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Climate Justice in a Populist Era: Grievance Politicization Among Fridays for Future Protesters in Germany

In the context of twenty-first century Western democracies, multiple left-wing movements are posed as counterpoints to right wing populist ones.[1] However, the environmental justice movement merits special attention. Well before the multiple, simultaneous global protest actions of 2019 signaled its position as »one of the most extensive social movements on the planet«,[2] environmentalism was attributed a transformative role in processes of macropolitical and social change.[3] Identified as the »symbolic center« of the wave of emancipatory liberal mobilization that began in the late-1960s and early-1970s,[4] scholars argue that the environmentalist cause generated a succession of conservative backlashes ever since, including the populist backlash of the last two decades.[5] According to this theory of ›cultural backlash‹, environmental advocates created the ground upon which right wing populist contention emerged. They did this by embedding a post-materialist worldview in political institutions – a worldview that in privileging socially-liberal status recognition, quality of life issues, and expressive politics, displaced conservative values and traditional materialist security and economic policy concerns.

The reasoning here is compelling. But it isn't clear if recent environmental and climate justice mobilizations adhere to the larger story of cultural backlash. We could assume that the inverse logic applies: that the re-politicization of environmental concern is a post-materialist reaction to the »populist Zeitgeist«.[6] Then youth or student-led climate movements – such as Extinction Rebellion, the Sunrisers, and Fridays for Future – could also substantiate claims about the adoption of post-materialist values by younger and well-educated cohorts. While this might allow us to assume climate protesters fall on the post-materialist ›side‹ of a battle against right wing populism, it is an open question.

Further, the cultural backlash theory is problematized by another stream of research and theorizing on the socio-structural origins of contention. The emphasis

1 The authors thank the colleagues who helped administer the protest surveys in Germany, including Sebastian Haunss, Piotr Kocyba, Dieter Rucht, Moritz Sommer, Simone Teune, Jurek Wejwoda, Sabrina Zajak, and the team from Sweden that coordinated the cross-national research collaboration. We also thank the Editors of this special issue and anonymous reviewers for their helpful comments and suggestions.

2 Almeida 2019, pp. 975.

3 For a review see Rootes 2004; see also Frank, Hironaka, Schofer 2000.

4 E.g., Inglehart 1977; Touraine et al. 1983.

5 Inglehart, Norris 2016; Norris, Inglehart 2019.

6 Mudde 2007.

here is on the wave of mobilization that emerged after the economic crisis of 2008. In this perspective, which we label the »post-2008 backlash« theory, movements on the right as well as the left were fundamentally materialist reactions to the reconsolidation of global financial powers and neoliberal governance, but differed in terms of their political expression. [7] Conservative forces mobilized on the front of traditional, »elite-directed« materialist politics, demanding policy change and voting for right wing populist parties and leaders. Progressive forces, including movements propelled by climate change and by new generations of protesters, followed the long-term trend toward non-hierarchical, participatory forms of »protest politics« and focused on the post-materialist front.[8] In arguing that progressive movements channeled materialist concerns into a post-materialist action repertoire, the post-2008 backlash account shows that materialist grievances can be decoupled from materialist political engagement.

Given that these theories diverge in their accounts of the emergence of twenty-first century mobilizations and the importance placed on environmental movements, we argue that a more nuanced and updated treatment of the motivations of contemporary climate protesters is needed. Are the concerns of participants in climate demonstrations predominantly materialist or post-materialist in orientation? Does their protest participation mean that they privilege a progressive or post-materialist action repertoire – eschewing the authoritarian values and elite-directed, materialist forms of political engagement associated with conservatives or right wing populists? And do these motivational factors (concerns and political engagement attitudes) distinguish adult participants from the newest young generation of participants? The answers to these questions have theoretical implications that may lead to a clearer understanding of environmental movements and patterns in their emergence more generally.

While the backlash models are useful for assessing the broad motivational origins of present climate mobilization, we still must examine greater variation among the people engaging in contemporary climate movement actions. Our hunch is that a hybrid model will better explain the motivations of recent climate protesters. As we generally expect that materialist concern has intensified, we do not expect progressive and post-materialist political engagement attitudes to predominate. Yet we are uncertain as to if and how configurations of motivational factors will differ between younger and older cohorts of protest participants.

This article contributes to the literature through a detailed study of climate justice protesters' concerns, and political engagement attitudes across generational cohorts and across two remarkable global climate protests in the German context. For our analysis, we employ new survey data on participants at the first (March 15, 2019) and third (September 20, 2019) Global Climate Strike demon-

7 In the scholarship we group under this label, the roots of recent mobilizations can be located in the economic stagnation of the 1970s, and/or within longer-term contention between capitalism, the state, and civil society (Burawoy 2015; Fraser 2015; see also Della Porta 2015; Tufekci 2014).

8 E.g., Inglehart, Catterberg 2002; Tufekci 2014.

strations orchestrated by the international Fridays for Future (FFF) movement.[9] The surveys ask respondents about their reasons for protesting, their political attitudes, their trust and confidence in various institutions, and their perceptions of the ability of different forms of engagement to bring about change. We analyze configurations of motivational factors according to variations in the intensity of responses on these items in order to see if they fit a cultural backlash, post-2008 backlash, or combined model of the motivational origins of recent climate justice mobilizations.

1. The Motivational Origins of Mobilization: Two Approaches

The formation of mobilization *potential,* or the ›demand‹ side of political engagement, is pivotal to understanding the ebb and flow of contention in societies. This holds for extra-institutional forms of action like protest (i.e. protest mobilization) as well as institutional ones like voting (i.e. electoral mobilization). But questions about the constitution of shared grievances, values, sociabilities, or purposes upon which the potential for all types of mobilization depend only began re-animating research on social movements and on populism fairly recently.[10] Moreover, movement scholars tend to contextualize politicization through the study of movements, protesters, and collective action. Populism scholars, on the other hand, usually contextualize politicization by studying political parties, voters, and voting behavior.[11] To oversimplify a wealth of literature in sociology and political science, then, these subfields tend to diverge in terms of which actors and behaviors they emphasize.

Against this backdrop, macro-oriented approaches focused on the role of socio-structural cleavages in politicizing different groups and issues have several analytical virtues. More specifically, those of cultural backlash and post-2008 backlash provide useful lenses for considering potential connections between growing support for both right wing populist parties as well as climate movements. After presenting these two accounts, we apply micro-oriented approaches to grievance politicization in order to theorize an alternative, hybrid model of the motivational origins of contemporary climate justice mobilizations.

1.1 The Cultural Backlash Account

The theory of cultural backlash advanced by Inglehart and Norris is anchored in Inglehart's argument of the ›silent revolution‹ of mass interests following World War II.[12] According to this interpretation, the new wave of large-scale protests over the 1970s and 80s in Western democracies (e.g. women's, gay and lesbian,

9 See de Moor et al. 2020; Haunss et al. 2019; Neuber, Gardner 2020; Wahlström et al. 2019.

10 E.g., Aslanidis 2020; Klandermans 2013; Polletta, Gardner 2015; Rydgren 2007.

11 E.g., Aslanidis 2016; McCarthy 2018; Van Hauwaert, Van Kessel 2017.

12 Inglehart 1977; 1981; 1990.

and religious right), was rooted in the rejection of the wartime ›materialist‹ authoritarian value system as more and more people's immediate material needs were met. With the environmental movement as the paradigmatic case, people became increasingly concerned about ›post-materialist‹ causes, such as quality of life and the recognition of differences in terms of ›lifestyles‹ and identities, as well as post-materialist styles of political engagement, such as self-expression and »protest politics«.[13] Political parties, as well as political advocacy and civil society groups came to embrace these new priorities. What's more, younger generations who grew up in the more secure formative conditions of this new terrain were socialized into post-materialist political attitudes and behaviors.[14] To this day, the cultural rift between people holding socially conservative and materialist values and those holding socially liberal and post-materialist ones is the major cleavage in electorates, and the one underlying the populist backlash.

