.08 (0.14)	0.78*** (0.21)
Education: Low	0.50*** (0.11)	0.27 (0.19)	0.27 (0.19)	0.83*** (0.29)
East Germany	-0.02 (0.13)	0.11 (0.18)	-0.23 (0.22)	0.21 (0.40)
PID: Left	-0.13* (0.07)	-0.11 (0.12)	-0.11 (0.11)	-0.35** (0.14)
PID: Greens	0.04 (0.05)	0.23** (0.09)	0.04 (0.07)	-0.02 (0.09)
PID: SPD	0.22*** (0.04)	0.23*** (0.07)	0.24*** (0.07)	0.09 (0.09)
PID: CDU	0.33*** (0.04)	0.35*** (0.07)	0.36*** (0.06)	0.21*** (0.08)
PID: CSU	0.13 (0.08)	0.18 (0.13)	0.22 (0.14)	0.04 (0.17)
PID: FDP	0.23*** (0.08)	0.38*** (0.12)	-0.02 (0.15)	0.12 (0.14)
PID: AfD	-0.80*** (0.08)	-1.21*** (0.14)	-0.72*** (0.11)	-0.77*** (0.16)
PID: Others	-0.18* (0.10)	-0.54*** (0.18)	-0.23 (0.16)	0.40** (0.19)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Fix. Eff.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations, using two-way fixed effects instead of REWB models. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Extreme Bounds Analyses

Within our extreme bounds analyses, all estimated models include the common set of control variables, wave fixed effects and respondent-clustered standard errors. Also, every model contains the within climate concern deviation as predictor. The models then differ in the composition of the added ‘control variables’. A tough criterion for a coefficients’ robustness was conceptualized by Leamer (1985) by calculating its extreme bounds ($\beta_{\min} - z \times SE_{\min}$ and $\beta_{\max} + z \times SE_{\max}$). We set z such that resulting extreme bounds correspond to a 95% CI. Estimates are considered robust if the extreme bounds exclude 0.

Figure A.6: Climate Concern Sensitivity: Other Concern Deviations (EBA)



Distributions of β s of within-respondent climate concern deviations on SWD, when using each combination of the other concern deviations (besides environmental concern) as control variables. REWB models with respondent random intercepts, wave fixed effects and full control set. Data based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations.

First, we estimate models with every possible combination of our additional set of concern deviations, excluding the strongly correlated environmental concern deviations. Figure A.6 shows the distribution of the 127 resulting climate concern deviation β s for the main data set and each sub-sample. Table A.35 shows summary evaluations of these distributions. Compared to our main models, the estimated $\bar{\beta}$ is somewhat smaller for each sample (e.g. -0.09 vs. -0.14 in the main-model, and -0.15 vs. -0.21 in the 20/21 sub-sample). For both samples $\bar{\beta}$ is significantly below 0 and Leamer’s bounds exclude 0. They range from -0.03 to -0.17 in the

main data set and -0.30 to -0.04 in the 20/21 sub-model. The other two sub-samples however fail this test. Even though the average estimated β s are negative in both models, the effects are not strong enough and to susceptible to the inclusion of other concern deviations to be considered equally robust.

Table A.35: Climate Concern Sensitivity: Other Concern Deviations (EBA)

	Full Model	10/16 Sub-Model	16/20 Sub-Model	20/21 Sub-Model
$\bar{\beta}$	-0.088	0.018	0.034	-0.151
S.E.	0.018	0.031	0.028	0.036
$\beta < 0$ (p = 0.05)	1.000	0.000	0.000	1.000
Leamer's EB: Upper	-0.025	0.121	0.126	-0.038
Leamer's EB: Lower	-0.169	-0.115	-0.079	-0.298

Results depict statistics for β s of within-respondent climate concern deviations on SWD, when using each combination of the other concern deviations (besides environmental concern) as control variables. REWB models with respondent random intercepts, wave fixed effects and full control set. Data based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations.

Table A.36 depicts summary statistics for a similar exercise. This time, we probe the impact of deviations in respondents' life satisfaction and their mood in the month prior to the survey on our main effect. The mood is captured in four items asking about the frequency of feeling angry, worried, happy or sad. Results match the previous findings, as the main and the 20/21 sub-sample model prove robust, producing significant coefficients in every of the 31 estimated regressions. Meanwhile, the originally significant β in the 10/16 sub-sample model again proves sensitive to the inclusion to these controls, with only 1 of 31 regression coefficients reaching statistical significance.

Table A.36: Climate Concern Sensitivity: Current Mood & Life Satisfaction (EBA)

	Full Model	10/16 Sub-Model	16/20 Sub-Model	20/21 Sub-Model
$\bar{\beta}$	-0.139	-0.023	-0.036	-0.216
S.E.	0.018	0.033	0.027	0.035
$\beta < 0$ (p = 0.05)	1.000	0.032	0.000	1.000
Leamer's EB: Upper	-0.102	0.044	0.020	-0.138
Leamer's EB: Lower	-0.178	-0.121	-0.092	-0.293

Results depict statistics for β s of within-respondent climate concern deviations on SWD, using each combination of deviations in life satisfaction and the frequencies of feeling angry, worried, happy or sad in the previous 4 weeks as control variables. REWB models with respondent random intercepts, wave fixed effects and full control set. Data based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations.

Overall, we understand these results as strong support for the stability of our main effect and its existence in the 20/21 sub-sample. Here it is insensitive to the inclusion of co-concern deviations and measures of respondents' current moods and life satisfaction. This also illustrates, that climate concern is not a second order concern, whose effect depends on changes in other concern dimensions. The somewhat weaker significant effect originally identified for the 10/16 sub-sample is much more sensitive and lacks robustness.

A.4 Climate Concern: Hypothesized Interactions

Table A.37: Climate Concern \times Value Orientation (VO)

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.18*** (0.04)	-0.12* (0.07)	-0.10 (0.06)	-0.42*** (0.10)
Value Orientation: R. Post-Materialist	-0.05 (0.04)	-0.08 (0.05)	-0.06 (0.05)	-0.07 (0.05)
Value Orientation: R. Materialist	0.07** (0.03)	0.04 (0.05)	0.07 (0.04)	0.01 (0.04)
Value Orientation: Materialist	-0.02 (0.05)	-0.06 (0.07)	-0.03 (0.07)	-0.06 (0.07)
Climate Concern (Between)	0.11*** (0.02)	0.02 (0.03)	0.11*** (0.03)	0.13*** (0.03)
Female	0.05** (0.02)	0.02 (0.04)	0.01 (0.03)	0.10*** (0.03)
Age: 26-35	-0.36*** (0.05)	-0.45*** (0.08)	-0.35*** (0.07)	-0.19* (0.10)
Age: 36-45	-0.45*** (0.05)	-0.56*** (0.08)	-0.40*** (0.07)	-0.26*** (0.09)
Age: 46-55	-0.64*** (0.05)	-0.80*** (0.08)	-0.48*** (0.07)	-0.32*** (0.09)
Age: 56-65	-0.80*** (0.05)	-0.96*** (0.09)	-0.72*** (0.07)	-0.52*** (0.09)
Age: > 65	-0.85*** (0.05)	-0.97*** (0.09)	-0.83*** (0.07)	-0.63*** (0.09)
Education: Medium	-0.51*** (0.03)	-0.64*** (0.04)	-0.63*** (0.04)	-0.28*** (0.03)
Education: Low	-0.82*** (0.04)	-1.03*** (0.07)	-0.98*** (0.06)	-0.68*** (0.07)
East Germany	-0.77*** (0.03)	-0.87*** (0.04)	-0.92*** (0.04)	-0.46*** (0.04)
PID: Left	-0.21*** (0.06)	-0.37*** (0.08)	-0.08 (0.08)	-0.21** (0.09)
PID: Greens	0.56*** (0.04)	0.84*** (0.06)	0.78*** (0.05)	0.43*** (0.05)
PID: SPD	0.53*** (0.03)	0.68*** (0.05)	0.65*** (0.05)	0.40*** (0.05)
PID: CDU	0.78*** (0.03)	0.98*** (0.05)	0.90*** (0.04)	0.63*** (0.05)
PID: CSU	0.42*** (0.06)	0.50*** (0.09)	0.51*** (0.09)	0.40*** (0.10)
PID: FDP	0.47*** (0.07)	0.73*** (0.10)	0.41*** (0.11)	0.29*** (0.11)
PID: AfD	-1.56*** (0.07)	-1.94*** (0.12)	-1.93*** (0.09)	-1.47*** (0.10)
PID: Others	-0.83*** (0.09)	-1.46*** (0.14)	-0.69*** (0.14)	-0.15 (0.16)
CC (Within) \times VO: R. Post-Materialist	0.04 (0.06)	-0.02 (0.09)	0.07 (0.08)	0.13 (0.13)
CC (Within) \times VO: R. Materialist	0.06 (0.05)	0.12 (0.09)	0.02 (0.07)	0.23* (0.12)
CC (Within) \times VO: Materialist	0.19*** (0.07)	0.01 (0.12)	0.17 (0.10)	0.52*** (0.17)
Constant	6.20*** (0.07)	6.48*** (0.10)	6.63*** (0.09)	6.50*** (0.11)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	50,406	21,322	25,962	17,074
Akaike Inf. Crit.	214,310.30	90,998.94	110,249.70	71,693.85

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Value Orientation: Post-Materialist’, ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.38: Descriptives: Climate Concern Deviation over Value Orientation Sub-Groups – Main Data

Climate Concern Dev.	-1.50	-1.33	-1.25	-1.00	-0.75	-0.66	-0.50	-0.33	-0.25	0.00	0.25	0.33	0.50	0.66	0.75	1.00	1.25	1.33	1.50
Post-Materialist	0.10	0.20	0.30	1.40	2.50	3.90	8.20	6.40	5.30	41.00	7.10	7.30	8.60	3.60	2.30	1.40	0.10	0.10	0.00
R. Post-Materialist	0.10	0.20	0.20	1.60	2.50	3.80	8.00	6.50	5.50	41.90	6.70	7.30	8.20	3.50	2.20	1.60	0.20	0.10	0.00
R. Materialist	0.10	0.20	0.20	1.60	2.30	3.80	8.50	6.50	6.00	40.70	6.40	7.20	8.70	3.60	2.40	1.60	0.10	0.10	0.00
Materialist	0.10	0.20	0.30	1.60	2.20	3.50	9.40	7.40	4.80	40.20	5.80	6.40	9.60	4.30	2.10	1.70	0.20	0.20	0.10

Share of observations (in %) with respective deviation in climate concern from respondents’ average concern. Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023).

Table A.39: Descriptives: Climate Concern Deviation over Value Orientation Sub-Groups – 20/21 Sub-Sample

Climate Concern Dev.	-1.00	-0.50	0.00	0.50	1.00
Post-Materialist	0.90	15.00	68.30	15.00	0.90
R. Post-Materialist	0.90	16.20	65.70	16.20	0.90
R. Materialist	0.90	17.20	63.90	17.20	0.90
Materialist	1.40	17.20	62.70	17.20	1.40

Share of observations (in %) with respective deviation in climate concern from respondents’ average concern. Based on 2020/2021 sub-sample of the SOEP-Panel (Goebel et al., 2023).

Table A.40: Climate Concern × Green Partisanship

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.54*** (0.09)	-0.28* (0.15)	-0.30** (0.13)	-0.68*** (0.15)
Sometimes Green	-0.21*** (0.06)	-0.34*** (0.12)	-0.29*** (0.10)	-0.13* (0.07)
Never Green	-0.67*** (0.07)	-0.82*** (0.12)	-1.03*** (0.10)	-0.45*** (0.09)
Climate Concern (Between)	0.09** (0.02)	-0.01 (0.03)	0.04 (0.03)	0.13*** (0.02)
Female	0.03 (0.02)	0.03 (0.03)	0.01 (0.03)	0.04* (0.02)
Age: 26-35	-0.35*** (0.04)	-0.39*** (0.08)	-0.32*** (0.07)	-0.36*** (0.06)
Age: 36-45	-0.46*** (0.04)	-0.50*** (0.08)	-0.39*** (0.07)	-0.47*** (0.05)
Age: 46-55	-0.65*** (0.04)	-0.76*** (0.08)	-0.48*** (0.07)	-0.51*** (0.05)
Age: 56-65	-0.81*** (0.04)	-0.92*** (0.08)	-0.72*** (0.07)	-0.72*** (0.05)
Age: > 65	-0.85*** (0.04)	-0.88*** (0.08)	-0.79*** (0.07)	-0.81*** (0.05)
Education: Medium	-0.44*** (0.02)	-0.60*** (0.04)	-0.58*** (0.03)	-0.27*** (0.03)
Education: Low	-0.68*** (0.04)	-0.96*** (0.06)	-0.88*** (0.06)	-0.53*** (0.05)
East Germany	-0.69*** (0.03)	-0.86*** (0.04)	-0.92*** (0.04)	-0.43*** (0.03)
PID: Left	-0.25*** (0.05)	-0.41*** (0.08)	-0.15** (0.07)	-0.21*** (0.07)
PID: Greens	0.14*** (0.05)	0.34*** (0.09)	0.14* (0.08)	0.05 (0.08)
PID: SPD	0.51*** (0.03)	0.68*** (0.05)	0.63*** (0.05)	0.41*** (0.04)
PID: CDU	0.80*** (0.03)	1.02*** (0.04)	0.93*** (0.04)	0.65*** (0.04)
PID: CSU	0.45*** (0.06)	0.53*** (0.09)	0.56*** (0.09)	0.42*** (0.08)
PID: FDP	0.46*** (0.06)	0.72*** (0.09)	0.43*** (0.11)	0.38*** (0.07)
PID: AfD	-1.49*** (0.06)	-1.79*** (0.12)	-1.87*** (0.08)	-1.42*** (0.08)
PID: Others	-0.68*** (0.08)	-1.43*** (0.14)	-0.68*** (0.13)	-0.14 (0.12)
CC (Within) × Sometimes Green	0.33*** (0.11)	0.51** (0.20)	0.32* (0.17)	0.44** (0.21)
CC (Within) × Never Green	0.43*** (0.09)	0.22 (0.15)	0.28** (0.13)	0.51*** (0.15)
Constant	6.81*** (0.08)	7.19*** (0.15)	7.61*** (0.13)	7.25*** (0.11)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,685.50	102,017.40	118,974.20	119,480.90

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. The reference categories for categorical predictors are ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.41: Descriptives: Climate Concern Deviation over Stable Partisanship Sub-Groups – Main Data

Climate Concern Dev.	-1.50	-1.33	-1.25	-1.00	-0.75	-0.66	-0.50	-0.33	-0.25	0.00	0.25	0.33	0.50	0.66	0.75	1.00	1.25	1.33	1.50
Always	0.00	0.00	0.10	0.40	1.70	2.50	8.10	3.30	2.90	58.30	5.40	5.40	8.30	1.90	1.20	0.40	0.00	0.00	0.00
Sometimes	0.20	0.30	0.30	1.20	2.70	3.20	7.90	4.00	5.40	45.60	7.90	6.40	8.40	2.60	2.40	1.20	0.10	0.00	0.00
Never	0.10	0.10	0.20	1.70	2.00	3.20	10.10	5.90	4.80	43.20	5.40	6.00	10.20	3.30	1.90	1.70	0.10	0.10	0.00

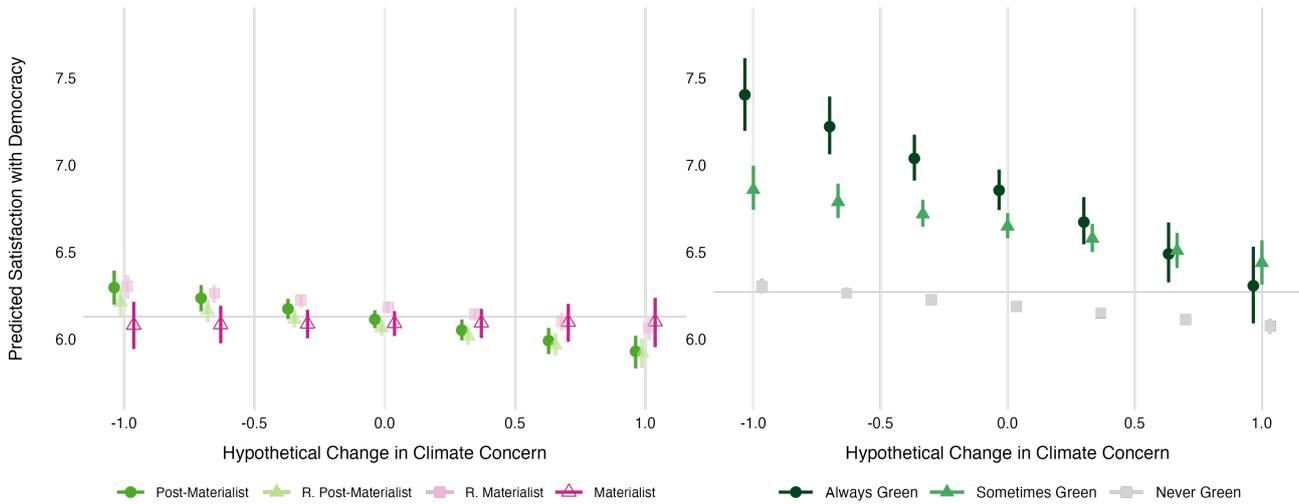
Share of observations (in %) with respective deviation in climate concern from respondents’ average concern. Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023).

