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Pathways to environmental activism in four countries: social media, environmental concern, and political efficacy

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ABSTRACT

In 2018-9, millions of youth participated in climate-related marches across the globe. This activism reflects youth's distinctive form of political participation: cause-oriented, expressive, and networked. However, the pathway between environmental concern and environmental activism is complicated in some contexts and for some citizens. This article uses survey data from four countries (Canada, France, the United Kingdom, the United States) gathered in autumn 2019. We focus on the environmental activism of youth and young adults (aged 18–33 years, n = 1574). We find the role of social media is consistent and strong for all environmental activities in all countries; the role of political efficacy depends on activity and country but has a positive role in environmental activism; and environmental concern is a positive and significant correlate of boycotting and signing petitions but a weak predictor of participating in environmental marches. The relationship between environmental concern and environmental marches is distinctive in the United Kingdom. Overall, we find that concern about a social cause does not automatically translate into increased activism related to that cause. Moreover, online social networks, political efficacy, and political context are critical to understanding this mobilization process.

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Introduction

Concern about the environment is part of a generational shift towards post-materialist values and away from materialist values (Franzen and Vogl 2013; Hurst et al. 2013; Pickard, Bowman, and Arya 2020; Preisendörfer, Herold, and Kurz 2020). In most countries, environmental concern correlates with age (Franzen and Meyer 2010; Tranter and Booth 2015). In the United States, 59% of young people say climate change is a 'very big problem', while the concern of older generations is considerably lower (Doherty, Kiley, and Asheer 2019). Without taking any actions on their concerns, youth's voice in the climate debate is less likely to be heard and public policy less likely to be consistent with their best interests. This study investigates how strongly environmental concern

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relates to environmental activism and examines the role of political efficacy and the usage of social media as drivers of participation in the environmental activities of Generation Z (18 – to 24-year-olds) and Millennials (25- to 33-year-olds). Social media is the most consistent predictor of environmental activism in the four countries studied (Canada, France, the United Kingdom, and the United States).

The unprecedented level of environmental youth activism—led by Greta Thunberg's 'skolestreik for klimaet' (school strike for climate) that resulted in the global Fridays for Future (FFF) movement and the Extinction Rebellion (XR) activist network—can be described as a 'political epiphany' for a whole generation. Beyond impacting policy outcomes, political socialization research suggests that participation in this movement can have a profound and enduring impact on this generation (Ohme and de Vreese 2020). At this young age, causes of activism are strongly intertwined with identity formation (Matsuba, Alisat, and Pratt 2017). Participating in these activities can shape a generation into identifying as 'environmental activists,' just as the 1960s era created a 'protest generation' that adopted demonstrations as part of their political action repertoires (Grasso 2016). In addition, participation in this movement can affect how younger generations experience their agency in a political system. Finally, the success of the movement (or lack thereof) can shape their interest in politics and political participation as they move through the life course. For all of these reasons, it is important to understand the drivers and mechanisms leading young people to participate in environmental activities, such as marches, boycotts, and signing petitions. These activities are important because they are key components of youth's participation repertoires – the combination of political activities in people's 'personal toolboxes of political action' (Oser 2017, 241).

For collective action, such as marches, people participate if they believe their actions will have an impact; but they also consider a variety of other factors, including whether their peers would support the cause and/or participate in the activity (Klandermans and Oegema 1987; Preisendörfer, Herold, and Kurz 2020). Feelings of political efficacy develop at a young age and foster political participation among youth (Andersen et al. 2020). Young generations may experience their formative years differently depending on the country and political system in which they grew up (Kitanova 2020). The usage of digital media during the formative years of political socialization can be an important driver of political participation (Boulianne and Theocharis 2020; Ohme and de Vreese 2020). Moreover, concern about a political topic is a likely precondition for activism in political activities (Klandermans and Oegema 1987; Preisendörfer, Herold, and Kurz 2020).