Other prominent treatments of the forces precipitating support for right wing populism in Europe and North America largely accord with this account. People's discontent with politics-as-usual wasn't driven so much by material economic deprivation. Rather, social groups once dominant in ›traditional‹ status hierarchies (e.g. older, non-college educated white men) developed stakes in right wing populist politics when they began to feel marginalized by the rising tide of ›politically correct‹ liberal cosmopolitan (or post-materialist) culture in their own countries.[15] If the cultural backlash reasoning follows, then the recent re-politicization of environmental concerns can be seen as stemming from renewed competition over mainstream cultural values in Western societies – or as a progressive reaction to the specter of right wing populism.

People mobilizing around the environment in particular are cast as the natural adversaries of right wing or authoritarian populism in the cultural backlash account. Namely, they are the groups posited as having prompted the right wing populist backlash against post-materialist values in the first place: women, the well-educated middle class, and younger people. These constituencies are not only positioned as holding values opposite to the social conservatism, anti-elitism, and authoritarianism of right wing populism, but they are also assumed to be more or less content with their formal representation by post-materialist green parties, some traditional left parties, or with their expressive engagement in »protest politics«.[16]

Findings on political engagement in the last decades also lend some weight to the cultural backlash theory. Research has repeatedly found that women, youth, people with more formal education, and the relatively affluent are core participants in progressive activism, environmental advocacy, and voting support for

13 Inglehart 1977; Inglehart, Catterberg 2002; Meyer, Tarrow 1998; Taylor, Whittier 1992; Touraine et al. 1983.

14 E.g., Inglehart 1977; 1990; McAdam 1999a.

15 E.g., Eatwell, Goodwin 2018; Haidt 2012; Hochschild 2018; Mutz 2018; Skocpol, Williamson 2012.

16 Inglehart, Norris 2016, pp. 22; Inglehart, Catterberg 2002.

green parties.[17] In fact, higher education levels are strongly correlated with both post-materialism *and* political activism.[18] Even in settings where environmentalism is highly professionalized in organizations and national governance, protests over environmental issues are ongoing.[19] Yet despite this model's accuracy when it comes to the demographic composition of recent environmental mobilizations, this is not currently under discussion.[20] At issue, instead, is whether participants' concerns and political engagement attitudes adhere to the post-materialist orientation expected in the cultural backlash account.

1.2 The Post-2008 Backlash Account

In post-2008 backlash accounts, neoliberalism is the ideology underlying intergroup power relations – in contrast to the primacy given to post-materialism in the cultural backlash thesis. Sociologists Nancy Fraser and Michael Burawoy independently theorize that since the 2008 financial crisis, continued marketization and neoliberal governance have created cycles of contention.[21] These include a wave of countermobilization beginning in 2010. They argue that in a state of affairs marked by the growing separation between popular politics and state and market power, movements of the left as well as the right critically share feelings of economic and political dispossession. In short, classic political and cultural cleavages have become increasingly superficial on the demand side of mobilization.

The more salient division lies in the forms of political engagement favored by different movements, i.e. people's differing attitudes about the appropriate *means* for redressing their concerns. The crucial Achilles heel Burawoy identifies for progressive movements is the longstanding strategic repertoire they tend to adopt. »[S]uspicious of all inherited institutions and ideologies, and even of leadership itself,« post-2008 progressive movements channeled their energy into forms of nonhierarchical, ›horizontalism‹ that gave them »great flexibility, but by the same token, rendered them institutionally weak«.[22]

Anticipating post-materialist political engagement attitudes among climate protesters is more or less congruent with cultural backlash theory.[23] However, the juxtaposition of materialist concern with post-materialist political engagement is

17 Bremer, Schwander 2019; Ferree and Mueller 2004; McAdam 1988; 1999b; Milkman 2017; Rootes 2004.

18 Rootes 2004.

19 E.g., Almeida 2019; Rootes 2004.

20 The demographic characteristics of participants in climate mobilizations are not contested. Most research on environmental movements show the global climate justice movement is primarily composed of younger cohorts, women, the college-educated middle class, and people who are left-leaning on the political party spectrum (e.g., de Moor et al. 2020; Neuber, Gardner 2020; Rootes 2004; Wahlström et al. 2019).

21 Fraser 2015; Burawoy 2015.

22 Burawoy 2015, pp. 16; see also Tufekci 2014; Milkman 2018.

23 Inglehart 1977; Inglehart, Norris 2016.

not. In highlighting the intensification of materialist grievances against a background of rightward drifts in electoral politics, state repression, and growing wealth disparities,[24] this account raises the possibility that the linkages between younger protest cohorts and post-materialist values and »protest politics« are more tenuous. Ultimately, the argument that post-materialist forms of political engagement can express materialist concerns is a crucial departure from the cultural backlash account.

1.3 A Hybrid Account of Intensified Political and Economic Asymmetries

The two backlash theories present us with some unresolved puzzles. For one, they offer similar explanations for progressive and/or post-materialist political engagement attitudes among participants in climate mobilizations, but diverge on the type of grievances fostering such involvement. Whether materialist or post-materialist concerns are fostering protest has important implications for different generations of protesters. This points to conceptual and contextual reasons for differences in the backlash theses, despite their shared emphasis on environmental mobilization as part of larger cycles of contention. Another question is whether trends may have shifted at other levels of interaction; neither model considers mobilization to be a stable outcome or solely driven by macro-level processes. We argue that micro-sociological approaches to the demand side of politicization offer an important lens for resolving these puzzles – for updating and synthesizing the backlash accounts – in ways that can better explain the motivations driving participants in contemporary climate mobilizations.

The relative stability of macro-structural fault lines in societies along social categorizations or status locations (e.g. class, gender, nationality) is what enable scholars to theorize how large scale, longer term processes alter the beliefs and actions of social groups in society.[25] However, while sharing a common structural location often serves as the foundation or ›raw material‹ on which grievances are based, politicization depends on more. The politicization of grievances is a multilevel process through which individual concern becomes political engagement or mass mobilization.[26] Concerns and political engagement repertoires are two central factors: individuals must both collectively identify core grievances, and become convinced that they can tackle them.[27]

Concerns and engagement are further connected by political attitudes about the responsiveness of institutions. On the one hand, political cynicism or mistrust often politicizes people's seemingly disparate grievances. On the other, assessments of where different institutions sit in relation to the conflict influence the forms of

24 Burawoy 2015; Fraser 2015; Piketty 2015.

25 E.g., Lipset, Rokkan 1967; Van Dorn et al. 2013.

26 E.g., Aslanidis 2016; 2020; Inglehart, Norris 2016; Kaltwasser et al. 2017; Klandermans 2013; Shultziner 2013; Simon, Klandermans 2001; Snow et al. 1998; van Stekelenburg, Klandermans 2007; 2013.

27 E.g., Klandermans 2013; McAdam 1988; Van Dorn et al. 2013.

action people think can redress their grievances.[28] These factors – the why and how of mobilization – are closely intertwined. Treating socio-demographic locations and protest participation as indicative of materialist or post-materialist orientations can mask important nuance at the micro level. Instead we need configurational approaches to actor motivations (i.e. concerns, political trust, and confidence as well as motivations and political efficacy perceptions).

When considering the puzzles through this lens, just as we can't assume that materialist concerns go hand in hand with materialist engagement, we can't assume that progressive or left-leaning attitudes go hand in hand with post-materialist political engagement or »protest politics.« Both the cultural backlash and post-2008 backlash theories suggest that a post-materialist and/or progressive action repertoire is incongruent with materialist, »traditional politics« (classic policy claims, lobbying, petitioning, and so on). Consistent with the post-materialist worldview, progressive groups express their identities and seek recognition as a constituency in ways that render them ineffective on the policy front. Despite the agency associated with mobilization, then, the post-materialist strategies of progressive activists generate symbolic rewards at best. But these treatments leave little room for agency and for the adaptation of repertoires amidst changing conditions. If progressive activism writ large once followed a post-materialist template for action, there is now a heightened chance for dissonance and adaptation in the face of rising threats from right wing populism, marketization, and the weakness of post-materialist approaches in challenging neoliberal governance arrangements.[29]

Considering political cleavages (presented as cultural cleavages in the cultural backlash account), we know that divisions between adversarial groups on the left and on the right usually evolve alongside their relative disadvantage in the state of affairs. What's more, there is little doubt that politicians, public intellectuals, and/or movement leaders certainly ›supply‹ or frame political divides along such lines.[30] All the scholarship we cite suggests that skepticism towards established political institutions is widespread among populists, and progressives alike.[31] With this in mind, it wouldn't be surprising to find climate mobilizations reflecting asymmetries in governance in ways that do not accord with the privileging of post-materialist political engagement.