Table A.42: Descriptives: Climate Concern Deviation over Stable Partisanship Sub-Groups – 20/21 Sub-Sample

Climate Concern Dev.	-1.00	-0.50	0.00	0.50	1.00
Always	0.20	10.90	77.80	10.90	0.20
Sometimes	0.80	14.10	70.10	14.10	0.80
Never	1.20	17.60	62.20	17.60	1.20

Share of observations (in %) with respective deviation in climate concern from respondents’ average concern. Based on 2020/2021 sub-sample of the SOEP-Panel (Goebel et al., 2023).

Figure A.7: Simulating Predicted Satisfaction with Democracy



The plots present predicted satisfaction with democracy and corresponding 95-percent confidence intervals obtained via post-estimation simulation using an observed value approach (Hanmer & Ozan Kalkan, 2013; King et al., 2000). For this approach, different scenarios are defined by setting climate concern deviation values and stable Green partisanship / value orientations to a range of different values for all respondents, but leaving all other co-variate values as observed. To simulate uncertainty, we then take 1000 draws from a simulated sampling distribution based on the estimated model coefficients and their variance covariance matrix. For each defined scenario, we then obtain 1000 predicted satisfaction with democracy values per individual by multiplying the co-variate values with the sampled coefficients. These are then averaged over all respondents creating 1000 average predictions per scenario. Finally, point estimates depict the average predicted democratic satisfaction of those 1000 simulations per scenario and CIs span between the 2.5- and 97.5-percentile of the simulated values. Based on fully controlled interaction models (tables A.37 & A.40). Horizontal lines indicates average measured democratic satisfaction in observations used for respective analysis. They differ slightly since the value orientation models can only be estimated for respondents participating in the 2016 wave, from where the measure derives. Based on main data set including 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations.

A.5 Climate Concern: Exploratory Interactions

As briefly described in the paper’s main text, we explore other factors that might lead to salience heterogeneity at the individual level and therefore moderate the effect of rising climate concern on democratic satisfaction to provide more context for the reader. We run interaction analyses based on respondents’ age, education, region (East/West Germany), sex, and party identification at point t .

For example, younger citizens will arguably experience the negative impacts of climate change stronger and the politicization of climate action is greatly driven by youth-led movements. Empirically, age does not significantly moderate the effect of climate concern changes in the main model (tab. A.43). Only, in the 16/20 sub-sample, there is some evidence that the below 25 years-old are more affected by climate concerns than their middle-aged counterparts. Still, the negative impact of climate concern increase on SWD is neither purely driven by nor exclusive to younger citizens. Even less so, the impact is not significantly moderated by respondents’ sex in any model (tab. A.46).

Table A.43: Exploratory: Climate Concern \times Age

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.14** (0.07)	0.10 (0.15)	-0.26** (0.11)	-0.13 (0.12)
Age: 26-35	-0.38*** (0.04)	-0.40*** (0.08)	-0.33*** (0.07)	-0.37*** (0.06)
Age: 36-45	-0.48*** (0.04)	-0.51*** (0.08)	-0.40*** (0.07)	-0.48*** (0.05)
Age: 46-55	-0.66*** (0.04)	-0.77*** (0.08)	-0.49*** (0.07)	-0.52*** (0.05)
Age: 56-65	-0.84*** (0.04)	-0.93*** (0.08)	-0.74*** (0.07)	-0.72*** (0.05)
Age: > 65	-0.89*** (0.04)	-0.90*** (0.08)	-0.82*** (0.07)	-0.82*** (0.05)
Climate Concern (Between)	0.13*** (0.02)	0.01 (0.03)	0.09*** (0.03)	0.14*** (0.02)
Female	0.03 (0.02)	0.04 (0.03)	0.02 (0.03)	0.04* (0.02)
Education: Medium	-0.47*** (0.02)	-0.63*** (0.04)	-0.63*** (0.03)	-0.28*** (0.03)
Education: Low	-0.73*** (0.04)	-1.00*** (0.06)	-0.95*** (0.06)	-0.54*** (0.05)
East Germany	-0.71*** (0.03)	-0.88*** (0.04)	-0.95*** (0.04)	-0.44*** (0.03)
PID: Left	-0.24*** (0.05)	-0.40*** (0.08)	-0.14* (0.08)	-0.21*** (0.07)
PID: Greens	0.53*** (0.03)	0.86*** (0.06)	0.78*** (0.05)	0.43*** (0.04)
PID: SPD	0.52*** (0.03)	0.68*** (0.05)	0.65*** (0.05)	0.41*** (0.04)
PID: CDU	0.78*** (0.03)	1.00*** (0.04)	0.92*** (0.04)	0.64*** (0.04)
PID: CSU	0.42*** (0.06)	0.51*** (0.09)	0.54*** (0.09)	0.41*** (0.08)
PID: FDP	0.45*** (0.06)	0.70*** (0.09)	0.41*** (0.11)	0.37*** (0.07)
PID: AfD	-1.49*** (0.06)	-1.79*** (0.12)	-1.87*** (0.08)	-1.42*** (0.08)
PID: Others	-0.66*** (0.08)	-1.41*** (0.14)	-0.67*** (0.13)	-0.12 (0.12)
CC (Within) \times Age: 26-35	-0.08 (0.08)	-0.27 (0.19)	0.30** (0.14)	-0.25 (0.15)
CC (Within) \times Age: 36-45	-0.05 (0.08)	-0.31* (0.17)	0.28** (0.13)	-0.10 (0.15)
CC (Within) \times Age: 46-55	0.06 (0.08)	-0.04 (0.17)	0.25** (0.12)	0.04 (0.14)
CC (Within) \times Age: 56-65	0.02 (0.08)	-0.04 (0.18)	0.19 (0.13)	-0.10 (0.14)
CC (Within) \times Age: > 65	0.01 (0.08)	-0.17 (0.17)	0.19 (0.12)	-0.10 (0.14)
Constant	6.18*** (0.05)	6.41*** (0.09)	6.64*** (0.08)	6.82*** (0.06)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,865.20	102,066.80	119,121.70	119,519.40

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories: ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

We do find significant evidence for a moderation based on residential regions in the main model (tab. A.45). Here, rising climate concern affects democratic satisfaction significantly twice as strong for West compared to East German residents ($\beta = -0.16$ vs. -0.08). This moderation is driven by the 20/21 sub-sample where the interaction-coefficient amounts to 0.14 points, and does not manifest in any other sub-sample.

Conditioning on educational attainment produces similar results. Climate change is often seen as a very complex topic and German climate movements have been largely driven by activists from academic backgrounds. Fittingly, the full model suggests that highly educated respondents experience a stronger negative impact of rising climate concern on democratic satisfaction compared to medium-educated individuals (tab. A.44). This is, again, driven

purely by the most recent sub-sample, for which a significant moderation is identified ($\beta_s = -0.36$ vs. -0.11). Unexpectedly, the climate concern deviation effect is never significantly weaker amongst lower-educated respondents. On the contrary, in the 10/16 sub-sample it is actually significantly stronger ($+ 0.27$) than amongst the highly educated. Diving into these diverging patterns is left for future scholars as it exceeds the scope of this paper.

Table A.44: Exploratory: Climate Concern \times Education

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.23*** (0.03)	0.02 (0.05)	-0.07 (0.05)	-0.36*** (0.06)
Education: Medium	-0.47*** (0.02)	-0.63*** (0.04)	-0.63*** (0.03)	-0.28*** (0.03)
Education: Low	-0.73*** (0.04)	-1.01*** (0.06)	-0.95*** (0.06)	-0.55*** (0.05)
Climate Concern (Between)	0.13*** (0.02)	0.01 (0.03)	0.09*** (0.03)	0.14*** (0.02)
Female	0.03 (0.02)	0.04 (0.03)	0.02 (0.03)	0.04* (0.02)
Age: 26-35	-0.38*** (0.04)	-0.40*** (0.08)	-0.34*** (0.07)	-0.37*** (0.06)
Age: 36-45	-0.48*** (0.04)	-0.51*** (0.08)	-0.41*** (0.07)	-0.48*** (0.05)
Age: 46-55	-0.67*** (0.04)	-0.77*** (0.08)	-0.50*** (0.07)	-0.52*** (0.05)
Age: 56-65	-0.84*** (0.04)	-0.93*** (0.08)	-0.74*** (0.07)	-0.72*** (0.05)
Age: > 65	-0.89*** (0.04)	-0.90*** (0.08)	-0.83*** (0.07)	-0.82*** (0.05)
East Germany	-0.71*** (0.03)	-0.88*** (0.04)	-0.95*** (0.04)	-0.44*** (0.03)
PID: Left	-0.24*** (0.05)	-0.40*** (0.08)	-0.14* (0.08)	-0.21*** (0.07)
PID: Greens	0.53*** (0.03)	0.86*** (0.06)	0.78*** (0.05)	0.43*** (0.04)
PID: SPD	0.52*** (0.03)	0.68*** (0.05)	0.65*** (0.05)	0.41*** (0.04)
PID: CDU	0.78*** (0.03)	1.00*** (0.04)	0.92*** (0.04)	0.64*** (0.04)
PID: CSU	0.42*** (0.06)	0.51*** (0.09)	0.54*** (0.09)	0.41*** (0.08)
PID: FDP	0.45*** (0.06)	0.70*** (0.09)	0.41*** (0.11)	0.37*** (0.07)
PID: AfD	-1.49*** (0.06)	-1.80*** (0.12)	-1.87*** (0.08)	-1.42*** (0.08)
PID: Others	-0.66*** (0.08)	-1.42*** (0.14)	-0.67*** (0.13)	-0.13 (0.12)
CC (Within) \times Education: Medium	0.16*** (0.04)	-0.08 (0.07)	0.07 (0.06)	0.25*** (0.08)
CC (Within) \times Education: Low	0.04 (0.06)	-0.27** (0.11)	-0.03 (0.09)	0.12 (0.12)
Constant	6.18*** (0.05)	6.41*** (0.09)	6.64*** (0.08)	6.81*** (0.06)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,836.60	102,059.60	119,111.90	119,501.60

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories: ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Table A.45: Exploratory: Climate Concern \times East vs. West

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.16*** (0.02)	-0.05 (0.03)	-0.04 (0.03)	-0.25*** (0.04)
East Germany	-0.71*** (0.03)	-0.88*** (0.04)	-0.95*** (0.04)	-0.44*** (0.03)
Climate Concern (Between)	0.13*** (0.02)	0.01 (0.03)	0.09*** (0.03)	0.14*** (0.02)
Female	0.03 (0.02)	0.04 (0.03)	0.02 (0.03)	0.04* (0.02)
Age: 26-35	-0.38*** (0.04)	-0.40*** (0.08)	-0.34*** (0.07)	-0.37*** (0.06)
Age: 36-45	-0.48*** (0.04)	-0.52*** (0.08)	-0.41*** (0.07)	-0.48*** (0.05)
Age: 46-55	-0.67*** (0.04)	-0.77*** (0.08)	-0.50*** (0.07)	-0.52*** (0.05)
Age: 56-65	-0.84*** (0.04)	-0.93*** (0.08)	-0.74*** (0.07)	-0.72*** (0.05)
Age: > 65	-0.89*** (0.04)	-0.90*** (0.08)	-0.83*** (0.07)	-0.82*** (0.05)
Education: Medium	-0.47*** (0.02)	-0.63*** (0.04)	-0.63*** (0.03)	-0.28*** (0.03)
Education: Low	-0.73*** (0.04)	-1.01*** (0.06)	-0.94*** (0.06)	-0.55*** (0.05)
PID: Left	-0.24*** (0.05)	-0.40*** (0.08)	-0.14* (0.08)	-0.21*** (0.07)
PID: Greens	0.53*** (0.03)	0.86*** (0.06)	0.77*** (0.05)	0.43*** (0.04)
PID: SPD	0.52*** (0.03)	0.68*** (0.05)	0.65*** (0.05)	0.41*** (0.04)
PID: CDU	0.79*** (0.03)	1.00*** (0.04)	0.92*** (0.04)	0.64*** (0.04)
PID: CSU	0.42*** (0.06)	0.51*** (0.09)	0.54*** (0.09)	0.41*** (0.08)
PID: FDP	0.45*** (0.06)	0.70*** (0.09)	0.41*** (0.11)	0.37*** (0.07)
PID: AfD	-1.49*** (0.06)	-1.79*** (0.12)	-1.87*** (0.08)	-1.42*** (0.08)
PID: Others	-0.66*** (0.08)	-1.42*** (0.14)	-0.67*** (0.13)	-0.12 (0.12)
CC (Within) \times East Germany	0.08* (0.04)	-0.05 (0.07)	0.03 (0.06)	0.14* (0.08)
Constant	6.19*** (0.05)	6.41*** (0.09)	6.65*** (0.08)	6.81*** (0.06)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,844.60	102,060.70	119,108.70	119,504.60

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories: ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

Lastly, we find limited evidence for a moderating impact of Green partisanship at point t . In