We investigate three predictors of young people's environmental activism: level of environmental concern, level of political efficacy, and usage of social media for politics. To explore potential contextual differences, the study was conducted in four Western democracies (Canada, France, the United Kingdom, and the United States). We find (1) the role of social media is consistent and strong for all environmental activities in all countries; (2) the role of political efficacy depends on activity and country but has a positive role in environmental activism; and (3) environmental concern is a positive and significant correlate of boycotting and signing petitions but a weak predictor of participating in environmental marches. The connection between concern for a social cause and participation in cause-related activism depends on the political context and the intensity of the political activity. These findings have clear implications for environmental movements; groups and organizations continue to have a significant role in mobilizing citizens

to participate and social media are a key tool for these groups. In some countries, environmental concern and perceived efficacy do not translate into increased participation. The pathways to participation are different and require a holistic view of youth's living conditions as well as the openness of political institutions to citizens' collective demands.

Environmental concern and activism

Concern about a social cause is expected to predict whether one participates in efforts to support the social cause. This connection seems likely for a generation that prefers cause or issue-oriented and Do-It-Ourselves activism (Grasso 2016; Pickard 2019; Sloam 2016; Thorson 2015; Vromen et al. 2016). Preisendörfer, Herold, and Kurz (2020) find that environmental concern is a stronger predictor of participation in different types of environmental protests, such as attending an environmental rally and signing an environmental petition in the past five years, compared to the actual environmental conditions in one's community. Continuing this line of research, we examine the role of environmental concern as a predictor of different forms of environmental activism, including participation in a march or demonstration, boycotting a product, and signing a petition. However, we advance scholarship by exploring whether this connection translates across countries and across generations.

Mayerl and Best (2019) examine the correlation of environmental concern with willingness to sacrifice, i.e. pay higher prices, pay higher taxes, and cut one's standard of living, to protect the environment. They find the connection between environmental concern and willingness to sacrifice depends on the country. For countries with higher wealth, environmental concern and willingness to sacrifice are more highly correlated; in poorer countries, the correlation is weak. While they explain this differing relationship as a problem of measurement (also see Marquart-Pyatt 2015), we propose this varying relationship reflects differences in national contexts. In affluent countries, citizens are empowered to act on their beliefs. However, in poorer countries, citizens' actions may depend less on their beliefs; rather, citizens may be forced to make basic survival decisions that may compete with their desires to protect the environment. Furthermore, citizens in poorer countries do not have the luxury to pay higher prices, higher taxes, or sacrifice their basic standard of living.

While this can explain between-country differences, this pattern may also explain within-country differences defined by age. Does the connection between environmental concern and participation in environmental activities apply across generations? Borrowing the logic of poor/wealthy countries, we might expect that if younger generations live in more precarity then their concerns about the environment might not translate into environmental activism. Perhaps their concerns about the environment may become of secondary interest compared to basic subsistence needs. Sloam (2020, 5) interviewed young Londoners and concluded that

> environmental issues were simply less tangible than existential economic and social problems faced during their transition to adulthood (in the context of the financial crisis and austerity in public spending). This must be placed within the context of increasing precarity for younger generations in the UK.

The competing demands of subsistence and participating in environmental activism become even more apparent in the case of high-effort activities, such as participating

in marches and demonstrations, or the more radical activities of Extinction Rebellion that impact time, health, and safety (Pickard, Bowman, and Arya 2020). Interviewing 60 environmental activists aged 11–34 years, Pickard, Bowman, and Arya (2020) highlight these competing concerns of wanting to do something about climate change but also being concerned about arrest and the long-term impacts thereof on employment outcomes.

Using the International Social Survey Programme (ISSP) 2010, Franzen and Vogl (2013) find that Canada is distinctive as having higher levels of environmental concern; Great Britain's level of environmental concern is ten percentage points lower than Canada's while France and United States report identical results for levels of environmental concern. The results include all adults, leaving questions about whether contemporary youth in these specific countries differ in their views and how these concerns translate into activism. As such, we propose a research question rather than a hypothesis:

> RQ1: How does environmental concern relate to young citizens' participation in marches, boycotts, and petitions associated with the environment in Canada, France, the United Kingdom, and the United States?