The materialist grievances underscored in the post-2008 account also need to be seriously considered as shifting currents, especially when it comes to environmental mobilization. Notably, global environmental concern has never been unprob-

28 Cf. Klandermans 2013.

29 For instance, between post-materialist solutions, intensifying concern over economic redistribution, security, and institutional policy, and »a sense of political dispossession« (Burawoy 2015, pp. 16). As waves of contention evolve, so do movement repertoires, e.g. Traugott 1995.

30 E.g., Fraser 2015; Inglehart, Norris 2019; Mutz 2018.

31 E.g., Akkerman et al. 2014; Fraser 2015; Norris 2002; Norris, Inglehart 2019; Van Hauwaert, Van Kessel 2017.

lematically predicated upon post-material values. Even Inglehart found environmental concerns fell »neatly in the middle between the materialist and post-materialist clusters.«[32] Subsequent research, which identifies concerns about pollution and fears of environmental hazards as materialist, and concerns about preserving and protecting nature as post-materialist, has found the latter more strongly associated with environmental activism and associations (i.e. traditional »green« issues).[33] Post-2008 economic processes give reason to expect that this cleavage is also diminishing. Given the greater encroachment of climate-related disruptions into people's day-to-day lives,[34] a re-politicization of materialist grievances and uptake of more materialist or assertive political engagement attitudes and action strategies makes sense.[35]

2. Hypotheses and Research Question

Drawing on this discussion, we propose three hypotheses and present a research question. We could expect climate protesters to fit a cultural backlash model in which post-materialist concerns join with post-materialist engagement attitudes – i.e. aggrieved with the climate change denial, conservatism, and authoritarianism of right wing populism and prioritizing ›lifestyle‹ or »protest politics« to express it (H1). Alternatively, we could expect protesters to fit a post-2008 backlash model, wherein materialist concerns (e.g. those at the intersection of economic and environmental precariousness) are combined with progressive and post-materialist engagement attitudes (H2). Finally, we could expect a hybrid model, wherein both materialist and post-materialist grievances are motivating factors along with political engagement attitudes favoring the materialist front (H3).

H1. Cultural backlash model: Progressive and post-materialist concerns, and post-materialist political engagement attitudes will be predominant among climate protesters. That is, they will be relatively unconcerned with material economic arrangements compared to the rise of socially conservative and authoritarian values, and prioritize post-materialist forms of engagement.

H2. Post-2008 backlash: Materialist concerns will be predominant among climate protesters, but political attitudes will be progressive and political engagement attitudes will be predominantly post-materialist.

H3. Hybrid model: Materialist concerns and more materialist political engagement attitudes will be prevalent among climate protesters.

Similarities and differences across generations are highly relevant to both accounts because the political attitudes and behaviors acquired in one's formative

32 Rootes 2004, pp. 618; see Inglehart 1977.

33 Longhofer, Schofer 2010; Rootes 2004.

34 Burawoy 2015; Shultziner 2013; Snow et al. 1998.

35 The inequality-cum-ecological security concerns in the global environmental justice movement reinforce such an interpretation (Almeida 2019). For a discussion of assertive movement action see Amenta 2006.

years tend to remain relatively stable over the life course.[36] As suggested by the post-2008 theory, concerns over stymied aspirations may be spreading among the younger protest cohorts traditionally associated with post-materialism. For example, some argue that post-2008 US ›Millennial movements‹ reflect a generation (those born after 1980) with »a worldview that combines struggles for redistribution *and* recognition.«[37] The security in one's formative years that can inspire post-materialist worldviews among younger generations may be dissipating. At the very least we might find materialist, economic concerns diffusing to younger cohorts.[38] Thus, we can easily see that that motivational configurations differ between new younger generations of protesters and adult participants. However, because there is no research on which to base expectations for our case, we pose the following research question: *Do motivational factors for concerns and political engagement attitudes distinguish adult participants from the younger generation of participants?*

3. Case, Data, and Methods

3.1 The Case of Fridays for Future: A new wave of climate mobilization?

The context surrounding the global environmental mobilizations of 2019 merit discussion to situate the case examined in this investigation. Many of the persistent societal realities underscored by the cultural backlash and post-2008 backlash accounts – such as entrenched socio-economic inequalities, uncertainty in democratic institutions, misinformation, and environmental degradation – have been punctuated by events in the last few years. The electoral shocks of Brexit, Trump, and Bolsonaro have become practically synonymous with right wing populism and, to varying degrees, with climate change denial.[39] At the same time, other institutional actors intensified public concern about the myriad ramifications of climate change. In 2018, the UN Intergovernmental Panel on Climate Change report grabbed global attention by unequivocally presenting the urgent need for »rapid, far-reaching, and unprecedented changes in all aspects of society.« Many media outlets also embraced more unequivocal stances on climate change news coverage.[40] And, in the face of growing schisms over the enforcement of climate agreements, popular global climate justice mobilizations ramped up as well.

Despite having only emerged in 2018, youth-led climate movements initiated hundreds of protest actions around the world in 2019. These new climate cam-

36 E.g., Inglehart 1977; Milkman 2017; Saunders et al. 2012.

37 Milkman 2017, pp. 10; see also Burawoy 2015.

38 McAdam 1999a.

39 Almeida 2019; Brubaker 2017.

40 For example, in May of 2019, *The Guardian* updated its style guide for the language it uses about the environment to prefer »climate emergency, crisis, or breakdown« over »climate change« (Carrington 2019).

paigns contributed momentum to the global environmental justice movement not seen since peaks in mobilization in 2014 and 2015.[41] The Fridays for Future (FFF) movement acted alongside others, like Extinction Rebellion and the U.S.-based Sunrise movement, but the FFF movement's international campaign stands out for having orchestrated four Global Climate Strikes in 2019: on March 15, May 24, September 20-27, and November 29. Addressing the intersecting threats of environmental degradation, inequality, and government inaction to the »future«,[42] the movement attracted an estimated 7.6 million people to its September »Week for Future« action.[43] The FFF's major role in (re)politicizing issues of global environmental justice in Germany (a country where right wing populist parties have won recent electoral victories), make these mobilizations an appropriate case for this study. Moreover, the demographic composition of the movement – predominantly young, female, and well-educated – make it particularly appropriate for considering competing models of motivational origins of contemporary environmental mobilizations.

3.2 The Data

Empirically, we use a new set of survey data on protest participants at Global Climate Strikes (FFF demonstrations) in Germany. Resembling trajectories seen in many other Western democracies, FFF mobilizations have grown substantially in Germany since the first school strike for climate took place in Berlin on September 14, 2018. The first Global Climate Strike on March 15 2019 exceeded all prior FFF marches and rallies in terms of participant numbers and the number of concurrent protests that took place across the country. But even these numbers were surpassed by the demonstration on Friday, September 20.[44] Organizers estimated 270,000 participants in Berlin alone – a tenfold increase from March.[45] This study analyzes surveys from these large Global Climate Strike actions: one on March 15, in the German cities of Bremen and Berlin, and one on September 20, in Berlin and Chemnitz. All data collection followed the well-established protest survey method used in the international research project *Caught in the Act of Protest: Contextualizing Contestation* (CCC).[46] The CCC methodology is designed to ensure the random selection of interview respondents, to minimize response biases, and to link individual attributes to mobilization contexts.

41 Almeida 2019.

42 Thunberg 2019.

43 Chase-Dunn, Almeida 2020.

44 Haunss et al. 2019; Sommer et al. 2019; Neuber, Gardner 2020.

45 In contrast to organizer estimates of around 1.4 million participants in the September »week for future« over Germany, they estimated between 15,000-25,000 participants in Berlin's March global climate strike and 300,000 across the country (Neuber, Gardner 2020).