Table A.46: Exploratory: Climate Concern \times Sex

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.16*** (0.03)	-0.06 (0.04)	-0.04 (0.04)	-0.23*** (0.05)
Female	0.03 (0.02)	0.04 (0.03)	0.02 (0.03)	0.04* (0.02)
Climate Concern (Between)	0.13*** (0.02)	0.01 (0.03)	0.09*** (0.03)	0.14*** (0.02)
Age: 26-35	-0.38*** (0.04)	-0.40*** (0.08)	-0.34*** (0.07)	-0.37*** (0.06)
Age: 36-45	-0.48*** (0.04)	-0.51*** (0.08)	-0.41*** (0.07)	-0.48*** (0.05)
Age: 46-55	-0.67*** (0.04)	-0.77*** (0.08)	-0.50*** (0.07)	-0.52*** (0.05)
Age: 56-65	-0.84*** (0.04)	-0.93*** (0.08)	-0.74*** (0.07)	-0.72*** (0.05)
Age: > 65	-0.89*** (0.04)	-0.90*** (0.08)	-0.83*** (0.07)	-0.82*** (0.05)
Education: Medium	-0.47*** (0.02)	-0.63*** (0.04)	-0.63*** (0.03)	-0.28*** (0.03)
Education: Low	-0.73*** (0.04)	-1.01*** (0.06)	-0.94*** (0.06)	-0.55*** (0.05)
East Germany	-0.71*** (0.03)	-0.88*** (0.04)	-0.95*** (0.04)	-0.44*** (0.03)
PID: Left	-0.24*** (0.05)	-0.40*** (0.08)	-0.14* (0.08)	-0.21*** (0.07)
PID: Greens	0.53*** (0.03)	0.86*** (0.06)	0.77*** (0.05)	0.43*** (0.04)
PID: SPD	0.52*** (0.03)	0.68*** (0.05)	0.65*** (0.05)	0.41*** (0.04)
PID: CDU	0.78*** (0.03)	1.00*** (0.04)	0.92*** (0.04)	0.64*** (0.04)
PID: CSU	0.42*** (0.06)	0.51*** (0.09)	0.54*** (0.09)	0.41*** (0.08)
PID: FDP	0.45*** (0.06)	0.70*** (0.09)	0.41*** (0.11)	0.37*** (0.07)
PID: AfD	-1.49*** (0.06)	-1.79*** (0.12)	-1.87*** (0.08)	-1.42*** (0.08)
PID: Others	-0.66*** (0.08)	-1.42*** (0.14)	-0.67*** (0.13)	-0.12 (0.12)
CC (Within) \times Female	0.04 (0.03)	0.002 (0.06)	-0.003 (0.05)	0.03 (0.07)
Constant	6.18*** (0.05)	6.41*** (0.09)	6.65*** (0.08)	6.81*** (0.06)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,847.60	102,061.60	119,109.20	119,507.80

* (**,***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories: ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: None’.

the full-model, Green-identifiers loose 0.44 points in democratic satisfaction with every one-unit increase in climate concern (tab. A.47). This effect is significantly stronger than that of any other partisan group, with only the FDP-comparisons being statistically insignificant. This is, again, mostly driven by the 20/21 sub-sample. Here, the biggest differences exist between Green- vs. FDP- and AfD-identifiers ($\beta_{interaction} = 0.68; 0.51$). The moderating effect of partisan identification at wave t thus lacks robustness over time compared to our stable Green partisanship analysis (tab. A.40). As argued above, parties can influence their partisans opinions and issue salience. However, it seemingly takes time for this influence to take roots. This also corroborates stable Green partisanship as the more fitting operationalization to proxy individuals’ climate salience.

Table A.47: Exploratory: Climate Concern \times Party ID

	Full (10-21)	10/16	16/20	20/21
Climate Concern (Within)	-0.44*** (0.07)	-0.07 (0.13)	-0.21* (0.11)	-0.54*** (0.12)
PID: Left	-0.78*** (0.06)	-1.26*** (0.10)	-0.92*** (0.09)	-0.65*** (0.07)
PID: SPD	-0.02 (0.04)	-0.17** (0.07)	-0.13** (0.06)	-0.02 (0.05)
PID: CDU	0.24*** (0.04)	0.14** (0.07)	0.14** (0.06)	0.20*** (0.05)
PID: CSU	-0.12* (0.06)	-0.35*** (0.10)	-0.23** (0.10)	-0.03 (0.08)
PID: FDP	-0.09 (0.06)	-0.15 (0.11)	-0.36*** (0.12)	-0.06 (0.08)
PID: AfD	-2.04*** (0.07)	-2.65*** (0.13)	-2.65*** (0.10)	-1.85*** (0.09)
PID: Others	-1.20*** (0.09)	-2.28*** (0.15)	-1.46*** (0.14)	-0.55*** (0.12)
PID: None	-0.54*** (0.03)	-0.86*** (0.06)	-0.78*** (0.05)	-0.43*** (0.04)
Climate Concern (Between)	0.13*** (0.02)	0.01 (0.03)	0.09*** (0.03)	0.14*** (0.02)
Female	0.03 (0.02)	0.04 (0.03)	0.02 (0.03)	0.05* (0.02)
Age: 26-35	-0.38*** (0.04)	-0.41*** (0.08)	-0.34*** (0.07)	-0.37*** (0.06)
Age: 36-45	-0.48*** (0.04)	-0.52*** (0.08)	-0.41*** (0.07)	-0.48*** (0.05)
Age: 46-55	-0.67*** (0.04)	-0.77*** (0.08)	-0.50*** (0.07)	-0.52*** (0.05)
Age: 56-65	-0.84*** (0.04)	-0.94*** (0.08)	-0.75*** (0.07)	-0.73*** (0.05)
Age: > 65	-0.89*** (0.04)	-0.91*** (0.08)	-0.83*** (0.07)	-0.82*** (0.05)
Education: Medium	-0.47*** (0.02)	-0.63*** (0.04)	-0.63*** (0.03)	-0.28*** (0.03)
Education: Low	-0.73*** (0.04)	-1.00*** (0.06)	-0.94*** (0.06)	-0.54*** (0.05)
East Germany	-0.71*** (0.03)	-0.88*** (0.04)	-0.94*** (0.04)	-0.44*** (0.03)
CC (Within) \times PID: Linke	0.37*** (0.12)	-0.25 (0.21)	0.17 (0.19)	0.42* (0.22)
CC (Within) \times PID: SPD	0.30*** (0.09)	0.09 (0.16)	0.16 (0.14)	0.26 (0.17)
CC (Within) \times PID: CDU	0.20** (0.08)	-0.05 (0.15)	0.07 (0.13)	0.24 (0.16)
CC (Within) \times PID: CSU	0.36*** (0.13)	0.16 (0.22)	0.58*** (0.21)	0.48* (0.25)
CC (Within) \times PID: FDP	0.22 (0.14)	-0.33 (0.26)	-0.19 (0.26)	0.68*** (0.24)
CC (Within) \times PID: AfD	0.29** (0.14)	-0.19 (0.33)	0.24 (0.21)	0.51** (0.24)
CC (Within) \times PID: Others	0.43** (0.19)	0.38 (0.32)	0.30 (0.34)	0.63 (0.39)
CC (Within) \times PID: None	0.35*** (0.07)	0.04 (0.14)	0.20* (0.11)	0.35*** (0.13)
Constant	6.73*** (0.06)	7.27*** (0.10)	7.43*** (0.09)	7.25*** (0.07)
Wave Fix. Eff.	✓	✓	✓	✓
Respondent Rand. Int.	✓	✓	✓	✓
Observations	65,409	23,846	28,006	28,400
Akaike Inf. Crit.	278,850.00	102,076.00	119,121.40	119,517.60

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Based on 4 waves (2010, 2016, 2020, 2021) of the SOEP-Panel (Goebel et al., 2023) with described data transformations. Reference categories: ‘Non-Female’, ‘Age: < 26’, ‘Education: High’, ‘West Germany’ & ‘PID: Greens’.

B Appendix for Study 2

B.1 Data Description

Table B.1: Item Wordings

Items	Waves	Wording	Original Scale
Climate Concern	1, 2, 3	How concerned are you about climate change?	Categorical: Not concerned at all, Not very concerned, Somewhat concerned, Very concerned, Extremely concerned
SWD	1, 3	How satisfied are you, all things considered, with the way democracy works in Germany?	Numerical: 0 (Completely dissatisfied) – 10 (Completely Satisfied)
SFD	1, 3	In how far do you agree with the following statement? Democracy is the political system that best suits our society.	Categorical: Fully Disagree, Rather Disagree, Partly (Dis-)Agree, Rather Agree, Fully Agree
Fair Share	1, 3	Compared to how other people live here in Germany: Do you think you personally receive your fair share, or do you personally receive more or less than your fair share?	Categorical: Much Less than my fair share, Less than my fair share, My fair share, Little more than my fair share, Much more than my fair share
Life Satisfaction	1, 2, 3	Now we'd like to ask you about your overall satisfaction with your life. How satisfied are you, all things considered, with your life at the moment?	Numerical: 0 (Completely dissatisfied) – 10 (Completely Satisfied)
Social Ladder	1, 2, 3	Imagine that a ladder represents the different strata of society in Germany. At the top of the ladder – on rung 10 – are the people who are best off: they have the most money, the best education, and a highly respected job. At the bottom of the ladder – on rung 1 – are the people who are worst off: they have the least money, the least education, and no job or a job that no one wants or respects. Please indicate which rung of the ladder corresponds to your current position in society.	Numerical: 1 (Bottom) – 10 (Top)
Vote Intention	1, 3	Which party would you vote for if there were a federal election next Sunday?	Categorical: All parliament parties, NPD/Republikaner/Rechte, Others, Would not vote, Not eligible, Don't know
Climate Saliene	2	And how important ist the topic of fighting climate change to you?	Categorical: Not important at all, Not so important, Partly Important, Important, Very Important
Individual Efficacy	2	In how far do you agree with the following statements? – With my involvement, I can influence politics in this country.	Categorical: Fully Disagree, Rather Disagree, Partly, Rather Agree, Fully Agree
Collective Efficacy	2	– When citizens come together, they can exert a strong influence on political decisions in this country.	Categorical: Fully Disagree, Rather Disagree, Partly, Rather Agree, Fully Agree

Table B.2: Item Re-Codings

Items	Recoding
Climate Concern Δ	To Numerical and Differenced: Climate Concern ₂₀₂₃ - Climate Concern ₂₀₂₁
SWD Δ	As Numerical and Differenced: SWD ₂₀₂₃ - SWD ₂₀₂₁
SFD Δ	To Numerical and Differenced: SFD ₂₀₂₃ - SFD ₂₀₂₁
Fair Share Δ	To Numerical and Differenced: Fair Share ₂₀₂₃ - Fair Share ₂₀₂₁
Life Satisfaction Δ	As Numerical and Differenced: Life Satisfaction ₂₀₂₃ - Life Satisfaction ₂₀₂₁
Social Ladder Δ	As Numerical and Differenced: Social Ladder ₂₀₂₃ - Social Ladder ₂₀₂₁
Vote ₂₀₂₁	As Categorical: Don't know, All separate parliament parties, Radical Right, Others, None/Not eligible
Vote ₂₀₂₃	As Categorical: Don't know, All separate parliament parties, Radical Right, Others, None/Not eligible
Climate Saliene ₂₀₂₂	To Numerical: (0 – 5)
Individual Efficacy ₂₀₂₂	To Numerical: (-2 – 2)
Collective Efficacy ₂₀₂₂	To Numerical: (-2 – 2)
Efficacy ₂₀₂₂	Combined: (Individual Efficacy ₂₀₂₂ + Collective Efficacy ₂₀₂₂) / 2

Table B.3: Descriptives: Raw Categorical Variables

Variable	Levels	n ₂₀₂₁	% ₂₀₂₁	Σ % ₂₀₂₁	n ₂₀₂₂	% ₂₀₂₂	Σ % ₂₀₂₂	n ₂₀₂₃	% ₂₀₂₃	Σ % ₂₀₂₃	n _{all}	% _{all}	Σ % _{all}
Climate Concern	Not at all concerned	69	1.6	1.6				165	3.9	3.9	234	2.8	2.8
	Not very concerned	248	5.9	7.6				385	9.2	13.1	633	7.5	10.3
	Somewhat concerned	1098	26.2	33.8				1255	29.9	43.1	2353	28.1	38.4
	Very concerned	1824	43.5	77.3				1668	39.8	82.9	3492	41.7	80.1
	Extremely concerned	952	22.7	100.0				718	17.1	100.0	1670	19.9	100.0
Support for Democracy	Fully Disagree	24	0.6	0.6				27	0.6	0.6	51	0.6	0.6
	Rather Disagree	87	2.1	2.6				97	2.3	3.0	184	2.2	2.8
	Partly (Dis)agree	470	11.2	13.9				531	12.7	15.6	1001	11.9	14.8
	Rather Agree	1115	26.6	40.5				1304	31.1	46.7	2419	28.9	43.6
	Fully Agree	2495	59.5	100.0				2232	53.3	100.0	4727	56.4	100.0
Fair Share	Much Less than my fair share	153	3.6	3.6				211	5.0	5.0	364	4.3	4.3
	Less than my fair share	1330	31.7	35.4				1364	32.5	37.6	2694	32.1	36.5
	My fair share	2254	53.8	89.2				2162	51.6	89.2	4416	52.7	89.2
	Little more than my fair share	415	9.9	99.1				419	10.0	99.2	834	9.9	99.1
	Much more than my fair share	39	0.9	100.0				35	0.8	100.0	74	0.9	100.0
Vote Intention	Don't Know	389	9.3	9.3				259	6.2	6.2	648	7.7	7.7
	Left	239	5.7	15.0				254	6.1	12.2	493	5.9	13.6
	Greens	838	20.0	35.0				849	20.3	32.5	1687	20.1	33.7
	SPD	994	23.7	58.7				686	16.4	48.9	1680	20.0	53.8
	Union	743	17.7	76.4				961	22.9	71.8	1704	20.3	74.1
	FDP	383	9.1	85.6				246	5.9	77.7	629	7.5	81.6
	AfD	198	4.7	90.3				387	9.2	86.9	585	7.0	88.6
	RadRight	6	0.1	90.4				9	0.2	87.1	15	0.2	88.8
	Other	195	4.7	95.1				182	4.3	91.5	377	4.5	93.3
	None/Not Eligible	206	4.9	100.0				358	8.5	100.0	564	6.7	100.0
	Climate Salience	Not important at all				45	1.2	1.2				45	1.2
Not so important					182	4.8	5.9				182	4.8	5.9
Partly important					568	14.9	20.8				568	14.9	20.8
Important					1619	42.5	63.3				1619	42.5	63.3
Very important					1400	36.7	100.0				1400	36.7	100.0
Individual Efficacy	Fully Disagree				493	12.9	12.9				493	12.9	12.9
	Rather Disagree				1321	34.5	47.4				1321	34.5	47.4
	Partly (Dis)agree				1253	32.7	80.1				1253	32.7	80.1
	Rather Agree				672	17.6	97.7				672	17.6	97.7
	Fully Agree				89	2.3	100.0				89	2.3	100.0
Collective Efficacy	Fully Disagree				124	3.2	3.2				124	3.2	3.2
	Rather Disagree				651	17.0	20.2				651	17.0	20.2
	Partly (Dis)agree				1295	33.8	54.0				1295	33.8	54.0
	Rather Agree				1456	38.0	92.0				1456	38.0	92.0
	Fully Agree				305	8.0	100.0				305	8.0	100.0

Table B.4: Descriptives: Raw Continuous Variables

Variable	Survey Year	Min	Q ₁	Mean	Q ₃	SD	Max
Satisfaction with Democracy	2021	0	5	6.5	8	2.2	10
	2023	0	5	5.9	8	2.2	10
Life Satisfaction	2021	-5	2	2.5	4	1.8	5
	2023	-5	1	2.1	3	1.8	5
Social Ladder	2021	1	5	6.3	7	1.6	10
	2023	1	6	6.4	8	1.6	10

Table B.5: Descriptives: Recoded Categorical Variables

Variable	Levels	n	%
Vote ₂₀₂₁	Don't Know	389	9.3
	Left	239	5.7
	Greens	838	20.0
	SPD	994	23.7
	Union	743	17.7
	FDP	383	9.1
	AfD	198	4.7
	RadRight	6	0.1
	Other	195	4.7
	None/Not Eligible	206	4.9
Vote ₂₀₂₃	Don't Know	259	6.2
	Left	254	6.1
	Greens	849	20.3
	SPD	686	16.4
	Union	961	22.9
	FDP	246	5.9
	AfD	387	9.2
	RadRight	9	0.2
	Other	182	4.3
	None/Not Eligible	358	8.5