Political efficacy and political context

In a recent paper, Bene (2020, 5) defined political efficacy as 'the extent to which people perceive that they exercise control over their political actions and their outcome,' thus connecting this definition to the hypothesis that 'if people feel that they can effectively shape political processes, they are more likely to carry out political actions.' Thus, political efficacy is an important concept that helps to explain why some people engage in activism while others do not (Niemi, Craig, and Mattei 1991; Verba and Nie 1972). However, political efficacy is often lower for younger citizens, as they do not believe as strongly as older citizens that their action or vote matters in the political system (Andersen et al. 2020). Many studies find older people are more efficacious in this regard than younger people (Ha et al. 2013; Li, Lee, and Li 2016; Wagner, Gray, and Gainous 2017; Warner et al. 2017; Willnat et al. 2013). Using the European Social Survey 2014-2015, Bene (2020) finds non-linear effects of age on political efficacy with different slopes for external efficacy compared to internal efficacy. He finds that older people are distinctive in relation to higher perceptions of their own ability to participate in politics (internal efficacy) but, for other age groups, this positive relationship is not as strong. The oldest and youngest age groups report higher levels of external efficacy, i.e. influence on the political system, compared to middle-aged people.

Educational initiatives or specific campaigns can have a positive impact on youth's political efficacy (Kahne and Westheimer 2006; Ohme, Marquart, and Kristensen 2020). But, importantly, young people's views will be shaped by their real-world experiences about the responsiveness of the political system (Shore and Tosun 2019). Hence, to understand the role of political efficacy for environmental activism, we must look at how the two youngest generations experienced politics in their formative years.

Generations are formed by a distinct set of experiences based on key events (Neundorf and Smets 2017). For example, Grasso et al. (2017) examine the idea of a generation of Thatcher's Children and Blair's Babies by looking at UK data about political attitudes

and the prime minister during a generation's coming of age. We use this framework to examine Generation Z (18- to 24-year-olds) and Millennials (25- to 33-year-olds) in Canada, France, the United Kingdom, and the United States. These younger generations have different and distinct experiences related to the responsiveness of the political system, efficacy of protest, and role of social media, which shape their views and can influence their propensity to engage in environmental activism.

Coming of age in the United Kingdom and France in the new millennium was characterized by a number of political disruptions. Pickard, Bowman, and Arya (2020) describe young people as a crisis-struck generation that experienced the involvement of the UK in the Iraq war, financial crisis of 2008, and recent Brexit turmoil. Bailey (2020) documents the topics of protest events in the United Kingdom since 2010; the timeline ends with environmental protests being most popular. He also establishes the tactics used, documenting the popularity of demonstrations compared to more confrontational tactics, such as strikes, blockades, and occupations. While participation in demonstrations has historically been low among UK youth (Sloam 2016), the topic of these more recent protest events has often been the environment (Bailey 2020).

In France, the terrorist attacks from 2010 onwards produced a 'State of Emergency' that granted great power to the French government (Pickard and Bessant 2018). In both France and the United Kingdom, young people predominantly felt politicians did not use this power to address youth-relevant issues, such as cuts in educational funding, high youth unemployment, and declining living standards (Sloam 2016; Pickard and Bessant 2018). The increasing scepticism toward political institutions and elites was, for example, expressed in the '*Nuit Debout*' protest movement in 2016 (Pickard, Bowman, and Arya 2020; Pickard and Bessant 2018). More recently, the '*Gilets Jaunes*' (Yellow Vest) movement reflects the clash between what citizens can afford to pay and environmental values (Cigainero 2018). The movement was ignited by President Macron's green tax on fuel, but has turned into a movement about inequality (McAuley 2019).

In Canada, coming of age in the new millennium was characterized by increased environmental protests, largely directed towards Alberta's oil sands development, but also as a reaction to Prime Minister Harper's election (2006-2015) and his climate change denial (Boulianne and Belland 2019). As observed in other countries, Canada experienced a series of social media-directed protests in 2012, including the successful '*Printemps Erable*' ('Maple Spring') Québec student protests against increased tuition fees (Schuetze 2019; Raynauld, Lalancette, and Tourigny-Koné 2016).

In the United States, the Occupy Wall Street (Theocharis et al. 2015) and Black Lives Matter movements (Freelon, McIlwan, and Clark 2016) were critical events in the formative years of young Americans. The size and duration of these events may have shaped young generations' understanding about the effectiveness of activism. As for environmental protest, the ongoing battles around the Keystone XL Pipeline have likely shaped young Americans' views about environmental protest as well as an understanding about the role of social media in activism (Hodges and Stocking 2016). Americans participate in annual marches related to climate change, with the September 2014 'People's Climate March' being a critical and large-scale event (Fisher 2019; Thorson et al. 2016). The Trump presidency and related protests (Fisher 2019; Boulianne, Koc-Michalska, and Bimber 2020a) will also likely have an enduring effect on youth's understanding about the efficacy of protest and the role of social media.