46 Klandermans et al. 2009; see also Van Aelst, Walgrave 2001; Walgrave, Wouters, Ketelaars 2016; de Moor et al. 2020.

Some distinct features of the FFF survey method merit special mention. For one, we combine face-to-face interviews with online surveys instead of the CCC approach of combining them with printed, mail-in surveys.[47] Although this means that less internet-savvy protesters may be underrepresented in our results, internet penetration is high in Germany at around 96%.[48] Second, in accordance with national legal and ethics regulations, only protesters older than 13 years of age were invited to participate in the survey. Whereas the March survey teams estimated that between five and 15% of protesters were omitted from the sample by virtue of their young age, our September estimates put the proportions at under five percent in both cities.[49]

We analyze a total of 751 individual surveys from Germany. The March 15, 2019 Global Climate Strike data contains 205 protester surveys from Berlin and 154 from Bremen (a 17% and 15% response rate, respectively). Our data from the demonstration on September 20 contains 112 protester surveys from Berlin and 280 from Chemnitz from the September 20 strikes (26% and 32% response rate, respectively) (see Appendix Table A).[50] To determine the representativeness of our survey data, we compare two samples: those who gave the short, face-to-face interviews during the events – for which high cooperation levels are reported – and those who also completed the online survey.[51] We found no significant differences for gender, age, degree of political interest, highest educational level, satisfaction with democracy, or past participation in demonstrations. Overall, our survey sample likely under-represents people under the age of 14. With this caveat, we have reasonable confidence that our data provides a representative picture of participants in the protests surveyed.[52] Further, while the data primarily offers an opportunity to get an important cross-section of those mobilized at FFF global climate actions in Germany, it also represents an important segment of those mobilized in Europe and North America.

47 Selected respondents were given a flyer with basic information about the research, a web address and QR-code to the online survey, and a unique identification number. Every fifth respondent was interviewed face-to-face, on-the-spot, following a short survey. Because almost all respondents agree to the short interview, the basic interview data enables the checks on non-response bias to the online survey (de Moor et al. 2020).

48 Newman et al. 2019.

49 These estimates are lower for the smaller strike events in the smaller cities of Bremen and Chemnitz.

50 The variation in response rates is primarily an artefact of the size of the specific demonstration combined with the size of the survey team. Moreover, the response rates are consistent with previous protest survey research in Germany and with the FFF survey research conducted in other European cities (de Moor et al. 2020; Sommer et al. 2019; Wahlström et al. 2019).

51 See van Stekelenburg et al. 2012

52 Emilsson et al. 2020; van Stekelenburg et al. 2012; Walgrave, Verhulst 2011; Walgrave, Wouters, Ketelaars 2016.

3.3 Operationalization of key measures

Comparing Youth and Adult FFF Protesters

Although FFF is predominantly a student and youth movement, participants in the September 20 demonstration were significantly older on average than their March predecessors in Germany (from 26 to 35; $p < .001$) and in the majority of the other countries surveyed.[53] The median age of German FFF protesters increased from 19 in March, to 32 in September. Therefore, we cluster survey respondents into »youths« up to 25 years old and »adults« 26 years or older, in order to analyze the differences between younger and older generations. This categorization of youth protesters, as those born after 1993, captures a slightly younger cohort than Millennials (people born between 1981 and 1996). It is also temporally appropriate for bounding the period of political socialization of younger protest cohorts – i.e. approximating the formative years in which conditions of prosperity versus hardship and/or exposure to certain political repertoires can be argued to have lasting effects on an individual's political attitudes and behavioral habits. [54]

To measure the social composition of FFF protest participants, we include standard variables *gender, education*, *subjective class identification*, and self-placement on a left-right *political ideology* continuum. Our variable for subjective class identification speaks to arguments from new social movement theorizing that class-based cleavages are less salient in political polarization. Similarly, our variable for political ideology captures the classic left-right distinction in party politics. In line with existing literature on public, protester, and populist attitudes, and therefore connecting to the mobilization potential of both movement and political party organizations, this is operationalized according to where respondents placed themselves on an 11-point scale from left (0) to right (10) (for details on all variables see Appendix Table B). Finally, most of our variables are measured on a scale of 1-5, where 1 indicates a variable's lowest bound and 5 its upper bound. On a »strongly disagree« to »strongly agree« scale, strongly disagree would be represented by one and strongly agree by five.

Post-Materialist vs. Materialist Concerns, and Left-Libertarian vs. Authoritarian Values

Whereas the broad theory of cultural backlash ascribes post-materialist concerns to liberal cosmopolitans (exemplified by environmental advocates), the post-2008 backlash model suggests materialist concerns about economic as well as environmental inequalities and insecurities are on the rise across political and generational divides. We therefore examine a number of economic concerns as subjective

53 In Germany, the largest respondent age cohort was 14-19 years old (52%) in March and 20-35 (37%) in September.

54 E.g., Inglehart 1977; McAdam 1999a; Milkman 2017; Saunders et al. 2012. This categorization also helps ensure statistically reliable estimates.

values rather than as objective structural locations.[55] To measure materialist-economic concerns, we consider respondents' subscription to egalitarian values in terms of (1) income *redistribution*,[56] (2) the extent to which they *prioritize environmental concerns* over slower economic growth or job loss, (3) their degree of concern with the influence of the *free-market* and private enterprise on climate issues, and (4) with the *privatization* of public services and industries. Although measures like these are commonly grouped under the larger umbrella of left-libertarian values,[57] attending to these survey items as economic-materialist measures can, in our view, point to the relative depth of concern with different dimensions of economics in policy and politics.

In breaking down the cultural cleavage-based inequalities some argue to separate left-libertarians from right wing populists, xenophobic, anti-establishment, and authoritarian values form a crucial axis. These traditional, authoritarian values or ›populist attitudes‹ are identified as core components in the worldviews of populist party voters.[58] To operationalize this for FFF protesters, we examine respondents' sentiment towards foreigners (*anti-immigration*), whether they viewed political parties as non-responsive to voting (*anti-party voting*), claimed to ignore other sides of an argument before making decisions (*anti-pluralism*), thought children should be taught to obey authority (*pro-authority*), and the extent to which they trust police (*pro-police*).[59] To address the possible selective anti-institutionalism of environmental activists, including arguments that the FFF movement demands too much guidance from science,[60] a variable is included that we term *technocratic sentiment* (or pro-scientific leadership). This measures agreement with the statement »the government must act on what climate scientists say even if the majority of people are opposed.«

Trust and Confidence in Political Institutions

Another cultural value some ascribe authoritarian populists is political trust, or lack thereof. Given the possibility of overlaps between ›critical citizens‹ on the left and populists of all stripes,[61] we include a number of measures to assess protesters' trust and confidence in different political institutions generally, and with respect to climate change. Standard measures of trust in *national* and *global governance* operationalize the extent of respondents' trust in national parliament,

55 E.g. Eatwell, Goodwin 2018.

56 See also Emilsson et al. 2020.

57 E.g. Saunders et al. 2012.

58 E.g., Inglehart, Norris 2016; Van Hauwaert, Van Kessel 2018.

59 To make the comparison with right wing populist values clearer, we operationalize some of these variables as the inverse of the response scale (i.e., »people from other countries should **[not]** be allowed to come to my country and live in it permanently if they want to«) (see Appendix Table B).

60 I.e., Evensen 2019.

61 E.g. Norris, Inglehart 2019

government, political parties, the European Union, and the United Nations.[62] We also include a measure for *trust in environmental groups* here. Because prior research shows environmental activists to be highly trusting of environmental associations, this variable serves as a check on conceptualizations as well as on the reliability of our results.[63] As a further assessment of skepticism towards establishment or ›traditional‹ political representatives, we consider respondents' degree of confidence in *politicians* to generally fulfill their promises, as well as confidence in the ability of *policy*, *government*, and *modern science* to remedy climate change problems.

Strategic Repertoires: Political Engagement Motivation and Efficacy Perceptions

Drawing on the longstanding argument that for a concern to politicize (to drive action), actors must believe their situation is unjust and that political engagement can bring about its resolution,[64] we combine motivational and efficacy perceptions to capture the strategic repertoires of FFF protesters. In grouping survey items according to their conceptual and demonstrated links to a materialist or a post-materialist repertoire of political action, we arrive at three sets of measures. The first set considers a *materialist repertoire* of instrumental or assertive collective action strategies.[65] This includes variables that measure whether respondents were motivated to participate in order to pressure politicians, the extent of their agreement with the FFF movement goal of holding politicians accountable for stopping global warming, their opinion of the demonstration's efficacy in reaching that goal, and whether organized citizen groups can impact public policies. To examine a *post-materialist repertoire* of expressive, symbolic, or individual ›lifestyle‹ action strategies, we measure whether protesters were motivated to join the protest to express solidarity, out of a feeling of moral obligation, if they perceived that their own personal participation would make a difference, and their sense of whether climate change can be halted primarily via voluntary, individual lifestyle changes.