Table B.6: Descriptives: Recoded Continuous Variables

Variable	Min	Q₁	Mean	Q₃	SD	Max
Climate Concern Δ	-4	-1.0	-0.2	0.0	0.7	4
SWD Δ	-10	-2.0	-0.5	0.0	2.0	10
SFD Δ	-4	0.0	-0.1	0.0	0.8	4
Fair Share Δ	-3	0.0	0.0	0.0	0.7	4
Life Satisfaction Δ	-9	-1.0	-0.4	0.0	1.8	10
Social Ladder Δ	-9	-1.0	0.1	1.0	1.3	5
Climate Salience ₂₀₂₂	0	3.0	3.1	4.0	0.9	4
Individual Efficacy ₂₀₂₂	-2	-1.0	-0.4	0.0	1.0	2
Collective Efficacy ₂₀₂₂	-2	0.0	0.3	1.0	1.0	2
Efficacy ₂₀₂₂	-2	-0.5	0.0	0.5	0.8	2

Table B.7: Weighted vs. Unweighted Survey Population

Category	Official	Unweighted	Difference	Weighted	Difference
Not Male	51.0	48.7	2.3	49.7	1.3
Male	49.0	51.3	-2.3	50.3	-1.3
< 25	8.7	5.6	3.0	5.3	3.4
25 - 34	15.0	14.4	0.6	15.6	-0.6
35 - 44	15.5	15.3	0.2	15.3	0.3
45 - 54	16.0	13.5	2.5	15.0	1.0
55 - 64	18.8	22.3	-3.4	21.7	-2.9
65 - 74	13.5	17.3	-3.9	15.1	-1.6
> 74	12.5	11.5	1.0	12.0	0.5
Baden-Württemberg	13.4	10.4	3.0	12.2	1.2
Bayern	15.8	13.5	2.4	15.4	0.4
Berlin	4.4	4.6	-0.2	4.4	0.0
Brandenburg	3.1	6.5	-3.4	3.2	-0.1
Bremen/Niedersachsen	10.4	10.1	0.3	10.7	-0.3
Hamburg/Schleswig-Holstein	5.7	5.6	0.1	6.8	-1.1
Hessen	7.5	5.7	1.8	8.0	-0.6
Mecklenburg-Vorpommern	1.9	5.1	-3.2	2.0	-0.0
Nordrhein-Westfalen	21.5	13.6	7.9	21.0	0.5
Saarland/Rheinland-Pfalz	6.2	5.9	0.3	6.1	0.1
Sachsen	4.9	10.3	-5.4	5.2	-0.3
Sachsen-Anhalt	2.6	4.3	-1.7	2.5	0.1
Thüringen	2.6	4.4	-1.8	2.6	-0.0

Official' values based on Microcensus calculations for 2022 (Statistisches Bundesamt (Destatis), 2025). The age group 0-14 was excluded from calculations; age group 15-19 only counted for 20% to match the sample ages.

Table B.8: Wording Context Variables from 2022 Wave

Items	Wording
CC Concern	How concerned are you about climate change? At present there are many discussions about climate policy (i.e., political decisions made because of climate change). To what extent do you agree with the following statements?
CP: Living Standard	I am concerned that my own standard of living will decline because of climate policy.
CP: Job Market	I am concerned that jobs will be destroyed as a result of climate policy without enough new ones being created.
CP: Social Conflict	I am concerned that social conflicts will increase because of climate policy. And how do you feel about the following statements?
CCI: Migration	I am concerned that migration to Europe will increase because of climate change.
CCI: Natural Disasters	I am concerned that natural disasters will increase because of climate change.
CCI: Nature / Biodiversity	I am concerned that biodiversity – the variety of plants and animals – will decline because of climate change. To what extent do you agree with the following statements on the topic of climate change?
Fear about Impact	I feel afraid when I think about the consequences of climate change.
Angry about Inaction	It makes me angry that not enough is being done to stop climate change.
Not as Dangerous	Climate change is not as dangerous as many politicians claim.

All variables captured using 5-step Likert scales (Fully Agree – Fully Disagree), treated as continuous.

B.2 Mediation Analysis

Table B.9: Democratic Satisfaction and Support

	Bi-Variate		Full		Parties	
SWD Δ	0.06*** (0.01)	0.07*** (0.01)	0.06*** (0.01)	0.07*** (0.01)	0.06*** (0.01)	0.07*** (0.01)
Constant	-0.05*** (0.01)	-0.03* (0.01)	-0.04*** (0.01)	-0.02 (0.01)	-0.05 (0.05)	-0.03 (0.06)
Weights		✓		✓		✓
Life Satisfaction Δ			✓	✓	✓	✓
Fair Share Δ			✓	✓	✓	✓
Social Ladder Δ			✓	✓	✓	✓
Vote ₂₀₂₁					✓	✓
Vote ₂₀₂₃					✓	✓
Observations	4,191	4,191	4,191	4,191	4,191	4,191
Adjusted R ²	0.03	0.03	0.03	0.04	0.03	0.06

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table B.10: Climate Concern and Democratic Support (H2)

	Bi-Variate		Full		Parties	
SWD Δ	0.06*** (0.01)	0.07*** (0.01)	0.06*** (0.01)	0.07*** (0.01)	0.06*** (0.01)	0.07*** (0.01)
Climate Concern Δ	0.05*** (0.02)	0.06*** (0.02)	0.05*** (0.02)	0.06*** (0.02)	0.05** (0.02)	0.05** (0.02)
Constant	-0.04*** (0.01)	-0.01 (0.01)	-0.03* (0.01)	-0.01 (0.01)	-0.04 (0.05)	-0.02 (0.06)
Weights		✓		✓		✓
Life Satisfaction Δ			✓	✓	✓	✓
Fair Share Δ			✓	✓	✓	✓
Social Ladder Δ			✓	✓	✓	✓
Vote ₂₀₂₁					✓	✓
Vote ₂₀₂₃					✓	✓
Observations	4,191	4,191	4,191	4,191	4,191	4,191
Adjusted R ²	0.03	0.04	0.03	0.04	0.03	0.06

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table B.11: Mediation Analysis Robustness

	Est.	Lower CI	Upper CI	p-Value
Mediated Effect	0.01	0.00	0.02	0.00
Direct Effect	0.05	0.02	0.08	0.00
Total Effect	0.06	0.03	0.09	0.00
Prop. Mediated	0.15	0.06	0.32	0.00

(a) Unweighted, No controls

	Est.	Lower CI	Upper CI	p-Value
Mediated Effect	0.01	0.00	0.01	0.00
Direct Effect	0.05	0.02	0.09	0.00
Total Effect	0.06	0.03	0.10	0.00
Prop. Mediated	0.14	0.06	0.31	0.00

(c) Unweighted, Full Δ Grievances controls

	Est.	Lower CI	Upper CI	p-Value
Mediated Effect	0.01	0.00	0.01	0.00
Direct Effect	0.05	0.02	0.08	0.00
Total Effect	0.06	0.03	0.09	0.00
Prop. Mediated	0.15	0.06	0.33	0.00

(e) Unweighted, Vote Intention Control Added

	Est.	Lower CI	Upper CI	p-Value
Mediated Effect	0.01	0.00	0.02	0.00
Direct Effect	0.06	0.03	0.09	0.00
Total Effect	0.07	0.04	0.10	0.00
Prop. Mediated	0.14	0.06	0.29	0.00

(b) Weighted, No controls

Presented in Main Study

	Est.	Lower CI	Upper CI	p-Value
Mediated Effect	0.01	0.01	0.02	0.00
Direct Effect	0.05	0.02	0.08	0.01
Total Effect	0.06	0.03	0.09	0.00
Prop. Mediated	0.20	0.10	0.41	0.00

(d) Weighted, Full Δ Grievances controls

	Est.	Lower CI	Upper CI	p-Value
Mediated Effect	0.01	0.01	0.02	0.00
Direct Effect	0.05	0.02	0.08	0.01
Total Effect	0.06	0.03	0.09	0.00
Prop. Mediated	0.20	0.10	0.41	0.00

(f) Weighted, Vote Intention Control Added

All results computed via the *mediation* package (Tingley et al., 2014) using the models of table 2.1 as mediator equations and the models of table B.10 as outcome equations. The tables show the *direct* effects of within-respondent climate concern changes on SFD, the *mediated* effects through changes in SWD, the combined *total* effects and the proportions flowing through the mediation path.

B.3 Moderation Analysis

Table B.12: Climate Salience as Moderator (H3)

	Bi-Variate		Full		Parties	
Climate Concern Δ	0.44**	0.39*	0.43**	0.32*	0.43**	0.31*
	(0.15)	(0.16)	(0.15)	(0.16)	(0.15)	(0.16)
Climate Salience ₂₀₂₂	0.06	0.04	0.04	0.04	0.05	0.04
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Climate Concern $\Delta \times$ Climate Salience ₂₀₂₂	-0.09	-0.07	-0.09	-0.04	-0.09	-0.03
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Constant	-0.65***	-0.58***	-0.57***	-0.57***	-0.54**	-0.54*
	(0.13)	(0.13)	(0.13)	(0.13)	(0.20)	(0.21)
Weights		✓		✓		✓
Life Satisfaction Δ			✓	✓	✓	✓
Fair Share Δ			✓	✓	✓	✓
Social Ladder Δ			✓	✓	✓	✓
Vote ₂₀₂₁					✓	✓
Vote ₂₀₂₃					✓	✓
Observations	3,814	3,814	3,814	3,814	3,814	3,814
Adjusted R ²	0.01	0.005	0.02	0.02	0.04	0.04

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table B.13: Efficacy as Moderator (H4)

	Bi-Variate		Full		Parties	
Climate Concern Δ	0.16*** (0.05)	0.17*** (0.05)	0.16*** (0.04)	0.18*** (0.05)	0.16*** (0.04)	0.20*** (0.05)
Efficacy ₂₀₂₂	0.06 (0.04)	0.08* (0.04)	0.04 (0.04)	0.07 (0.04)	0.03 (0.04)	0.06 (0.04)
Climate Concern $\Delta \times$ Efficacy ₂₀₂₂	-0.17*** (0.05)	-0.23*** (0.05)	-0.17*** (0.05)	-0.23*** (0.05)	-0.17*** (0.05)	-0.20*** (0.05)
Constant	-0.48*** (0.03)	-0.45*** (0.03)	-0.44*** (0.03)	-0.43*** (0.03)	-0.39** (0.15)	-0.36* (0.17)
Weights		✓		✓		✓
Life Satisfaction Δ			✓	✓	✓	✓
Fair Share Δ			✓	✓	✓	✓
Social Ladder Δ			✓	✓	✓	✓
Vote ₂₀₂₁					✓	✓
Vote ₂₀₂₃					✓	✓
Observations	3,828	3,828	3,828	3,828	3,828	3,828
Adjusted R ²	0.01	0.01	0.02	0.03	0.04	0.04

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table B.14: Individual Efficacy as Moderator (H4)

	Bi-Variate		Full		Parties	
Climate Concern Δ	0.11* (0.05)	0.10 (0.05)	0.10* (0.05)	0.11* (0.05)	0.11* (0.05)	0.15** (0.05)
Individual Efficacy ₂₀₂₂	0.04 (0.03)	0.06 (0.03)	0.03 (0.03)	0.05 (0.03)	0.02 (0.04)	0.05 (0.04)
Climate Concern $\Delta \times$ Individual Efficacy ₂₀₂₂	-0.13** (0.04)	-0.19*** (0.04)	-0.14*** (0.04)	-0.18*** (0.04)	-0.13** (0.04)	-0.15*** (0.04)
Constant	-0.47*** (0.04)	-0.43*** (0.04)	-0.43*** (0.04)	-0.41*** (0.04)	-0.39* (0.15)	-0.35* (0.17)
Weights		✓		✓		✓
Life Satisfaction Δ			✓	✓	✓	✓
Fair Share Δ			✓	✓	✓	✓
Social Ladder Δ			✓	✓	✓	✓
Vote ₂₀₂₁					✓	✓
Vote ₂₀₂₃					✓	✓
Observations	3,828	3,828	3,828	3,828	3,828	3,828
Adjusted R ²	0.01	0.01	0.02	0.03	0.04	0.04

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table B.15: Collective Efficacy as Moderator (H4)

	Bi-Variate		Full		Parties	
Climate Concern Δ	0.21*** (0.05)	0.23*** (0.05)	0.21*** (0.05)	0.25*** (0.05)	0.21*** (0.05)	0.26*** (0.05)
Collective Efficacy ₂₀₂₂	0.04 (0.04)	0.06 (0.04)	0.03 (0.04)	0.06 (0.04)	0.02 (0.04)	0.05 (0.04)
Climate Concern $\Delta \times$ Collective Efficacy ₂₀₂₂	-0.11** (0.04)	-0.14** (0.04)	-0.11** (0.04)	-0.14** (0.04)	-0.12** (0.04)	-0.12** (0.04)
Constant	-0.49*** (0.04)	-0.47*** (0.04)	-0.45*** (0.04)	-0.44*** (0.04)	-0.40** (0.15)	-0.38* (0.17)
Weights		✓		✓		✓
Life Satisfaction Δ			✓	✓	✓	✓
Fair Share Δ			✓	✓	✓	✓
Social Ladder Δ			✓	✓	✓	✓
Vote ₂₀₂₁					✓	✓
Vote ₂₀₂₃					✓	✓
Observations	3,831	3,831	3,831	3,831	3,831	3,831
Adjusted R ²	0.01	0.01	0.02	0.02	0.04	0.04

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table B.16: Hypothesis Outcome Overview

Hyp	Expectation	Outcome
H1	Higher CC → Lower SWD	Rejected (sig. opposite)
H2	Higher CC → Lower SFD, mediated through Lower SWD	Rejected (sig. mediated opposite effect, but even stronger direct opposite effect)
H3	H1 stronger with high salience	Rejected, as H1 already reversed; Itself: null-result
H4	H1 weaker with high efficacy	Rejected, as H1 already reversed; Itself: Individuals with high efficacy in line with H1, & those with low efficacy drive sig. opposite effect

B.4 Exploration of Unexpected Findings

Confounding Influences

Table B.17: Sensitivity Analysis

Outcome: Δ SWD						
Treatment:	Est.	S.E.	t-value	$R^2_{Y \sim D \mathbf{X}}$	$RV_{q=1}$	$RV_{q=1, \alpha=0.05}$
Δ Climate Concern	0.167	0.043	3.843	0.4%	5.8%	2.9%
df = 4186	Bound (10x Δ Fair Share): $R^2_{Y \sim Z \mathbf{X}, D} = 2.3\%$, $R^2_{D \sim Z \mathbf{X}} = 1.4\%$					

Computed using the *sensemkr*-package in *R* (Cinelli et al., 2024). Based on the controlled and weighted 4th model in table 2.1.

Table B.18: Moderations with Other Concerns

	Economic (Socio)	Economic (Ego)	CP: Jobs	CP: Living Standard	Climate Change
Climate Concern Δ	0.32* (0.13)	0.31** (0.10)	0.18*** (0.05)	0.20*** (0.05)	0.43** (0.14)
Sociotropic Economic Concern ₂₀₂₂	-0.11** (0.04)				
Egotropic Economic Concern ₂₀₂₂		-0.02 (0.03)			
Climate Politics Concern: Jobs ₂₀₂₂			-0.07* (0.03)		
Climate Politics Concern: Living Standard ₂₀₂₂				-0.09** (0.03)	
Climate Concern Average _{2021,2022,2023}					0.07 (0.04)
CC $\Delta \times$ Sociotropic Economic Concern ₂₀₂₂	-0.04 (0.04)				
CC $\Delta \times$ Egotropic Economic Concern ₂₀₂₂		-0.05 (0.04)			
CC $\Delta \times$ Climate Politics Concern: Jobs ₂₀₂₂			0.07 (0.04)		
CC $\Delta \times$ Climate Politics Concern: Living Standard ₂₀₂₂				0.03 (0.04)	
CC $\Delta \times$ Climate Concern Average _{2021,2022,2023}					-0.11* (0.05)
Constant	-0.12 (0.11)	-0.38*** (0.07)	-0.42*** (0.04)	-0.42*** (0.04)	-0.61*** (0.12)
Weights	✓	✓	✓	✓	✓
Life Satisfaction Δ	✓	✓	✓	✓	✓
Fair Share Δ	✓	✓	✓	✓	✓
Social Ladder Δ	✓	✓	✓	✓	✓
Observations	3,831	3,827	3,823	3,832	4,174
Adjusted R ²	0.02	0.02	0.02	0.02	0.02

* (**, ***) shows $p < 0.05$ (0.01, 0.001) All interacted concerns captured on five-step Likert scales and treated as numeric.