For environmental activism, Brunsting and Postmes (2002) found both self-efficacy and perceived effectiveness of the action to be drivers of online and offline environmental participation. In a US survey, Feldman et al. (2017) report no direct relationship between external nor internal efficacy and climate activism measured as volunteering or donating to an environmental organization or contacting an official about climate change concerns. Andersen et al. (2020), however, argue that effects of efficacy on participation may not be uniform across generations, and find efficacy to be a more important predictor of different types of participation among Millennials (born 1980-94) and Generation Z (born after 1995) members compared to other generations. With respect to their participation in environmental activism, political efficacy may be important but differ in its role depending on how responsive young people experienced politics to be when coming of age. With the potential of country differences in mind, we therefore predict:

H1: Political efficacy positively correlates with participation in marches, boycotts, and petitions associated with the environment.

RQ2: Does the relationship between political efficacy and environmental activism differ by country?

Social media and organizations

Social media have changed the internal as well as external coordination and communication of activist movements. In recent environmental movements, such as Fridays for Future, platforms including Facebook and WhatsApp played a crucial role in getting out the message and recruiting followers (de Moor et al. 2020). Importantly, digital media can help to organize collective actions, such as protests (Bennett and Segerberg 2011), but can also turn young citizens' individual acts into 'connective actions' (Bennett, Wells, and Freelon 2011). In other words, social media can turn 'Do-It-Yourself' (DIY) (Thorson 2015) into 'Do-It-Ourselves' (DIO) (Pickard 2019). Youth can work as a group or loose network, rather than as solitary individuals, to engage in civic and political activities. In this study, we investigate to what extent following environmental groups on social media relates to political activism in the form of marching, boycotting, and signing petitions.

Organizations play a core role in political mobilization (Pollock 1982). Similar to other forms of online activism characterized by 'organizational hybridity' (Chadwick 2007), social media groups can be described as low-level, low-hierarchy organizational units that allow for interactive information sharing, collaboration, and coordination around a specific topic. In the 'absence of central coordinators' and without classical membership procedures, these groups are a low-threshold, semi-public way of establishing a community around political topics (Flanagin, Stohl, and Bimber 2006; Tsatsou 2018). Youth, specifically, favor these 'loose networks of community action—often established or sustained through friendships and peer relations and thin social ties maintained by interactive information technologies' (Bennett 2008, 14). These generational differences signal a move from dutiful citizenship with a focus on formal organizations and voting to actualizing citizenship with loose networks favoring non-institutionalized forms of participation (Bennett 2008).

Different pathways to political participation exist (Beck and Jennings 1982; Gil de Zúñiga et al. 2017). Especially for young citizens, digital media present an important pathway for becoming politically active (Möller et al. 2014). Digital platforms combine formerly separate pathways to participation and can therefore be especially effective. Specifically, social media are able to address different stages of mobilization (i.e. being informed, building interpersonal links, and organizing actions), which have been found to predict participation in social movement activities (Klandermans and Oegema 1987; Van Laer 2017). Social media groups combine functions of information, recruitment, and activity coordination in one digital space and can therefore function as a mobilizing hub. Due to this multifunctionality, we argue that following environmental groups on social media enables multiple pathways to action and can therefore be conducive to cause-oriented activism.

Tsatsou (2018) finds information seeking as well as sharing, dialogue, and target-oriented actions were core functionalities of social media during the Sunflower Movement in Taiwan. In their hybrid function of providing information about political topics and offering a space for planning political action, following social media groups can therefore be an important driver of activism. More specifically, the 'network embeddedness' (Van Laer 2017) of following a political group on social media can generate support for ideas, provide structural support for further individual actions (e.g. information about where and how to become active), and, ultimately, be used as a recruiting tool for organized, collective actions.