Finally, two survey items concerning FFF demands for ›global justice‹ through immediate action on climate change are difficult to group as either materialist or post-materialist. Prior research suggests interest in ›global green awareness‹ is correlated with post-materialism and environmental activism. By contrast, ›brown‹ concerns with the effects of environmental degradation on the welfare

62 E.g., Akkerman et al. 2014; Inglehart, Norris 2016; Van Hauwaert, Van Kessel 2017.

63 While it is also conceivable that such trust has eroded in light of ongoing policy implementation struggles during what was a long period of top-down environmental advocacy prior to the early 2000s (e.g., Almeida 2019; Longhofer, Schofer 2010; Rootes 2004), we think it more likely that this measure reflects protesters' trust in the FFF movement as an ›environmental group‹.

64 E.g., McAdam 1988; 1999b; Shultziner 2013; Simon, Klandermans 2001; Snow et al. 1998.

65 E.g., Amenta 2006; Milkman 2017.

and health of respondents and their families are widespread, but not correlated with activism.[66] In the present context – of mounting environment-related disruptions (i.e. threats to people's immediate material security and daily life routines), more insistent alarms on climate issues within and outside established political institutions, etc. – this conceptual distinction is further complicated. We therefore consider the extent to which respondents agree with the importance of the FFF goal to advance global justice through climate action, and their perception of whether the demonstration can achieve that goal as indicating a *mixed* repertoire. More importantly, though, relating these variables to the other items can also highlight lines of hybridity among the measures for materialist and post-materialist engagement orientations.[67]

4. Results

We conservatively recoded variables for our discussion of the results. We chose not to index survey items into predetermined value orientations because this practice can easily mask inconsistencies among items within an index (for example, between distrust in political parties and distrust in national government). In order to present a more nuanced profile of participants in climate mobilizations and test our hypotheses, we use descriptive statistics on the individual level survey data (supplemented with T-tests of significance to compare means of the same variable between groups). To answer our research question on motivational alignment between youth and adult protesters, we ran T-tests comparing the two group means, the overall group mean by each Global Climate Strike date (March 15, 2019 and September 20, 2019), as well as within group change over time on the measures of interest. These tests of variance are appropriate for our data.[68]

Table 1 presents the broad social and political composition of protesters surveyed at the FFF demonstrations. Congruent with the extant literature on environmental activism,[69] women are strongly represented (53%), as are current or former university students (52%). In terms of age, just over half of the respondents were 25 years old or younger (our category for youth), which overlaps with the large share of primary school students (31%). A large proportion of participants identified as upper or lower middle class (68.7%), though nearly 25% did not identify with any social class strata. While there is evidence of the expected left-wing political orientation of most protesters (M=3.4), around 39% of respondents placed themselves in the middle of the spectrum (not strongly left-wing); an-

66 See Rootes 2004.

67 Political interest is another measure associated with greater political engagement *across* social groups (e.g., Saunders et al. 2012; Van Hauwaert, Van Kessel 2017). We note that political interest was high and consistent.

68 Of course, explaining politicization by political attitudes can pose problems of reverse causality. We accordingly refrain from statements about the causality of the effects.

69 E.g., Ferree, Mueller 2004; Rootes 2004.

other 15% selected the option that the categories were meaningless to them. Consistent with research showing high correlations between educational level, affluence, and environmental mobilization,[70] FFF demonstrations were substantially composed of left-leaning young people, women, and the educated middle class.

Table 1: Social Characteristics of FFF Protesters in Germany, 2019

	Total (%)	**Total (N)**
Gender		
Female	53.3	372
Male	45.4	317
Other gender identity	1.3	9
Age		
Youths (14 to 25 years)	53.3	400
Adults (26+ years)	46.7	351
Education		
Primary School Student	30.6	211
University degree/studying at university	52.3	361
No university degree	17.1	118
Subjective Class Identity		
Upper class	1.6	11
Upper middle class	39.2	270
Lower middle class	29.5	203
Working/ Lower class	5.2	36
None/ Don't know	24.5	169
Political Ideology		
Left	44.8	303
Right	2.0	14
Middle (or neutral)	38.9	269
None/not meaningful	15.3	106

To begin exploring whether protesters in these climate mobilizations fit the models of liberal, post-materialism in terms of their grievances, Table 2 (below) presents results on the measures for materialist-economic concerns and traditional, authoritarian values. Starting with the former, the majorities of respondents expressed concern about economic issues. The largest majority saw environmen-

70 E.g., Corrigall-Brown 2011; Rootes 2004; Saunders et al. 2012.

tal threats as greater risks than those posed by slower economic growth (89.5% on average). Considered in light of the other concerns, this seems to reflect discontent with neoliberal economic arrangements more than a post-materialist worldview. Notably, 76.4% of participants were highly concerned about the privatization of public services and industries, and even more – 86.4% – were concerned with the inability of the free-market and private enterprise to address climate problems. This suggests that FFF protesters see the market and private companies as sources for their climate concerns. With around 55% of respondents agreeing with the egalitarian value that government should redistribute income from the better-off to the less well-off, concern over redistribution was the weakest among these measures. This difference suggests caution in assuming support for income redistribution equates with either left-libertarian or post-materialist values.

Materialist-economic concerns across the board were significantly greater among adults than youths. But we also see that concern on all but one of these measures increased significantly from March to September. To uncover what this meant for each generational cohort, we examined changes between the two demonstrations on each item for youths and for adults (results not shown). For example, although in March redistribution concern was higher among adults (M=3.83, $p < .001$), increased concern among youth protesters (M=3.76, $p < .005$) brought their concern to levels just surpassing adults in September (M=3.74). In fact, we found that the generational gap on *all* of these measures shrank from March to September to the point where there were no significant differences between youths and adults in September. Supplementary analyses also in-

Table 2: Concerns and Values among FFF Protesters, 2019

Materialist-Economic concerns	*Total*	*Youth*	*Adults*	*Mar.-Sept. Δ*
Redistribution concern	54.7%	49.7%	60.2%**	50.4 - 58.6%*
Prioritize environment over economic growth	89.5	86.2	93.1*	87.2 - 91.6*
Free-market concern (climate)	86.4	82.9	90.3**	86.3 - 86.6
Privatization concern	76.4	64.2	89.8**	71.0 - 81.4*
Traditional, Authoritarian values				
Anti-Immigration†	16.8%	12.8%	21.3%**	13.9 - 19.5%
Anti-Party/Voting†	14.5	17.4+	11.4	19.9 → 9.4**
Anti-Pluralism†	18.1	19.7	16.5	19.8 → 16.6
Pro-Authority†	10.6	15.6**	5.1	13.1 → 8.2
Pro-Police	50.7	56.3*	44.6	56.4 → 45.3**
Technocratic sentiment	73.6	69.8	78.0*	67.4 - 79.3**

*Note: + $p < .10$; *$p < .05$; **$p < .001$ (t-tests); † the recoding on these items is less conservative; arrows (→) indicate a decrease from March to September.*

dicate that this generational alignment on materialist-economic concern was not solely an artifact of broader adult participation at the September Global Climate Strike. Thus, the particularly high levels of concern with market solutions provide partial support for the post-2008 backlash model of materialist grievances.

Moreover, as both backlash models would anticipate, the results in Table 2 also show that FFF protesters are neither staunch conservatives nor staunch authoritarians. Aside from the finding that one in five adults was neutral to or against immigration, only two items stand out in suggesting authoritarian values among demonstrators: favorable opinions to both police and technocratic leadership. As a proxy for favoring law and order, respondents' trust in the police is surprisingly high for protesters in Germany (50.7%).[71] Trust was lower among September participants (M=3.4, $p < .05$), but the heightened police presence arguably tipped the scale away from the majorities of youths (56.4%) and adults (61.9%) who trusted the police in March. More notable is the extent to which protesters believed the government »must act on what climate scientists say, *even if the majority are opposed*«. Respondents conveyed clear support for environmental policy to be governed by scientific experts as opposed to greater direct democracy or political pluralism (73.6% on average). Adults were more strongly in favor of expert direction than youths (M=4.1, $p < .05$), but once again younger demonstrators in effect »caught up« with adults in September (M=4.1, $p < .001$). The results in Table 2 suggest that FFF protesters, while not rejecting central components of liberal democracy, cannot be unproblematically classified as post-materialist, anti-authoritarian, or populist in terms of their grievances or values.