Asymmetrical Models

Table B.19: Party-Level Patterns

	Don't Know	Left	Greens	SPD	Union	FDP	AfD	RadRight	Other	None/Not Eligible	Sum
CC Up, SWD Down	6.90	6.30	3.80	5.10	6.00	5.30	5.40	0.00	3.80	6.40	5.30
CC Down, SWD Up	6.90	6.70	7.10	5.10	4.80	8.10	11.40	11.10	9.90	8.90	6.90
CC Same, SWD Same	17.00	11.80	22.60	19.20	13.30	21.10	11.40	0.00	9.90	14.50	16.50
CC Up, SWD Same	2.70	3.10	3.30	3.60	2.90	2.40	1.80	0.00	2.70	2.20	2.90
CC Same, SWD Up	13.90	12.60	14.80	13.40	10.90	11.40	16.00	11.10	15.40	18.40	13.70
CC Same, SWD Down	27.80	33.90	26.50	28.60	31.80	23.20	20.90	11.10	27.50	21.20	27.40
CC Down, SWD Same	6.60	6.70	8.70	9.00	8.80	8.10	7.20	33.30	9.30	8.90	8.50
CC Up, SWD Up	4.60	3.50	2.10	4.40	3.30	2.00	3.60	0.00	2.70	3.40	3.30
CC Down, SWD Down	13.50	15.40	11.10	11.50	18.00	18.30	22.20	33.30	18.70	15.90	15.40

Respondents are grouped by their reported vote intention in 2023. The table then shows, within parties, the proportion of possible climate concern and SWD change combinations.

Table B.20: Asymmetrical Models: Climate Concern and Democratic Satisfaction

	Bi-Variate		Full		Parties	
Climate Concern Δ^+	0.14 (0.09)	0.07 (0.09)	0.15 (0.09)	0.11 (0.09)	0.17 (0.09)	0.18* (0.09)
Climate Concern Δ^-	-0.16** (0.06)	-0.19** (0.06)	-0.15** (0.06)	-0.19** (0.06)	-0.14* (0.06)	-0.18** (0.06)
Constant	-0.47*** (0.04)	-0.42*** (0.04)	-0.46*** (0.06)	-0.40*** (0.06)	-0.38* (0.15)	-0.40* (0.16)
Weights		✓		✓		✓
Life Satisfaction $\Delta^{+,-}$			✓	✓	✓	✓
Fair Share $\Delta^{+,-}$			✓	✓	✓	✓
Social Ladder $\Delta^{+,-}$			✓	✓	✓	✓
Vote ₂₀₂₁					✓	✓
Vote ₂₀₂₃					✓	✓
Wald-Test for $\beta^+ = -\beta^-$	0.87	0.33	0.95	0.53	0.83	0.98
Observations	4,191	4,191	4,191	4,191	4,191	4,191
Adjusted R ²	0.003	0.003	0.02	0.02	0.04	0.04

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table B.21: Asymmetrical Models: Climate Concern and Democratic Support

	Bi-Variate		Full		Parties	
Climate Concern Δ^+	0.07* (0.03)	0.11** (0.03)	0.07* (0.03)	0.09** (0.03)	0.06 (0.03)	0.06 (0.03)
Climate Concern Δ^-	-0.05* (0.02)	-0.04 (0.02)	-0.05* (0.02)	-0.04* (0.02)	-0.05* (0.02)	-0.04* (0.02)
SWD Δ^+	0.05*** (0.01)	0.06*** (0.01)	0.05*** (0.01)	0.06*** (0.01)	0.04*** (0.01)	0.06*** (0.01)
SWD Δ^-	-0.07*** (0.01)	-0.07*** (0.01)	-0.07*** (0.01)	-0.07*** (0.01)	-0.07*** (0.01)	-0.07*** (0.01)
Constant	-0.03 (0.02)	-0.02 (0.02)	-0.03 (0.02)	-0.06* (0.02)	-0.02 (0.06)	-0.04 (0.06)
Weights		✓		✓		✓
Life Satisfaction $\Delta^{+,-}$			✓	✓	✓	✓
Fair Share $\Delta^{+,-}$			✓	✓	✓	✓
Social Ladder $\Delta^{+,-}$			✓	✓	✓	✓
Vote ₂₀₂₁					✓	✓
Vote ₂₀₂₃					✓	✓
Wald-Test for $\beta^+ = -\beta^-$	0.61	0.12	0.68	0.27	0.76	0.7
Observations	4,191	4,191	4,191	4,191	4,191	4,191
Adjusted R ²	0.03	0.04	0.03	0.04	0.04	0.06

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Conceptual Validation: Trust Models

Table B.22: Institutional Trust Models: Government

	Symmetrical		Asymmetrical	
Climate Concern Δ	0.14** (0.05)	0.06 (0.05)		
Climate Concern Δ^+			-0.19 (0.10)	-0.41*** (0.10)
Climate Concern Δ^-			-0.29*** (0.06)	-0.28*** (0.06)
Constant	-0.13*** (0.04)	-0.10** (0.04)	0.01 (0.06)	0.10 (0.06)
Weights		✓		✓
Life Satisfaction Δ	✓	✓		
Life Satisfaction $\Delta^{+,-}$			✓	✓
Fair Share Δ	✓	✓		
Fair Share $\Delta^{+,-}$			✓	✓
Social Ladder Δ	✓	✓		
Social Ladder $\Delta^{+,-}$			✓	✓
Observations	4,177	4,177	4,177	4,177
Adjusted R ²	0.02	0.01	0.02	0.02

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table B.23: Institutional Trust Models: Parliament

	Symmetrical		Asymmetrical	
Climate Concern Δ	0.14** (0.04)	0.09* (0.04)		
Climate Concern Δ^+			-0.02 (0.09)	-0.16 (0.09)
Climate Concern Δ^-			-0.22*** (0.06)	-0.21*** (0.06)
Constant	0.02 (0.03)	0.05 (0.03)	0.11 (0.06)	0.20*** (0.06)
Weights		✓		✓
Life Satisfaction Δ	✓	✓		
Life Satisfaction $\Delta^{+,-}$			✓	✓
Fair Share Δ	✓	✓		
Fair Share $\Delta^{+,-}$			✓	✓
Social Ladder Δ	✓	✓		
Social Ladder $\Delta^{+,-}$			✓	✓
Observations	4,159	4,159	4,159	4,159
Adjusted R ²	0.02	0.01	0.02	0.01

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Sub-Group Analyses

Table B.24: Sub-Group Analyses: Party Electorates

	Symmetrical		Asymmetrical	
Climate Concern Δ	0.28 (0.19)	0.44*** (0.13)		
Climate Concern Δ^+			0.69* (0.40)	-0.14 (0.29)
Climate Concern Δ^-	-0.47* (0.26)			
Climate Concern $\Delta \times \text{Vote}_{2023}$: Left	-0.33 (0.22)			
Climate Concern $\Delta \times \text{Vote}_{2023}$: Greens	-0.03 (0.22)			
Climate Concern $\Delta \times \text{Vote}_{2023}$: SPD	0.02 (0.21)			
Climate Concern $\Delta \times \text{Vote}_{2023}$: Union	-0.16 (0.25)			
Climate Concern $\Delta \times \text{Vote}_{2023}$: FDP	-0.11 (0.23)			
Climate Concern $\Delta \times \text{Vote}_{2023}$: AfD	-0.37 (1.78)			
Climate Concern $\Delta \times \text{Vote}_{2023}$: RadRight	-0.26 (0.28)			
Climate Concern $\Delta \times \text{Vote}_{2023}$: Other	0.08 (0.23)			
Climate Concern $\Delta \times \text{Vote}_{2023}$: None/Not Eligible		-0.53** (0.24)		
Climate Concern $\Delta \times \text{Vote}_{2021}$: Left		-0.39** (0.17)		
Climate Concern $\Delta \times \text{Vote}_{2021}$: Greens		-0.19 (0.16)		
Climate Concern $\Delta \times \text{Vote}_{2021}$: SPD		-0.06 (0.17)		
Climate Concern $\Delta \times \text{Vote}_{2021}$: Union		-0.31 (0.20)		
Climate Concern $\Delta \times \text{Vote}_{2021}$: FDP		-0.02 (0.25)		
Climate Concern $\Delta \times \text{Vote}_{2021}$: AfD		-1.30** (0.55)		
Climate Concern $\Delta \times \text{Vote}_{2021}$: RadRight		-0.67*** (0.23)		
Climate Concern $\Delta \times \text{Vote}_{2021}$: Other		-0.38* (0.21)		
Climate Concern $\Delta \times \text{Vote}_{2021}$: None/Not Eligible			-0.07 (0.26)	-0.74*** (0.19)
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: Left			-0.04 (0.57)	
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: Greens			-0.92** (0.47)	
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: SPD			-0.24 (0.46)	
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: Union			-0.09 (0.45)	
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: FDP			-0.96* (0.51)	
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: AfD			-1.48*** (0.48)	
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: RadRight				
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: Other			-0.28 (0.62)	
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: None/Not Eligible			-0.87* (0.49)	
Climate Concern $\Delta^+ \times \text{Vote}_{2023}$: Left			0.63* (0.35)	
Climate Concern $\Delta^- \times \text{Vote}_{2023}$: Greens			0.04 (0.29)	
Climate Concern $\Delta^- \times \text{Vote}_{2023}$: SPD			-0.08 (0.30)	
Climate Concern $\Delta^- \times \text{Vote}_{2023}$: Union			-0.07 (0.29)	
Climate Concern $\Delta^- \times \text{Vote}_{2023}$: FDP			-0.22 (0.33)	
Climate Concern $\Delta^- \times \text{Vote}_{2023}$: AfD			-0.58* (0.31)	
Climate Concern $\Delta^- \times \text{Vote}_{2023}$: RadRight			0.13 (1.79)	
Climate Concern $\Delta^- \times \text{Vote}_{2023}$: Other			0.21 (0.38)	
Climate Concern $\Delta^- \times \text{Vote}_{2023}$: None/Not Eligible			-0.52* (0.31)	
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: Left				0.48 (0.50)
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: Greens				0.12 (0.38)
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: SPD				0.49 (0.34)
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: Union				0.72** (0.35)
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: FDP				0.10 (0.45)
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: AfD				0.79 (0.51)
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: RadRight				-1.21 (1.14)
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: Other				0.02 (0.57)
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: None/Not Eligible				-0.54 (0.44)
Climate Concern $\Delta^+ \times \text{Vote}_{2021}$: Left				1.05*** (0.32)
Climate Concern $\Delta^- \times \text{Vote}_{2021}$: Greens				0.66*** (0.23)
Climate Concern $\Delta^- \times \text{Vote}_{2021}$: SPD				0.55** (0.23)
Climate Concern $\Delta^- \times \text{Vote}_{2021}$: Union				0.49** (0.24)
Climate Concern $\Delta^- \times \text{Vote}_{2021}$: FDP				0.57** (0.26)
Climate Concern $\Delta^- \times \text{Vote}_{2021}$: AfD				0.43 (0.33)
Climate Concern $\Delta^- \times \text{Vote}_{2021}$: RadRight				0.38 (2.57)
Climate Concern $\Delta^- \times \text{Vote}_{2021}$: Other				1.01*** (0.30)
Climate Concern $\Delta^- \times \text{Vote}_{2021}$: None/Not Eligible				0.38 (0.28)
Constant	-0.35** (0.14)	-0.49*** (0.11)	-0.50*** (0.18)	-0.27* (0.15)
Weights	✓	✓	✓	✓
Life Satisfaction Δ	✓	✓		
Fair Share Δ	✓	✓		
Social Ladder Δ	✓	✓		
Life Satisfaction $\Delta^{+,-}$			✓	✓
Fair Share $\Delta^{+,-}$			✓	✓
Social Ladder $\Delta^{+,-}$			✓	✓
Vote ₂₀₂₃ : Baseline	<i>Don't know</i>		<i>Don't know</i>	
Vote ₂₀₂₁ : Baseline		<i>Don't know</i>		<i>Don't know</i>
Observations	4,191	4,191	4,191	4,191
Adjusted R ²	0.03	0.03	0.03	0.03

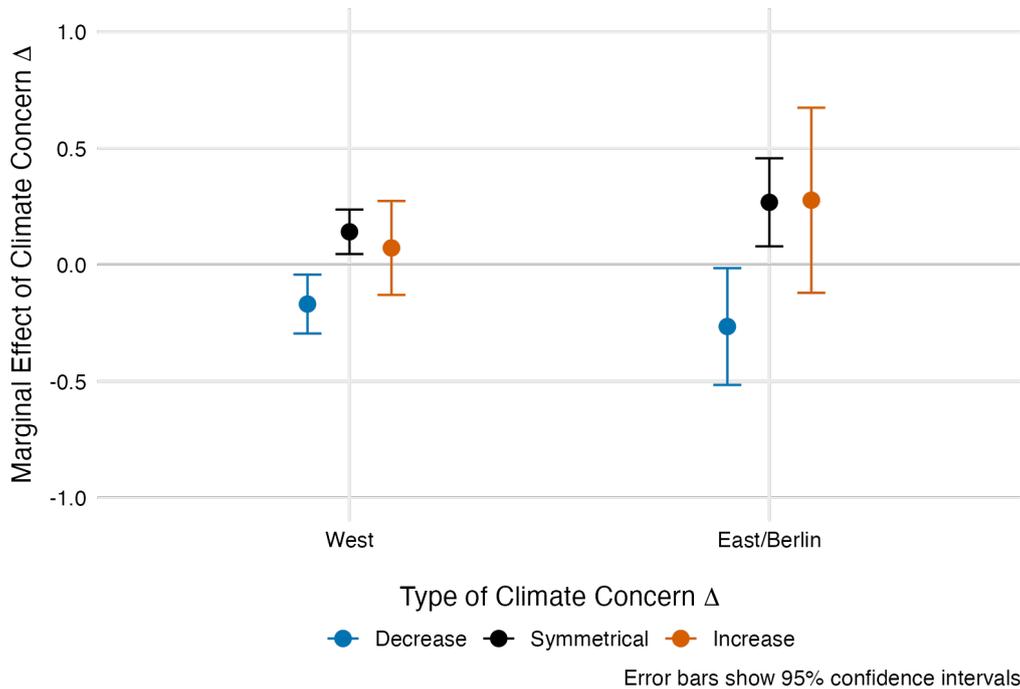
* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table B.25: Sub-Group Analyses: East vs. West Germany

	Symmetrical	Asymmetrical
Climate Concern Δ	0.14** (0.05)	
Climate Concern Δ^+		0.07 (0.10)
Climate Concern Δ^-		-0.17** (0.06)
East Germany/Berlin	-0.02 (0.08)	-0.04 (0.10)
Climate Concern $\Delta \times$ East Germany/Berlin	0.13 (0.11)	
Climate Concern $\Delta^+ \times$ East Germany/Berlin		0.20 (0.23)
Climate Concern $\Delta^- \times$ East Germany/Berlin		-0.10 (0.14)
Constant	-0.41*** (0.04)	-0.40*** (0.06)
Weights	✓	✓
Life Satisfaction Δ	✓	
Fair Share Δ	✓	
Social Ladder Δ	✓	
Life Satisfaction $\Delta^{+,-}$		✓
Fair Share $\Delta^{+,-}$		✓
Social Ladder $\Delta^{+,-}$		✓
Observations	4,191	4,191
Adjusted R ²	0.02	0.02

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Figure B.1: Effect of Climate Concern Changes over East vs. West German Residency



Marginal effects calculated via *marginaleffects* (Arel-Bundock et al., 2024). Based on weighted and controlled symmetrical and asymmetrical models from table B.25 where changes in climate concern are interacted with east vs. west German residency.

Table B.26: Sub-Group Analyses: Age Groups

	Symmetrical	Asymmetrical
Climate Concern Δ	-0.06 (0.16)	
Climate Concern Δ^+		0.06 (0.35)
Climate Concern Δ^-		0.12 (0.22)
Age: 25-34	-0.004 (0.17)	0.17 (0.22)
Age: 35-44	0.02 (0.17)	0.09 (0.21)
Age: 45-54	-0.03 (0.17)	0.24 (0.21)
Age: 55-64	-0.13 (0.16)	-0.10 (0.21)
Age: 65-74	0.04 (0.17)	-0.01 (0.21)
Age: 74 +	-0.19 (0.17)	-0.18 (0.22)
Climate Concern $\Delta \times$ Age: 25-34	0.17 (0.19)	
Climate Concern $\Delta \times$ Age: 35-44	0.19 (0.19)	
Climate Concern $\Delta \times$ Age: 45-54	0.25 (0.19)	
Climate Concern $\Delta \times$ Age: 55-64	-0.04 (0.19)	
Climate Concern $\Delta \times$ Age: 65-74	0.70*** (0.20)	
Climate Concern $\Delta \times$ Age: 74 +	0.39* (0.20)	
Climate Concern $\Delta^+ \times$ Age: 25-34		-0.53 (0.45)
Climate Concern $\Delta^+ \times$ Age: 35-44		0.07 (0.43)
Climate Concern $\Delta^+ \times$ Age: 45-54		-0.52 (0.41)
Climate Concern $\Delta^+ \times$ Age: 55-64		-0.07 (0.41)
Climate Concern $\Delta^+ \times$ Age: 65-74		0.90* (0.42)
Climate Concern $\Delta^+ \times$ Age: 74 +		0.42 (0.42)
Climate Concern $\Delta^- \times$ Age: 25-34		-0.39 (0.25)
Climate Concern $\Delta^- \times$ Age: 35-44		-0.24 (0.26)
Climate Concern $\Delta^- \times$ Age: 45-54		-0.67* (0.27)
Climate Concern $\Delta^- \times$ Age: 55-64		0.04 (0.25)
Climate Concern $\Delta^- \times$ Age: 65-74		-0.58* (0.27)
Climate Concern $\Delta^- \times$ Age: 74 +		-0.36 (0.28)
Constant	-0.37* (0.15)	-0.44* (0.19)
Weights	✓	✓
Life Satisfaction Δ	✓	
Fair Share Δ	✓	
Social Ladder Δ	✓	
Life Satisfaction $\Delta^{+,-}$		✓
Fair Share $\Delta^{+,-}$		✓
Social Ladder $\Delta^{+,-}$		✓
Age: Baseline	< 25	< 25
Observations	4,191	4,191
Adjusted R ²	0.02	0.03

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

C Appendix for Study 3

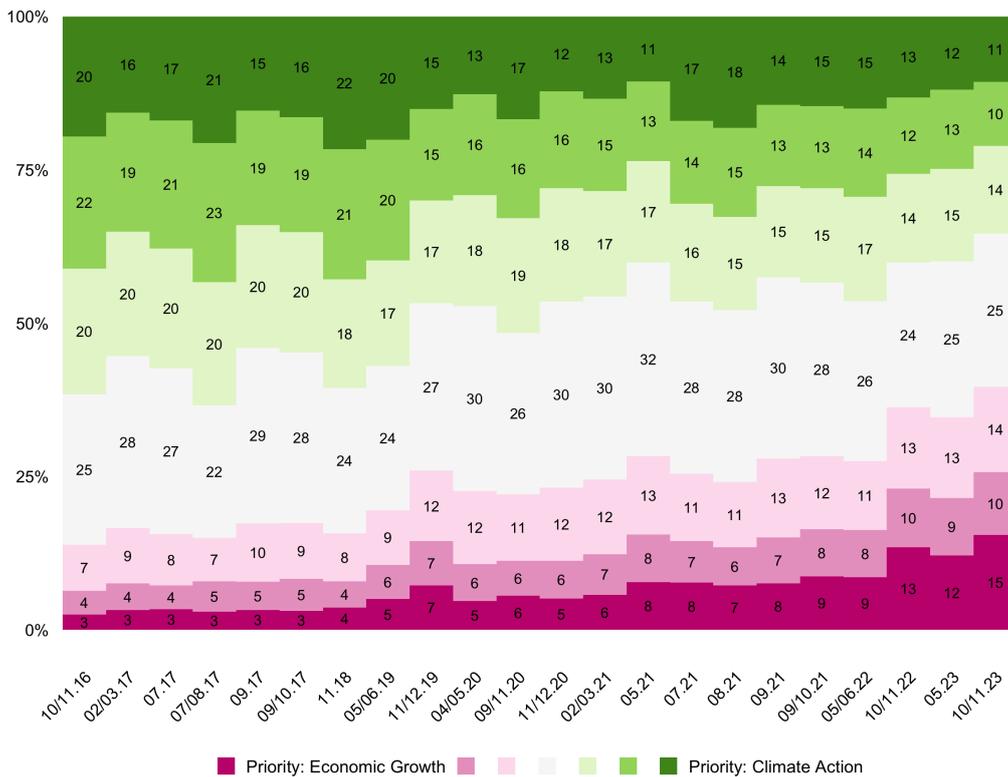
C.1 Added Descriptives

Table C.1: Worries about Climate Politics and Climate Change Impacts

	Completely Disagree	Rather Disagree	Partly (Dis-)agree	Rather Agree	Completely Agree
Due to climate politics:					
Lower Standard of living	5.90	26.70	27.50	30.00	10.00
More jobs destroyed than created	7.10	23.10	24.50	33.20	12.10
More societal conflict	1.10	8.10	18.50	53.80	18.50
Due to climate change:					
More migration to Europe	4.00	16.70	23.90	35.50	19.80
More natural disasters	1.00	3.80	11.20	41.20	42.70
Less biodiversity	1.20	5.00	13.40	39.00	41.40

Based on raw data of the 2nd wave (2022) of the Social Cohesion Panel (Gerlitz et al., 2024). Unweighted shares in % (N = 8.643).

Figure C.1: Growing Issue Polarization in Germany



Based on GLES panel data (GLES, 2021, 2022a, 2022b, 2022c, 2022d, 2022e, 2022f, 2022g, 2023a, 2023b, 2024). Question wording: ‘Some say that combating climate change should always take priority, even if this harms economic growth. Others say that economic growth should always take priority, even if this makes combating climate change more difficult. What is your opinion on this issue?’

C.2 Democratic Norms

Table C.2: Overview of Democratic Norms under Attack

Technocracy	Importantly, this item does not ask about mere consultation, but complete reallocation of decision-making power from elected politicians to experts and scientist. This fundamentally contradicts liberal democracy as it cuts off the legitimizing link between public will and office holders (Gaus et al., 2020) and takes an inherently non-pluralistic approach to arrive at policy decisions (Caramani, 2017). Technocrats lack electoral accountability and have to be less responsive to voters' demands which further challenges core principles of representative democracy (Bertsou & Caramani, 2020). Given the longstanding scientific consensus that anthropogenic climate change exists, poses a threat and government action is necessary (IPCC, 2023; Oreskes, 2004) this mode of governance should attract action supporters.
Passive Voting Rights	The universal right to run for office is already mentioned as an important foundation of democratic culture, political equality and pluralism by seminal scholars like Mill (1861) and Dahl (1998). These values are violated if expressing certain views becomes a condition for passive voting rights.
Freedom of Assembly & Speech	These political freedoms are main pillars of liberal democracy as conceptualized by Dahl (1971) that facilitate pluralism and enable citizens to challenge the ruling authorities. Freedom of speech is also one of the norms citizen most consistently value as integral part of democracy (e.g. Chu et al., 2024).
Checks & Balances	The idea of a separation of power between different branches of government dates back at least to Locke (1689), with Montesquieu (1748) emphasizing the need for them to be able to 'check' each other to avoid tyranny by the few. Governments ignoring court ruling is a deviation from this norm.
Censorship	Analogue to the <i>Freedom of Assembly & Speech</i> , a functioning liberal democracy, according to Dahl (1971), requires citizens to have the unimpaired opportunity to voice their opinions and preferences. Media censorship infringes on this opportunity and is commonly interpreted as an indicator of contemporary democratic backsliding (e.g. Mechkova et al., 2017).
(Private) Property Rights	This arguably constitutes the least clear-cut example of a democratic norm violation. Expropriation for the sake of public benefit is a century old practice that pits the fundamental right and freedom to own property against public interests (Plimmer & McCluskey, 2019). Article 14 of Germany's constitution, the <i>Grundgesetz</i> , explicitly names the well-being of the general public as the only justification for (compensated) expropriation. As Alexander (2003) shows, courts interpret the right to private ownership of property as an elementary basic right, if the property does not serve purely economic purposes. In summary, expropriation is not inherently undemocratic, but violates a cornerstone of liberal values, citizen's property rights. This is especially the case here as the item does not mention any form of (legally required) compensation.

Non-Strategic Misreporting & Inattentiveness

Non-strategic misreporting can arise from misunderstanding, random responding, or satisficing to minimize cognitive effort (Agerberg & Tannenber, 2021; Alvarez et al., 2019; Kuhn & Vivyan, 2021; Riambau & Ostwald, 2021). Respondent attentiveness has been identified as a key factor in identifying and correcting for non-strategic misreporting. Kuhn and Vivyan (2021) show that excluding likely survey satisficers (no recall, short engagement time) improves the external validity of list experiments. Alvarez et al. (2019) show that inattentive respondents – identified through trap questions – respond faster, provide more non-attitudes, and exhibit inconsistent answers.

Table C.3: Overview Attentiveness Checks

Condition	No. of Obs.
Illogical straightlining of additional climate change/politics emotions battery	29
Straightlining of at least two item batteries out of: policy ... support (8 items), effectiveness (8 items) & financial impact (6 items)	31
<i>Failing Multiple Attentiveness Checks</i>	3
Completed module in less than 4 minutes	4
Completed both list tasks in less than 30 seconds	71
Completed five open undemocratic statements in less than 25 seconds	26
<i>Failing Multiple Speeding Checks</i>	66
Completed module in more than 36.83 minutes	3
Completed both list tasks in more than 3.65 minutes	31
Completed five open undemocratic statements in more than 3.68 minutes	33
<i>Failing Multiple Slow-Pace Checks</i>	5
Combined (At least failing any single check)	280

In absence of a trap question, I thus create a series of inattentiveness measures based on (illogical) straight lining behavior and completion speed. Table C.3 provides an overview of the explicit criteria and their failure rates. The linear probability model in table C.4 shows that condition assignment in the list experiment did not affect respondents likelihood to be inattentive. Compared to Alvarez et al.’s 36% of inattentive respondents, my measure captures about 13% of respondents. This suggests that I either have constructed a rather conservative measure of inattentiveness or that SOEP respondents are substantially more attentive.

Table C.4: (In-)Attentiveness and Treatment Condition

	Inattentiveness
Cond.: Pro	0.11 (0.13)
Constant	-1.93*** (0.09)
Observations	2,101
Akaike Inf. Crit.	1,652.73

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Intuitively, excluding these 13% of respondents likely reduces bias and noise resulting from non-strategic misreporting. But inattentiveness does not occur completely at random as it is related, for example, to less political knowledge and participation (Alvarez et al., 2019). Dropping inattentive respondents could thus potentially skew prevalence estimates. Through a series of bi-variate models, I show that attentiveness indeed correlates, albeit rather unsystematically, with some of my dependent measures (tab. C.5). Inattentive respondents are less likely to

support *Technocracy*, more likely to support *Censorship* and restricting *Freedom of Assembly & Speech*, but no different in regard of the other five outcomes.

Table C.5: (In-)Attentiveness and Outcome Measures

	Abstract (Pro)	Technocracy	Pass. Voting Rights	Censorship	Property Rights	Abstract (Con)	Checks & Balances	Freedom of Assembly & Speech
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Inattentiveness	0.22 (0.21)	-0.51*** (0.14)	0.05 (0.14)	0.20** (0.08)	-0.15 (0.10)	0.31 (0.25)	-0.01 (0.14)	0.56** (0.18)
Constant	-1.29*** (0.08)	1.27*** (0.06)	-0.50*** (0.05)	-0.97*** (0.03)	-0.37*** (0.03)	-1.83*** (0.10)	0.51*** (0.05)	-2.00*** (0.07)
Model Type	Log.	Log.	Log.	OLS	OLS	Log.	Log.	Log.
Observations	1,016	2,027	1,983	2,032	2,005	1,031	2,038	1,990
Akaike Inf. Crit.	1,077.35	2,189.69	2,636.04			847.21	2,699.25	1,522.00

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

Table C.6 further shows that only two control and predictor variables significantly affect the likelihood of failing my inattentiveness measure: those more politically interested and more in favor of climate action are slightly less likely to be inattentive, which makes sense as they might take a higher interest in the overall module. Summarized, I will neither rely solely on the attentive-only or full sample, but treat them as robust checks for each other.