Turning to measures of political trust and confidence, Table 3 shows remarkably low levels of trust in national and global governance. Moreover, youth and adult protesters were consistently aligned on political trust – or nearly so. Trust in political parties, the least trusted institutions (10.2%), was higher among youths than adults at levels approaching significance (M=2.8, $p < .10$). Otherwise, with the largest share of respondents in both age groups only ›somewhat‹ trusting, the most trusted institutions were the EU and the UN (~43%). This result is suggestive of EU-ambivalence, if not the outright EU-skepticism found among right wing populist supporters.[72] Relative to trust in governance institutions, trust in environmental groups was much stronger (~77%). Importantly, though, the political confidence measures offer a different vantage for interpreting the selective institutional distrust of FFF protesters.

71 Sommer et al. 2019.

72 E.g. Inglehart, Norris 2016.

Table 3: Trust and Confidence in Political Institutions among FFF Protesters, 2019

Trust in Political Institutions	*Total*	*Youth*	*Adults*	*Mar.-Sept. Δ*
National Governance				
Parliament	30.3%	28.0%	32.7%	31.0 → 29.6%
Government	21.0	19.6	22.5	19.5 - 22.4
Political Parties	10.2	13.2+	6.9	10.9 → 9.5
Global Governance				
European Union	42.6	49.2	35.4	45.7 → 39.7
United Nations	42.9	42.0	43.8	43.7 → 42.13
Trust in Environmental Groups	76.9	79.0	74.6	79.2 → 74.7
Confidence in Institutions				
Politicians (general)	62.3	68.4**	55.6	68.2 → 56.7*
Policy (climate)	50.5	60.3**	39.2	60.1 → 41.2**
Government (climate)	1.2	1.25	1.1	1.1 - 1.28+
Modern science (climate)	56.0	54.8	57.4	51.1 - 60.6*

*Note: + p< .10; *p < .05; **p < .001 (t-tests). Arrows (→) indicate a decrease from March to September.*

Compared to low levels of trust in national government (21%) and a near total lack of faith that government can be »relied on to solve environmental problems« (1.2%), respondents were relatively confident in the ability of politicians to fulfill their political promises (62.3%) and in the ability of policies to address climate change (50.5%). Youth protesters were consistently more confident than adults in politicians (M=3.8, p < .05) and in climate policies (M=3.7, p < .001). Nonetheless, confidence dropped among both generation groups in September, as evidenced by the nearly 20% decline in respondents' confidence that policies can tackle climate change (M=3.30, p < .001). By contrast, protesters' confidence in modern science (56%) increased (M=3.7, p < .05). Mirroring their technocratic sentiments (see Table 2), FFF protesters assessed non-government institutions, such as scientific and environmental groups, to be the most trustworthy, but continued to view government institutions as equally important for resolving climate change issues.

Given our arguments that grievance politicization depends on perceptions of where different institutions fall in relation to the concern *and* of the appropriate means for its resolution,[73] we still only have a partial picture of FFF protesters' attitudes toward political engagement. To examine how the results seen thus far fit with motives for protesting and perceptions of what types of political engage-

73 Cf. Klandermans 2013.

ment matter most, Table 4 presents the results for strategic repertoires. Our variables associated with a more assertive, materialist repertoire received the strongest overall support. Around 98% of respondents in both generation groups and at both events agreed with the movement's stated goal of holding politicians to their promises to curb global warming. This was 10% greater than support for the global justice goal (87%).[74] Similarly, over 88% reported that they were motivated to join the protest in order to put pressure on politicians.

Table 4: The Strategic Repertoires of FFF Protesters, 2019

Strategic Repertoires: Motives & Efficacy	*Total*	*Youth*	*Adults*	*Mar.-Sept. Δ*
Materialist Repertoire (instrumental/ assertive)				
Pressure politicians	89.1%	89.4%	88.7%*	89.8 → 88.4%
Hold politicians accountable (FFF goal)	98.5	98.4	98.5	98.3 - 98.6
Protest efficacy for accountability	56.5	62.3+	49.9	63.2 → 50.0**
Organized citizen groups' efficacy	76.2	79.8	72.2	74.1 - 78.2
Global justice through climate action (FFF goal)	87.3	85.3	89.6**	85.4 - 89.1
Protest efficacy for global justice	38.6	40.3	36.6	42.9 → 34.4*
Post-materialist Repertoire (expressive)				
Express solidarity	84.4	76.7	93.2**	79.7 - 88.9**
Moral obligation	70.0	66.0	74.8**	63.8 - 76.1**
Individual efficacy	50.2	55.7*	44.2	50.7 → 49.7*
›Lifestyle‹ politics efficacy	43.0	52.6**	32.0	47.4 → 39.0

*Note: + p < .10; *p < .05; **p < .001 (t-tests). Arrows (→) indicate a decrease from March to September.*

Adults were more strongly motivated than youths to pressure politicians (M=4.6, p < .05), to express solidarity (M=4.6, p < .001), and by a feeling of moral obligation (M=4.1, p < .001). Although the two motivations conceptualized as post-materialist for their more expressive, non-assertive action orientation are better evidenced among adult protesters, the extent to which adults were motivated to express solidarity was nearly indistinguishable from their desire to pressure politicians.[75]

74 Agreement with the importance of this goal was significantly higher among adults compared to youths (M= 4.5 p < .001), but this difference was no longer significant in September (not shown).

75 In fact, the motivation for protesting to pressure politicians was greater among adults in September (M=4.6) than it had been in March (M=4.4), making it a slightly stronger motivation than expressing solidarity (M=4.5). The only consistently significant motivational difference between the generations in September was the stronger

The political efficacy results accord with those on political confidence. Younger protesters' perceptions of political efficacy were generally higher (i.e., they expressed more confidence) than adults. Importantly, though, the rankings for the efficacy of different forms of engagement were similar for both generations: people viewed organized group action as most efficient (76.2%), followed by protests to achieve politician accountability on climate change (56.5%), and finally individual participation (50.2%). The only consistently significant difference across the events was the greater extent to which youths believed their individual participation could bring about policy change (52.6%, M=3.7, $p < .05$).

Also notable here is the large difference in protesters' perceptions of the demonstration's capacity to achieve the two movement goals. Belief in the ability of the climate strike to impact global justice (38.6%) was much lower than in its ability to hold politicians accountable (56.5%). When interpreted in conjunction with high levels of agreement on the importance of both of these goals (over 85% on average), FFF protesters do not appear to think that mass street demonstrations are sufficient means for attaining global environmental justice. A similar interpretation can be applied to the finding on the efficacy of ›lifestyle‹ politics. Although youth respondents' were significantly more likely than adults to believe voluntary ›lifestyle‹ changes have the power to bring about political change (52.6%, M=3.6, $p < .05$), they did not privilege the power of such actions over any of the others – except for the demonstration's capacity to help reach the global justice goal (40.3%).

Reinforcing our results on protesters' diminished confidence in politicians and climate policy at the September event (see Table 2), political efficacy scores also declined from March to September (and, again, especially among adults). Aside from the youth generation's stronger perceptions of political efficacy, there are two notable exceptions to this trend. One is the continued strength of the materialist engagement attitude that organized groups of citizens have the power to influence national policy (from 74 to 78%). Second, our authoritarian value measure for anti-party or anti-voting sentiment from Table 2 not only shows FFF protesters' firm belief in the capacity of voting to influence politicians (over 85% on average), but also that this belief was even more firmly held in September (from 85 to 90%, M=4.6, $p < .001$) than it was in March.[76] Taken together, engagement attitudes with the strongest levels of support were consistent among both youths and adults: targeting politicians, the importance of movement goals,

motivation to express solidarity among adults (not shown), which is not surprising when accounting for participation in a youth-led movement where the threats of environmental degradation and inequality are often framed in terms of »future« generations (c.f. Eliasoph 1998).