Table C.6: (In-)Attentiveness and Predictors

	Inattentiveness
Climate Action Pref: Pro	-0.01* (0.003)
Climate Action Pref: Strength	-0.004 (0.004)
Gender: Male	0.01 (0.02)
Age	0.0001 (0.0005)
Region: East	-0.03 (0.02)
Education: Middle Vocational	-0.02 (0.03)
Education: Vocational/Abi	-0.03 (0.04)
Education: Higher	-0.002 (0.03)
Political Interest	-0.03** (0.01)
Left-Right Self-Placement	-0.01 (0.01)
Efficacy	0.01 (0.01)
HH Income Satisfaction	-0.001 (0.003)
Constant	0.18*** (0.05)
Observations	1,959

* (**, ***) shows $p < 0.05$ (0.01, 0.001)

C.4 Item Description

Table C.7: Control Variables: Wording and Original Scales

Items	SOEP Code & Instrument	Original Scale	Wording
Gender	<i>pla0047_v2</i> SOEP-IS-2023-pl	Categorical: Male, Female, Other, None	What gender do you identify as?
East/West	<i>sampreg</i> directly prov. by SOEP	Categorical: East, West	Simply recorded (by interviewer)
Education	<i>pgisced</i> SOEP-IS-2023-pgen	Categorical: None, In School, Elementary, Middle Vocational Vocational/Abi, Higher Vocational, Higher Education	Combinded by the SOEP itself from: What is the highest educational qualification you have earned? What is the highest school-leaving certificate that you've earned?
Age	<i>geburt</i> SOEP-IS-2023-pbrutto	Numeric: Year of Birth	Based on background information about participants
Left-Right	<i>plh0004</i> SOEP-IS-2023-pl	Numeric: (0) Completely left – Completely right (10)	In politics people often talk about 'left' and 'right' when it comes to characterize different political attitudes.
Left-Right (Abs.)			If you think about your own political views: Where would you place yours?
Party Identification	<i>plh0012_v6</i> 2023-pl	Categorical: SPD, CDU, CSU, FDP, Greens, Left AfD, NPD/Republicans/Right, Others	Which party do you lean towards?
Political Interest	<i>plh0007</i> SOEP-IS-2023-pl	Categorical: Very Strong, Strong, Not Very Strong, Not at All	Generally speaking, how interested are you in politics?
Efficacy	<i>plh0377_v2</i> SOEP-IS-2023-pl	Numeric: (1) – (7) Fully Applies	To which degree do you personally agree with the individual statements? If you are socially or politically active, you can influence social circumstances.
HH Income Satisfaction	<i>plh0175</i> SOEP-IS-2023-pl	Numeric: (0) Low – (10) High	How satisfied are you today with the following areas of your life? ... with your household income?
Life Satisfaction	<i>plh0182</i> SOEP-IS-2023-pl	Numeric: (0) Low – (10) High	Now we would like to ask you about your satisfaction with your life in general. How satisfied are you with your life, all things considered?
Risk Aversion	<i>plh0204_v2</i> SOEP-IS-2023-pl	Numeric: (1) Not at All – (11) Very	Are you generally a person who is willing to take risks or do you try to avoid taking risks?
Habitual Worrier	<i>plh0216</i> SOEP-IS-2023-pl	Numeric: (1) Applies Not at All – (7) Fully Applies	People can have many different qualities — some are listed below. You will probably find that some of these descriptions fit you completely and that some do not fit you at all. Others may fit to a certain extent I am ... a worrier
Censorship: Effectiveness	<i>men23_39</i> SOEP-IS-2023 (own)	Numeric: (1) Not Effective at All – (5) Very Effective	How effective do you think these measures are in countering climate change? – Remove all posts that say there is no climate change
Expropriation: Effectiveness	<i>men23_40</i> SOEP-IS-2023 (own)	Numeric: (1) Not Effective at All – (5) Very Effective	How effective do you think these measures are in countering climate change? – New government competencies to nationalize land ownership for renewable energy development

Table C.8: Control Variables: Applied Recodings

Items	Recoding
Gender	To Dummy: 1 (Male), 0 (Non-Male)
East/West	As Dummy: 1 (East), 0 (West)
Education	To Categorical: Up to Elementary, Middle Vocational, Vocational/Abi, Higher
Age	As Numerical, but subtracting birthyear from survey-year (2023)
Left-Right	As Numerical, but centering of scale (-5 – +5)
Left-Right (Abs.)	As Numerical, but Distance to Center (0 – 5)
Party Identification	As Categorical, but Union = CSU & CDU; Others = Others & small right-wing parties
Political Interest	To Numerical (0 – 3)
Efficacy	As Numerical (1 – 7)
HH Income Satisfaction	As Numerical (0 – 10)
Life Satisfaction	As Numerical (0 – 10)
Risk Aversion	As Numerical (1 – 11)
Habitual Worrier	As Numerical (1 – 7)
Censorship Policy: Effectiveness	As Numerical (0 – 4)
Expropriation Policy: Effectiveness	As Numerical (0 – 4)

C.5 Robustness Checks H1a

Table C.9: H1a Robustness Models: Policy Models as Ordered Logit

	Censorship		Property Rights		
	Est. (SE)	p-val.	Est. (SE)	p-val.	
Climate Action Pref.	0.10 (0.02)	0.000	0.12 (0.02)	0.000	
Policy Efficiency	0.91 (0.04)	0.000	1.05 (0.05)	0.000	
Gender: Male	-0.11 (0.09)	0.221	0.20 (0.10)	0.038	
Age	0.01 (0.00)	0.000	0.00 (0.00)	0.960	
Region: East	-0.11 (0.11)	0.296	-0.09 (0.11)	0.421	
Education: Middle Vocational	-0.30 (0.18)	0.094	-0.54 (0.19)	0.004	
Education: Vocational/Abi	-0.30 (0.21)	0.156	-0.35 (0.22)	0.114	
Education: Higher	-0.14 (0.18)	0.428	-0.54 (0.19)	0.004	
Political Interest	-0.12 (0.06)	0.036	0.04 (0.06)	0.539	
Left-Right Self-Placement	-0.02 (0.03)	0.600	-0.17 (0.03)	0.000	
Efficacy	0.05 (0.03)	0.075	0.05 (0.03)	0.116	
HH Income Satisfaction	0.00 (0.02)	0.927	-0.03 (0.02)	0.118	
	<i>Thresholds</i>				
	-2 -1	0.39 (0.27)	0.143	0.72 (0.29)	0.012
	-1 0	1.58 (0.27)	0.000	2.27 (0.29)	0.000
	0 1	2.60 (0.27)	0.000	3.65 (0.30)	0.000
	1 2	3.77 (0.28)	0.000	5.29 (0.32)	0.000

Table C.10: H1a Robustness Models: Attentive-Only

	Censorship	Property Rights	Abstract (Pro)	Pass. Voting Rights	Technocracy
	(1)	(2)	(3)	(4)	(5)
Climate Action Pref: Pro	0.06*** (0.01)	0.04*** (0.01)	0.28*** (0.04)	0.14*** (0.02)	0.03 (0.02)
Full Controls	✓	✓	✓	✓	✓
Model Type	OLS	OLS	Logistic	Logistic	Logistic
Observations	1,604	1,604	818	1,627	1,652
Adjusted R ²	0.36	0.39			
Akaike Inf. Crit.			791.25	2,043.37	1,655.84

* (**, ***) shows $p < 0.05$ (0.01, 0.001). Controls: gender, age, east, education, political interest, left-right placement, efficacy, household income satisfaction (, and for policy items: policy effectiveness). Sample restricted to likely attentive respondents.

Table C.11: H1a Robustness Models: EBA

DV	No. Regs	Coefficients					Extreme Bounds		
		Avg.	Min	Max	% Sig. Neg.	% Sig. Pos.	Lower	Upper	Robust
Censorship	16384	0.08	0.06	0.12	0.00	100.00	0.04	0.14	Robust
Property Rights	16384	0.07	0.04	0.12	0.00	100.00	0.02	0.14	Robust
Abstract (Pro)	8192	0.24	0.21	0.27	0.00	100.00	0.14	0.34	Robust
Passive Voting Rights	8192	0.14	0.13	0.17	0.00	100.00	0.09	0.20	Robust
Technocracy	8192	0.05	0.01	0.07	0.00	65.27	-0.03	0.12	

Controls: gender, age, east, education, political interest, left-right placement, left-right distance from center, party identification, efficacy, risk aversion, self-description as ‘worrier’, life satisfaction, household income satisfaction (, and for policy items: policy effectiveness).

Table C.12: H1a Robustness Models: ‘Pro’-Sample

	Censorship (1)	Property Rights (2)	Abstract (Pro) (3)	Pass. Voting Rights (4)	Technocracy (5)
Climate Action Pref: Pro	0.05** (0.02)	0.02 (0.02)	0.21*** (0.05)	0.15*** (0.03)	0.14*** (0.04)
Full Controls	✓	✓	✓	✓	✓
Model Type	OLS	OLS	Logistic	Logistic	Logistic
Observations	1,338	1,335	675	1,364	1,387
Adjusted R ²	0.34	0.33			
Akaike Inf. Crit.			795.53	1,797.35	1,423.08

* (**, ***) shows $p < 0.05$ (0.01, 0.001). ‘Pro’-sample only (from being satisfied with climate action (0) - favoring much more action (+5)). Controls: gender, age, east, education, political interest, left-right placement, efficacy, household income satisfaction (, and for policy items: policy effectiveness).

C.6 Exploring Technocracy

Table C.13: Exploring Bi-Directional Technocracy

	Basic (1)	Full (2)	Attentive Only (3)
Climate Action Pref: Strength	0.10** (0.03)	0.10** (0.03)	0.09* (0.04)
Climate Action Pref: Pro	-0.001 (0.02)	0.04 (0.02)	0.02 (0.03)
Controls		✓	✓
Model Type	Logistic	Logistic	Logistic
Observations	2,027	1,891	1,652
Akaike Inf. Crit.	2,193.33	1,944.57	1,651.36

* (**, ***) shows $p < 0.05$ (0.01, 0.001) Controls: gender, age, east, education, political interest, left-right placement, efficacy, household income satisfaction.

C.7 Robustness Checks & Exploration H1b

Table C.14: H1b Robustness Models: Attentive-Only

	Abstract (Con) (1)	Freedom of Assembly & Speech (2)	Checks & Balances (3)
Climate Action Pref: Pro	-0.10** (0.04)	-0.23*** (0.02)	-0.24*** (0.03)
Full Controls	✓	✓	✓
Model Type	Logistic	Logistic	Logistic
Observations	853	1,667	1,626
Akaike Inf. Crit.	652.02	1,778.31	1,028.21

* (**, ***) shows $p < 0.05$ (0.01, 0.001). Controls: gender, age, east, education, political interest, left-right placement, efficacy, household income satisfaction. Sample restricted to likely attentive respondents.

Table C.15: H1b Robustness Models: EBA

DV	No. Regs	Coefficients					Extreme Bounds		
		Avg.	Min	Max	% Sig. Neg.	% Sig. Pos.	Lower	Upper	Robust
Abstract (Con)	8192	-0.09	-0.13	-0.06	92.25	0.00	-0.18	0.01	
Freedom of Assembly & Speech	8192	-0.23	-0.30	-0.19	100.00	0.00	-0.34	-0.14	Robust
Checks & Balances	8192	-0.23	-0.28	-0.20	100.00	0.00	-0.32	-0.15	Robust

Controls: gender, age, east, education, political interest, left-right placement, left-right distance from center, party identification, efficacy, risk aversion, self-description as worrier', life satisfaction, household income satisfaction.

Table C.16: H1b Robustness Models: 'Con'-Sample

	Abstract (Con)	Freedom of Assembly & Speech	Checks & Balances
	(1)	(2)	(3)
Climate Action Pref: Pro	-0.12 (0.07)	-0.25*** (0.06)	-0.16*** (0.05)
Full Controls	✓	✓	✓
Model Type	Logistic	Logistic	Logistic
Observations	391	821	768
Akaike Inf. Crit.	396.06	763.95	803.76

* (**, ***) shows $p < 0.05$ (0.01, 0.001). 'Con'-sample only (from being satisfied with climate action (0) - thinking it already goes too far (-5)). Controls: gender, age, east, education, political interest, left-right placement, efficacy, household income satisfaction.

Table C.17: Party Identification & Democratic Attitudes

	Overall	None	Left	Greens	SPD	Union	FDP	AfD
Abstract (Pro)	22.1	22.0		36.2	17.8	20.5		9.5
Passive Voting Rights	37.9	40.6	29.1	44.3	38.2	36.0	25.6	17.5
Technocracy	76.8	81.0	75.5	69.7	69.7	74.0	70.5	83.6
Abstract (Con)	14.3	18.3		6.0	7.7	15.1		28.3
Freedom of Assembly & Speech	62.6	69.5	42.1	17.0	56.7	79.1	78.6	87.6
Checks & Balances	12.9	14.4	5.7	2.6	9.3	17.4	9.1	27.9

Share of respondents (in %) who agree with each norm transgression overall and by party identification (of major parties). Values are not printed if shares are based on less than 50 valid respondents

C.8 List Experiment Analysis

Assumption Tests

Table C.18: Randomization: Balance Check

		Diff.	Balanced
Gender: Male	Diff. in Proportions	-0.05	
Gender: NA	Diff. in Proportions	0.00	Yes
Age	Std. Diff. in Means	-0.02	Yes
Age: NA	Diff. in Proportions	-0.00	Yes
Education: None/In School/Elementary	Diff. in Proportions	0.02	Yes
Education: Middle Vocational	Diff. in Proportions	-0.01	Yes
Education: Vocational/Abi	Diff. in Proportions	0.02	Yes
Education: Higher	Diff. in Proportions	-0.02	Yes
Education: NA	Diff. in Proportions	-0.02	Yes
Mig. Background: No	Diff. in Proportions	-0.01	Yes
Mig. Background: NA	Diff. in Proportions	0.00	Yes
Region: East	Diff. in Proportions	0.03	Yes
Region: NA	Diff. in Proportions	-0.00	Yes
Left-Right Self Placement	Std. Diff. in Means	-0.02	Yes
Left-Right Self Placement: NA	Diff. in Proportions	0.01	Yes
Pol. Interest	Std. Diff. in Means	0.03	Yes
Pol. Interest: NA	Diff. in Proportions	-0.00	Yes
Efficacy	Std. Diff. in Means	-0.04	Yes
Efficacy: NA	Diff. in Proportions	0.00	Yes
HH Income Satisfaction	Std. Diff. in Means	-0.06	Yes
HH Income Satisfaction: NA	Diff. in Proportions	0.00	Yes

Computed using the *cobalt* package (Greifer, 2024). Differences in means are standardized by dividing them by the two group’s pooled standard deviation. Thresholds for Balance: Diff. in Proportions < abs(0.05) & Std. Diff. in Means < abs(0.1). Positive values signify higher shares/means amongst the ‘Pro Climate Action’ condition.

Table C.19: Testing the *No Design Effect* Assumption

(a) Pro Climate Action (H2a)			(b) Con Climate Action (H2b)		
	Est.	S.E.		Est.	S.E.
$\pi(Y_i(0) = 0, Z_i = 1)$	-0.01	0.01	$\pi(Y_i(0) = 0, Z_i = 1)$	0.04	0.01
$\pi(Y_i(0) = 1, Z_i = 1)$	0.18	0.02	$\pi(Y_i(0) = 1, Z_i = 1)$	0.18	0.02
$\pi(Y_i(0) = 2, Z_i = 1)$	0.16	0.01	$\pi(Y_i(0) = 2, Z_i = 1)$	0.13	0.01
$\pi(Y_i(0) = 3, Z_i = 1)$	0.03	0.01	$\pi(Y_i(0) = 3, Z_i = 1)$	0.02	0.00
$\pi(Y_i(0) = 0, Z_i = 0)$	0.08	0.01	$\pi(Y_i(0) = 0, Z_i = 0)$	0.08	0.01
$\pi(Y_i(0) = 1, Z_i = 0)$	0.29	0.02	$\pi(Y_i(0) = 1, Z_i = 0)$	0.28	0.02
$\pi(Y_i(0) = 2, Z_i = 0)$	0.25	0.02	$\pi(Y_i(0) = 2, Z_i = 0)$	0.25	0.02
$\pi(Y_i(0) = 3, Z_i = 0)$	0.03	0.01	$\pi(Y_i(0) = 3, Z_i = 0)$	0.03	0.01
Bonferroni corrected p-value		0.38	Bonferroni corrected p-value		1

Tests for the design effects in both list experiments as proposed by Blair and Imai (2012). The test estimates proportions of respondent types based on their true attitude to the sensitive item ($Z_i \in \{0, 1\}$) and control items ($Y_i \in \{0, \dots, J\}$). For the *Pro* climate action experiment one of the estimated population proportions is negative, hinting at a possible violation, but the value is statistically indistinguishable from 0. The overall test statistics (insignificant p-values) mandate a rejection of a design effect, meaning that the *No Design Effect* assumption holds.

Table C.20: Probing the *No Liars* Assumption

(a) Pro Climate Action (H2a)						(b) Con Climate Action (H2b)					
	Proportions Reporting each Y_i						Proportions Reporting each Y_i				
	0	1	2	3	4		0	1	2	3	4
Treatment	0.08	0.28	0.42	0.19	0.03	Treatment	0.08	0.32	0.43	0.15	0.02
Control	0.07	0.46	0.41	0.06		Control	0.12	0.46	0.37	0.05	
Treatment (Cum.)	1.00	0.92	0.64	0.22	0.03	Treatment (Cum.)	1.00	0.92	0.60	0.18	0.02
Control (Cum.)	1.00	0.93	0.47	0.06		Control (Cum.)	1.00	0.88	0.42	0.05	
Joint (Treatment (Cum.) - Control (Cum.))		-0.01 ¹	0.18	0.16	0.03	Joint (Treatment (Cum.) - Control (Cum.))		0.04	0.18	0.13	0.02
Conditional (Joint / Treatment)		-0.04	0.42	0.85	1.00	Conditional (Joint / Treatment)		0.14	0.42	0.83	1.00

Tables show (cumulative) proportions of respondents answering (at least) Y_i . Following Glynn (2013, p.166), cumulative proportions within the treatment condition that are significantly lower than those in the control condition (row 5) are an indicator of a *No Liars* assumption violation. Row 6 displays the conditional proportion or probability of supporting the sensitive item based on response levels ($P(Z_i = 1|Y_i \in \{0, \dots, J + 1\})$). Conditional proportions significantly above 1 also indicate assumption violations.

¹ A two-sample test for equality of proportions fails to uncover a significant difference ($p = 0.19$). Hence the assumption is upheld.

Table C.21: Randomization Impact

	Policies			Governance Proposals			
	IV Action Preference	Censorship	Property Rights	Freedom of Speech & Assembly	Checks & Balances	Technology	Passive Voting Rights
	OLS	OLS	OLS	Log.	Log.	Log.	Log.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cond.: Pro	-0.12 (0.14)	-0.06 (0.07)	-0.005 (0.06)	0.04 (0.10)	0.31* (0.15)	-0.02 (0.12)	0.02 (0.10)
Observations	1,821	1,746	1,768	1,780	1,735	1,764	1,726
Adjusted R ²	-0.0002	-0.0001	-0.001				
Akaike Inf. Crit.				2,357.49	1,268.02	1,860.15	2,292.48

Table shows the (non-)effects of being selected into the ‘Pro’ compared to the ‘Against’ condition on reported climate action preferences, support for illiberal policy proposals, and non-democratic governance proposals using bi-variate linear and logistic regression models.

Table C.22: ML vs. NLS Misspecification Test

(a) Full Sample				(b) Attentive-Only Sample			
	Statistic	DF	p		Statistic	DF	p
Pro Clim. Action	-3.97	24.00	1.00	Pro Clim. Action	-35.96	24.00	0.06
Against Clim. Action	81.05	24.00	0.00	Against Clim. Action	29.04	24.00	0.22

Misspecification test proposed by Blair et al. (2019). Significant results indicate model misspecification and negative test statistics indicate an “extremely poor fit” of the ML model (Blair et al., 2019, p. 464).

Inference

Table C.23: List Experiment: Multivariate Regression Models (Attentive-Only)

	Abstract (Pro)			Abstract (Con)		
	LM	ML	NLS	LM	ML	NLS
<i>Sensitive Item</i>						
Intercept	0.408 (0.239)	-2.661 (2.301)	-0.249 (1.129)	0.408 (0.239)	-2.661 (2.301)	-0.249 (1.129)
Climate Action Pref.	0.024 (0.015)	0.068 (0.09)	0.13 (0.074)	0.024 (0.015)	0.068 (0.09)	0.13 (0.074)
Gender: Male	0.057 (0.082)	1.112 (0.587)	0.274 (0.379)	0.057 (0.082)	1.112 (0.587)	0.274 (0.379)
Age	0 (0.002)	0.024 (0.025)	-0.003 (0.011)	0 (0.002)	0.024 (0.025)	-0.003 (0.011)
Region: East	-0.11 (0.092)	-0.131 (0.565)	-0.633 (0.48)	-0.11 (0.092)	-0.131 (0.565)	-0.633 (0.48)
Education: Middle Vocational	0.069 (0.167)	0.233 (0.916)	0.303 (0.835)	0.069 (0.167)	0.233 (0.916)	0.303 (0.835)
Education: Vocational/Abi	0.268 (0.194)	3.007 (1.241)	1.192 (0.927)	0.268 (0.194)	3.007 (1.241)	1.192 (0.927)
Education: Higher	0.095 (0.169)	0.223 (0.919)	0.453 (0.84)	0.095 (0.169)	0.223 (0.919)	0.453 (0.84)
Political Interest	-0.021 (0.053)	-0.23 (0.292)	-0.023 (0.245)	-0.021 (0.053)	-0.23 (0.292)	-0.023 (0.245)
Left-Right Self-Placement	0.022 (0.028)	0.086 (0.145)	0.133 (0.128)	0.022 (0.028)	0.086 (0.145)	0.133 (0.128)
Efficacy	-0.015 (0.026)	-0.233 (0.159)	-0.112 (0.123)	-0.015 (0.026)	-0.233 (0.159)	-0.112 (0.123)
HH Income Satisfaction	-0.011 (0.017)	0.073 (0.101)	-0.035 (0.075)	-0.011 (0.017)	0.073 (0.101)	-0.035 (0.075)
<i>Control Items</i>						
Intercept	1.168 (0.147)	-0.192 (0.279)	-0.447 (0.195)	1.168 (0.147)	1.168 (0.147)	1.168 (0)
Climate Action Pref.	0.023 (0.01)	0.04 (0.014)	0.032 (0.013)	0.023 (0.01)	0.023 (0.01)	0.023 (0)
Gender: Male	-0.017 (0.049)	-0.111 (0.081)	-0.024 (0.064)	-0.017 (0.049)	-0.017 (0.049)	-0.017 (0)
Age	0.006 (0.001)	0.006 (0.003)	0.008 (0.002)	0.006 (0.001)	0.006 (0.001)	0.006 (0)
Region: East	0.087 (0.056)	0.059 (0.089)	0.116 (0.075)	0.087 (0.056)	0.087 (0.056)	0.087 (0)
Education: Middle Vocational	-0.171 (0.101)	-0.195 (0.147)	-0.234 (0.134)	-0.171 (0.101)	-0.171 (0.101)	-0.171 (0)
Education: Vocational/Abi	-0.252 (0.129)	-0.553 (0.187)	-0.342 (0.171)	-0.252 (0.129)	-0.252 (0.129)	-0.252 (0)
Education: Higher	-0.222 (0.103)	-0.243 (0.149)	-0.3 (0.136)	-0.222 (0.103)	-0.222 (0.103)	-0.222 (0)
Political Interest	-0.03 (0.031)	-0.033 (0.046)	-0.041 (0.041)	-0.03 (0.031)	-0.03 (0.031)	-0.03 (0)
Left-Right Self-Placement	-0.032 (0.017)	-0.039 (0.024)	-0.043 (0.023)	-0.032 (0.017)	-0.032 (0.017)	-0.032 (0)
Efficacy	0.037 (0.016)	0.065 (0.026)	0.05 (0.021)	0.037 (0.016)	0.037 (0.016)	0.037 (0)
HH Income Satisfaction	-0.005 (0.011)	-0.024 (0.016)	-0.006 (0.015)	-0.005 (0.011)	-0.005 (0.011)	-0.005 (0)

Based on the attentive-only sample. Computed using the *list*-package in *R* (Blair & Imai, 2010).

Table C.24: List Experiment: Estimated Prevalence & Social Desirability (Attentive-Only)

	Abstract (Pro)			Abstract (Con)		
	LM	ML	NLS	LM	ML	NLS
List Est.	0.351 (0.039)	0.307 (0.052)	0.356 (0.037)	0.392 (0.039)	0.342 (0.041)	0.396 (0.036)
Direct Est.	0.226 (0.014)	0.226 (0.014)	0.226 (0.014)	0.148 (0.012)	0.148 (0.012)	0.148 (0.012)
Social Desirability (Diff.)	0.126 (0.042)	0.082 (0.054)	0.131 (0.039)	0.244 (0.04)	0.195 (0.043)	0.248 (0.037)

Based on the attentive-only sample. Computed using the *list*-package in *R* (Blair & Imai, 2010).

Table C.25: List Experiment: Multivariate Regression Models (Full)

	Abstract (Pro)			Abstract (Con)		
	LM	ML	NLS	LM	ML	NLS
<i>Sensitive Item</i>						
Intercept	0.503 (0.223)	-0.978 (1.758)	0.167 (0.958)	0.503 (0.223)	-0.978 (1.758)	0.167 (0.958)
Climate Action Pref.	0.019 (0.015)	0.047 (0.08)	0.086 (0.066)	0.019 (0.015)	0.047 (0.08)	0.086 (0.066)
Gender: Male	-0.004 (0.078)	0.252 (0.47)	-0.023 (0.341)	-0.004 (0.078)	0.252 (0.47)	-0.023 (0.341)
Age	0 (0.002)	0.013 (0.016)	-0.002 (0.01)	0 (0.002)	0.013 (0.016)	-0.002 (0.01)
Region: East	-0.054 (0.088)	-0.066 (0.52)	-0.299 (0.409)	-0.054 (0.088)	-0.066 (0.52)	-0.299 (0.409)
Education: Middle Vocational	-0.063 (0.154)	-0.358 (0.872)	-0.292 (0.646)	-0.063 (0.154)	-0.358 (0.872)	-0.292 (0.646)
Education: Vocational/Abi	0.119 (0.183)	1.223 (1.14)	0.473 (0.75)	0.119 (0.183)	1.223 (1.14)	0.473 (0.75)
Education: Higher	-0.068 (0.156)	-0.642 (0.904)	-0.301 (0.653)	-0.068 (0.156)	-0.642 (0.904)	-0.301 (0.653)
Political Interest	-0.027 (0.05)	-0.145 (0.247)	-0.124 (0.223)	-0.027 (0.05)	-0.145 (0.247)	-0.124 (0.223)
Left-Right Self-Placement	-0.005 (0.026)	-0.017 (0.137)	-0.009 (0.115)	-0.005 (0.026)	-0.017 (0.137)	-0.009 (0.115)
Efficacy	-0.001 (0.025)	-0.019 (0.144)	-0.011 (0.112)	-0.001 (0.025)	-0.019 (0.144)	-0.011 (0.112)
HH Income Satisfaction	-0.008 (0.016)	-0.015 (0.103)	-0.026 (0.07)	-0.008 (0.016)	-0.015 (0.103)	-0.026 (0.07)
<i>Control Items</i>						
Intercept	1.07 (0.138)	-0.429 (0.293)	-0.581 (0.183)	1.07 (0.138)	1.07 (0.138)	1.07 (0)
Climate Action Pref.	0.03 (0.009)	0.047 (0.014)	0.041 (0.012)	0.03 (0.009)	0.03 (0.009)	0.03 (0)
Gender: Male	-0.001 (0.046)	-0.043 (0.081)	-0.003 (0.061)	-0.001 (0.046)	-0.001 (0.046)	-0.001 (0)
Age	0.007 (0.001)	0.007 (0.003)	0.009 (0.002)	0.007 (0.001)	0.007 (0.001)	0.007 (0)
Region: East	0.054 (0.053)	0.045 (0.093)	0.074 (0.071)	0.054 (0.053)	0.054 (0.053)	0.054 (0)
Education: Middle Vocational	-0.103 (0.093)	-0.127 (0.17)	-0.141 (0.122)	-0.103 (0.093)	-0.103 (0.093)	-0.103 (0)
Education: Vocational/Abi	-0.205 (0.119)	-0.396 (0.218)	-0.278 (0.157)	-0.205 (0.119)	-0.205 (0.119)	-0.205 (0)
Education: Higher	-0.157 (0.094)	-0.165 (0.173)	-0.214 (0.125)	-0.157 (0.094)	-0.157 (0.094)	-0.157 (0)
Political Interest	-0.01 (0.029)	-0.012 (0.046)	-0.014 (0.039)	-0.01 (0.029)	-0.01 (0.029)	-0.01 (0)
Left-Right Self-Placement	-0.019 (0.017)	-0.028 (0.025)	-0.025 (0.022)	-0.019 (0.017)	-0.019 (0.017)	-0.019 (0)
Efficacy	0.03 (0.015)	0.042 (0.026)	0.041 (0.02)	0.03 (0.015)	0.03 (0.015)	0.03 (0)
HH Income Satisfaction	-0.004 (0.01)	-0.01 (0.018)	-0.006 (0.014)	-0.004 (0.01)	-0.004 (0.01)	-0.004 (0)

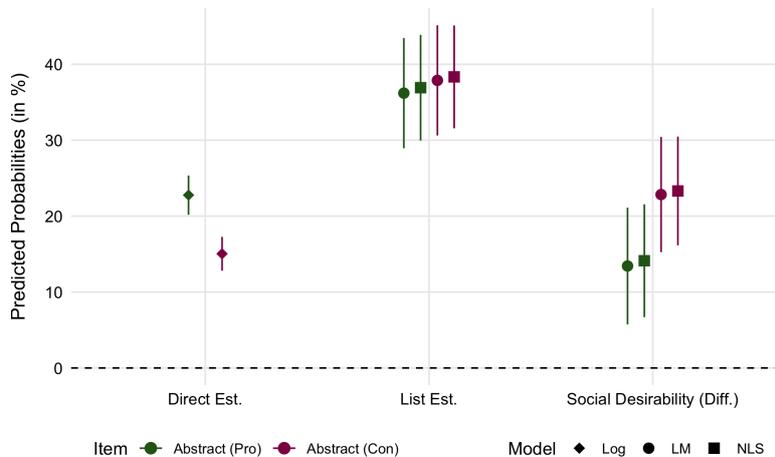
Based on the full sample. Computed using the *list*-package in *R* (Blair & Imai, 2010).

Table C.26: List Experiment: Estimated Prevalence & Social Desirability (Full)

	Abstract (Pro)			Abstract (Con)		
	LM	ML	NLS	LM	ML	NLS
List Est.	0.362 (0.037)	0.338 (0.047)	0.369 (0.035)	0.379 (0.037)	0.344 (0.045)	0.383 (0.035)
Direct Est.	0.228 (0.013)	0.228 (0.013)	0.228 (0.013)	0.15 (0.011)	0.15 (0.011)	0.15 (0.011)
Social Desirability (Diff.)	0.134 (0.039)	0.11 (0.049)	0.141 (0.038)	0.228 (0.039)	0.194 (0.047)	0.233 (0.036)

Based on the full sample. Computed using the *list*-package in *R* (Blair & Imai, 2010).

Figure C.3: Predicted Probabilities & Social Desirability (Full)



Estimation based on the full sample. List regression coefficients are reported in table C.25 – Both ML models not plotted due to evident misspecification (C.22). Numerical values of estimated probabilities and social desirability are reported in table C.26. Predictions rely on the *list* package’s average-case approach (covariates set to their mean).

D Appendix for Synthesis

Table D.27: Asymmetrical Re-Estimation of Study 1 Sub-Sample Models

	10/16	16/20	20/21
Climate Concern Δ^+	-0.09* (0.05)	0.001 (0.04)	-0.20*** (0.05)
Climate Concern Δ^-	0.02 (0.05)	0.02 (0.05)	0.13* (0.06)
Constant	-0.28 (0.18)	-0.05 (0.11)	0.57*** (0.10)
Female	✓	✓	✓
Age (Cat.)	✓	✓	✓
Education (Cat.)	✓	✓	✓
East	✓	✓	✓
Party ID _t	✓	✓	✓
Party ID _{t-1}	✓	✓	✓
Wald-Test for $\beta^+ = -\beta^-$	0.35	0.73	0.41
Observations	11,923	14,003	14,200
Adjusted R ²	0.02	0.002	0.09

* (**, ***) shows $p < 0.1$ (0.05, 0.01). Re-estimation of the sub-sample models from table A.19 as first-differenced asymmetrical models (Allison, 2019). Controls equivalent to original model, plus the addition of the lagged party identification.