76 These descriptive results for voting sentiment are derived from conservatively recoding the anti-party variable to reflect pro-party voting sentiment. Notably, although few respondents claimed any political party membership and satisfaction with democracy consistently rated at a 5.5 level (hovering in the middle between 0 very dissatisfied and 10 very satisfied), high proportions (of the vote-eligible) voted in the last federal election (see Neuber, Gardner 2020).

and the greater political efficacy of voting and organized citizen groups as compared to the FFF demonstrations themselves and individual political participation.

In summary, the results suggest that FFF protesters were predominantly motivated to exert pressure on politicians and, in order to exert that pressure, they prioritized materialist as opposed to post-materialist forms of political engagement. The results also point to younger participants being less disillusioned with both »traditional politics« and »protest politics« than adults.[77] Across the motivational factors, critically, both age groups shared the demand for greater scientific leadership on climate change policies, rather than for greater direct democracy, ›horizontalism‹, or ›lifestyle‹ politics. Overall, we find clear concern with current market as well as governance arrangements, clear faith in civil society institutions, and a clear privileging of engagement techniques focused on achieving climate change policy enforcement. This configuration provides the most support for the hybrid model which locates the motivational origins of climate mobilizations in relatively stronger materialist concern and relative stronger materialist political engagement attitudes. The least support is found for the cultural backlash model, which is based on classic treatments of the environmentalist cause in the cycle of cultural value competition between post-materialists and materialists.[78]

5. Discussion and Conclusion

The cultural and post-2008 backlash theories suggest that neither environmental nor populist mobilizations can be fully understood without also understanding how they relate to each other. However, differences in their assessments of how long-term structural transformations influence patterns of contention also suggest that we may need to rethink assumptions about the nature of the relationship between these movements. This investigation contributes to this reassessment by providing a nuanced profile of the concerns and political engagement attitudes of participants in the *Fridays for Future* (FFF) Global Climate Strike actions in Germany, and hence an account of the motivational origins underlying the peaks in environmental justice mobilization in 2019. Overall, the cultural backlash and post-2008 backlash models that ascribe progressive or expressive post-materialist values to environmental movements – especially post-materialist political engagement or »protest politics« – do not fit easily on contemporary climate justice mobilizations.

Our results suggest that these FFF mobilizations were not a renewed expression of classic post-materialism in terms of underlying concerns or attitudes about political engagement. Instead, they appear to best fit a hybrid motivational model which blends explanations from cultural and post-2008 backlash theories. FFF protesters expressed high levels of materialist concern with the market and with

77 E.g., Inglehart, Catterberg 2002; Tufekci 2014.

78 I.e., Inglehart, Norris 2016.

the national political institutions, and they did not view expressive, extra-institutional forms of action as more efficient than elite-directed engagement in bringing about political change. Both generation groups shared a demand for greater scientific leadership on climate policy (as opposed to greater direct democracy). In light of the literature we cite in this study, it appears as though the movement has tapped into the widespread desire for experts in civil society institutions and the government to reassert control over neoliberal market forces in order to halt economic and environmental crises.

While the initial question of the relationship between the emergence and trajectory of right wing populism and present environmental mobilization remains thorny, our results suggest that several important politicization dynamics connect the individuals supporting these groups despite their very different demographic bases. As expected, FFF protesters were younger, female, well-educated, middle class, and politically left-leaning. Thus, the social composition of FFF demonstrations in Germany, and in Europe more generally,[79] corresponds to the opposite sectors of society from which scholars have found right wing populist party supporters (e.g. older, male, non-college educated, and working class).[80] However this socio-demographic profile did not correspond with either the dominant post-materialist concern predicted by the cultural backlash model, or with the privileging of post-materialist political engagement predicted by both backlash models.

The results suggest that FFF demonstrators in Germany not only hold economic-materialist concerns, but they also hold attitudes that can be said to align with varieties of populism. To name a few, protesters espoused strong concern with neoliberal markets and corporate actors, are highly distrusting of national political institutions and also skeptical of international ones, and would privilege a more technocratic arrangement in which scientific experts on climate change determine climate policy. Moreover, the central motivation of the protesters we analyzed was to pressure politicians, to hold them accountable for promises to address climate change. Personal or individualized participation and voluntary lifestyle changes were not strongly believed to be effective means of addressing climate change when compared to the materialist front of institutional decision-making and policy informed by modern science. This suggests that FFF protesters are motivated to re-politicize climate change issues through materialist political engagement and the empowerment of scientific experts, which makes their action repertoire far less »antagonistic« than that of right wing populists.[81]

When it comes to our research question about the consensus or convergence in viewpoints among youth and adult participants in the demonstrations surveyed, the results are more inconclusive. Most indicators support growing alignment in attitudes across generations at the larger September strikes. Yet adults appear to be more disillusioned than youths with »protest politics« and »elite-directed« or

79 de Moor et al. 2020; Wahlström et al. 2019.

80 I.e., Inglehart, Norris 2016.

81 Brubaker 2017.

conventional politics. While this complements the assumption that many left-leaning people are ›critical citizens‹,[82] it also confirms the need to avoid treating environmental movements as ideologically uniform.

Taken together, the results of this research have important implications for work on mobilization. Bridging macro-structural accounts of recurring lines of contention in Western democracies with micro-level accounts of grievance politicization processes among individuals uncovers some of the important variations which are easily concealed by cleavage indices and conceptualizations – i.e. the classic left-right divide in economic and party ideology, materialist versus post-materialist worldviews, and right wing populism versus cosmopolitan liberalism. The research also underscores the importance of assessing configurations of diverse motivational factors in politicization processes.

There are, of course, several limitations to this study. For one, the survey data we analyze is only from two of the four Global Climate Strikes that took place in Germany in 2019. This, in addition to only having surveys from two protest sites on each date, limits the extent to which we can generalize our results. Further studies can build upon the preliminary findings presented here, by increasing survey data sites as well as by employing alternative analytic techniques.

The views of protest participants revealed in this study are relevant to debates on the possible renewal of reliable bases for public information (i.e. scientific institutions), left-wing parties in Germany, and multilateral political institutions in the global North. The strategic repertoire evinced by protesters – their institutionally oriented policy demands and engagement attitudes – suggests the movement is primarily directed at the renewal of democratic governance at multiple levels and through the expansion of civil society's influence on politics. To reemphasize, this was not about greater pluralism or direct democracy. Movement participants clearly favored the greater empowerment of climate science experts in climate policy decision-making. Similarly, despite high skepticism in national and international governance, respondents were more trusting in international bodies (i.e. the EU and the UN), and relatively confident in their own ability to hold politicians accountable. This suggests room for an alliance between politicians and climate activists, perhaps via climate scientists. It will be interesting to see if the political supply can catch up with the political demand. While we avoid making claims about the capacity of global environmental justice mobilizations to generate an electoral response or a shift in governance, their potential impact in what is a decidedly turbulent political terrain warrant attention.

82 E.g., Norris 2002; Norris, Inglehart 2019.

Appendix Table A: Survey response rates for Global Climate Strikes in Germany, 2019.

	15 March Berlin	15 March Bremen	20 September Berlin	20 September Chemnitz	Total
Estimated number of participants	15,000 - 25,000	5,000 - 6,000	100,000 - 270,000	2,000	122,000 - 303,000
Number of survey flyers distributed	1,202	998	433	855	3,488
Number of face-to-face interviews	257	100	93	171	621
Number of web survey responses	205	154	108	280	747
Response rate, web survey (%)	17	15	26	32	22

Appendix Table B: Survey question wordings and variables used in the analysis

Variable	Question	Construction
Generational Cohort Youths, Adults	In which year were you born?	Youths (14-25 years old) Adults (26+)
Social Characteristics		
Age	In which year were you born?	Numeric (14+)
Gender	Are you...?	1 male; 2 female; 3 other
Education	What is the highest level of education that you completed? If you are a student, at what level are you studying?	1 if primary school student (no university) ; 2 if studying at university or holding a university degree; 3 if no university degree and not studying at university (originally 1 to 8 scale)
Subjective class identity	»People sometimes describe themselves as belonging to the working class, the middle class, or the upper or lower class. Would you describe yourself as belonging to the ...?«	1 upper class; 2 upper middle class; 3 lower middle class; 4 working class or lower class; 5 none or don't know (originally 1 to 7 scale)

Variable	Question	Construction
Political ideology	»In politics people sometimes talk of »left« and »right«. Where would you place yourself on this scale, where 0 means the left and 10 means the right?« [Other options: »to me, this categorization is meaningless« & DK]	A 0 to 10 scale where 0 is left and 10 is right Descriptive recode: 1 left (0-3); 2 neutral (4-6); 3 right (7-10); 4 other (11,12)
Materialist-Economic Concerns		
Redistribution concern	»Government should redistribute income from the better off to the those who are less well off«	1 to 5 scale: 1 if »strongly disagree«; 2 if »disagree«; 3 if »neither disagree nor agree«; 4 if »agree«; 5 if »strongly agree« Descriptive recode: 1 agree (4-5); 2 neutral (3); 3 disagree (1-2)
Prioritize environment over economy	»Protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs«	
Free-market concern	»Companies and the market can[not] be relied on to solve our environmental problems«	
Privatization concern	»Even the most important public services are best left to private enterprise«	
Traditional, Authoritarian Cultural Values		
Anti-immigration sentiment	»People from other countries should [not] be allowed to come to my country and live in it permanently if they want to«	Descriptive recode of 1 to 5 scale: 1 agree (3-5); 2 disagree (1-2)
Anti-Party Voting	»I don't see the use of voting, parties do whatever they want anyway«	1 to 5 scale: 1 if »strongly disagree«; 2 if »disagree«; 3 if »neither disagree nor agree«; 4 if »agree«; 5 if »strongly agree« Descriptive recode: 1 agree (4-5); 2 disagree (1-4)
Anti-pluralist	»I [do not] consider everybody's side of an argument before making a decision«	
Pro-Authority	»Children should be taught to obey authority«	
Pro-Police (favorable to law and order)	»How much you would say that you trust [the police] in your country«	1 to 5 scale: 1 if »not at all«; 2 if »not very«; 3 if »somewhat«; 4 if »quite«; 5 if »very much« Descriptive recode: 1 yes (4-5); 2 middle (3); 3 no (1-2)
Scientific authoritarianism (technocracy)	»The Government must act on what climate scientists say even if the majority of people are opposed«	

Variable	Question	Construction
Trust in Political Institutions		
National Government	»Please indicate, in general, how much you trust each of the following institutions.«	1 to 5 scale: 1 if »not at all«; 2 if »not very«; 3 if »somewhat«; 4 if »quite«; 5 if »very much« Descriptive recode: 1 yes (4-5); 2 some / middle (3); 3 no (1-2)
National Parliament		
Political Parties		
European Union		
United Nations		
Environmental Groups		
Confidence in Political Institutions		
Politicians (general)	»Most politicians make a lot of promises but do not actually do anything.«	1 to 5 scale: 1 if »strongly disagree«; 2 if »disagree«; 3 if »neither disagree nor agree«; 4 if »agree«; 5 if »strongly agree« Descriptive recode: 1 agree (4-5); 2 neutral (3); 3 disagree (1-2)
Policy (climate)	»I feel confident that political decisions/ policies can address climate change.«	
Government (climate)	»Governments can be relied on to solve our environmental problems.«	
Modern science (climate)	»Modern science can be relied on to solve our environmental problems.«	
Strategic Repertoires: Motives and Efficacy		
Pressure politicians (motive)	»I participated in the demonstration in order to pressure politicians.«	1 to 5 scale: 1 if »strongly disagree«; 2 if »disagree«; 3 if »neither disagree nor agree«; 4 if »agree«; 5 if »strongly agree« Descriptive recode: 1 agree (4-5); 2 neutral (3); 3 disagree (1-2)
Express solidarity (motive)	»I participated in the demonstration in order to express my solidarity.«	
Moral obligation (motive)	»I participated in the demonstration because I felt morally obliged to do so.«	
FFF politician accountability goal	»Politicians must fulfill their promise to stop global warming. This goal is important.«	1 to 5 scale: 1 if »not at all«; 2 if »not very«; 3 if »somewhat«; 4 if »quite«; 5 if »very much« Descriptive recode: 1 yes (4-5); 2 some / middle (3); 3 no (1-2)
FFF global justice goal	»Global justice must be advanced through climate action. This goal is important.«	
Protest efficacy for accountability goal	»Politicians must fulfill their promise to stop global warming. This demonstration will be effective in reaching this goal.«	
Protest efficacy for global justice goal	»Global justice must be advanced through climate action. This demonstration will be effective in reaching this goal.«	

Variable	Question	Construction
Organized citizen groups' efficacy	»Organized groups of citizens can have a lot of impact on public policies in this country.«	1 to 5 scale: 1 if »not at all«; 2 if »not very«; 3 if »somewhat«; 4 if »quite«; 5 if »very much« Descriptive recode: 1 agree (4-5); 2 neutral (3); 3 disagree (1-2)
Individual efficacy	»My participation in politics can have an impact on public policy in this country.«	
›Lifestyle‹ politics efficacy	»Stopping climate change must primarily be accomplished through voluntary lifestyle changes by individuals.«	

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Summary: It is conventionally assumed that the values underlying people's support for environmentalism are diametrically opposed to those favorable to right wing populism. While this might allow us to assume that recent global climate strike mobilizations fall on the ›post-materialist‹ and ›progressive‹ side of a battle against right wing populism, it is an open question. In order to explain the motivational origins of present climate mobilizations, we refocus attention on the need to bridge macro-historical theories on patterns of contention in Western democracies with micro-sociological ones. Employing new data from protest surveys of Fridays for Future (FFF) Global Climate Strike demonstrations that took place in Germany in 2019, we test whether the motivations of these protesters adhere to models of post-materialism either in terms of their concerns or their political engagement attitudes, and whether these motivational factors differ between younger and older generational cohorts. Our results suggest that the motivations underlying recent climate mobilizations should not be typified as post-materialist. FFF protesters expressed high levels of materialist concern and they did not view expressive or extra-institutional forms of engagement as more capable than institutional ones to bring about political change. Although the younger cohort was less disillusioned with both »protest politics« and conventional politics than adults, few indicators distinguish the youth and adult groups. Notably, the groups held in common the demand for greater scientific leadership on climate policy, rather than for greater direct democracy. This study affirms the need to avoid treating environmental movements as ideologically uniform and the importance of assessing configurations of motivational factors in mobilization.

Keywords: protest; environmental movement; post-materialism and cultural value change; global climate strike; Fridays for Future; populism

Klimagerechtigkeit in Zeiten des Populismus: Politisierung unter Fridays For Future Demonstrierenden in Deutschland

Zusammenfassung: Im Allgemeinen wird angenommen, dass die Werte, die Menschen zum Engagement im Umweltschutz bewegen, diametral entgegengesetzt zu denen sind, die zur Unterstützung des Rechtspopulismus beitragen. Ein solches Verständnis könnte man auch auf die jüngsten Mobilisierungserfolge der globalen Klimabewegung übertragen und diese als erneuten Ausdruck der »progressiven« und »postmaterialistischen« Seite des Kampfes gegen Gegner wie Rechtspopulisten interpretieren. In kritischer Auseinandersetzung mit solchen verfestigten Bildern wollen wir derartige Vorannahmen als offene Fragen behandeln. Um die Ursprünge der Motive für die gegenwärtigen Klimaproteste zu erklären, verbinden wir makrohistorische und mikrosoziologische Perspektiven auf die gegenwärtigen Konfliktlinien in westlichen Demokratien. Auf Basis von Befragungen, die 2019 unter den Demonstrierenden des Globalen Klimastreiks »Fridays for Future« (FFF) in Deutschland durchgeführt wurden, prüfen wir, ob sich die Motivationen für die Anliegen und das Engagement der Demonstrierenden in das Modell des progressiven Postmaterialismus einordnen lassen und ob diesbezüglich Unterschiede zwischen den Generationen vorliegen. Unsere Ergebnisse legen nahe, dass die Motivationen, die die jüngsten FFF-Mobilisierungen anfeuern, weder als postmaterialistisch noch als anti-populistisch typisiert werden können.

Stichworte: Protest; Umweltbewegungen; Postmaterialismus und Wertewandel; globaler Klimastreik; Fridays for Future; Populismus