Leyva (2017) finds a positive relationship between general social media use and student activism in the UK around the 2015 election. Marquart, Ohme, and Möller (2020) find following politicians on social media is strongly connected to the campaign participation and civic messaging of 15- to 25-year-old Danish citizens. The direct effect is mediated through interaction with friends and followers, suggesting interaction with like-minded users in social media groups can have similar mobilization effects. Boulianne, Koc-Michalska, and Bimber (2020a) studied the Women's March and March for Science in 2017 and find that joining a cause-oriented group on social media quintuples the odds of participating in marches and demonstrations; their study also offers a systematic review of existing research on protest and social media use.

Specifically for environmental activism, Halpern, Rosenberg, and Cardini (2013) find more than half of their respondents joined a Facebook group against major environmental projects in Chile, much more than for other political topics. They also find a positive relationship between social networking site use and online environmental activism. For young citizens, Scherman, Arriagada, and Valenzuela (2015) find Facebook usage predicts participation in environmental student movements in Chile. For climate protests, Van Laer (2017) finds membership in formal organizations has no effect on protest participation, while communication with informal links, which is likely to happen in a social media group, increases the likelihood of protest participation. Moreover, Zhang and Skoric (2018) find political social media use in Hong Kong predicts environmental activism and consumerism, while relational social media use (e.g. interacting with friends) only has a positive relationship with the latter. In sum, the hybrid functionalities of social media groups as information providers, motivators, and recruitment spaces for environmental topics lead us to expect:

H2: Following an environmental group on social media positively correlates with participation in marches, boycotts, and petitions associated with the environment in Canada, France, the United Kingdom, and the United States.

Methods

Sample

This paper uses survey data gathered from September to November 2019. Kantar-Lightspeed administered the survey to their online panel in four countries: the United States, the United Kingdom, France, and Canada. We only use the youngest age groups for our analysis (ages 18–33 years). The sample includes approximately 400 young respondents in each of the four countries. The countries were chosen to represent Western democracies, while ensuring geographic diversity (North America and Europe) and linguistic diversity (English and French). The project was funded by Canada's Social Sciences and Humanities Research Council (SSHRC) as an Insight Grant (435-2019-04-94). This project was reviewed and approved by MacEwan University's Research Ethics Board. Data and analysis files are available here: https://doi.org/10.6084/m9.figshare.16613869.v1

Measures

Respondents were asked about whether they had engaged in political activities related to environmental issues. Because we were only interested in these activities if they were environmentally motivated, we expanded the time frame from the usual one-year period for political activities to the past five years (also see Preisendörfer, Herold, and Kurz 2020; ISSP 2010). This broader time span also helps to gather data about respondents during their formative years, as the time span would cover political activities extending back to the age of 13 years for the youngest respondents. We asked about activities these youth could perform at such a young age, including signing petitions (online or offline) about an environmental issue, taking part in a march or demonstration about an environmental issue, and participating in a boycott of a company, service, or product because of poor environmental practices. The time period also captures the environmental activism related to the recent climate strikes (Boulianne, Lalancette, and Ilkiw 2020b; Pickard, Bowman, and Arya 2020).

Pooling across countries, 13.58% of young respondents had participated in an environmental boycott, 15.66% had participated in an environmental march, and 28.87% had signed an environmental petition. Small differences by country are evident (see Table 1), particularly around environmental marches. Approximately 12.37% of American young adults had participated in an environmental march compared to 20.50% of French young adults. The greater propensity of French youth to participate in marches has been documented in other research unrelated to environmental activism (Sloam 2016).

In terms of environmental concern (RQ1), we used the original question from the ISSP (2010). It included an overall question about environmental concern, then a follow-up question about concern about specific topics, such as climate change and air pollution (also see Guber 2013). Based on a pre-test, we modified the question to include a statement indicating what respondents should consider. The statement reads as follows: 'Thinking about environmental issues, such as wildlife conservation, air or water pollution,

Table 1. Descriptive statistics

	Range	Mean (SD) or % ALL	Mean (SD) or % USA	Mean (SD) or % UK	Mean (SD) or % France	Mean (SD) or % Canada
Female	0,1	65.78%	57.11%	77.75%	60.39%	69.14%
Advanced education	0,1	54.28%	53.94%	56.47%	41.55%	65.08%
18–24 years	0,1	41.19%	40.94%	43.03%	43.21%	37.43%
25–33 years	0,1	58.81%	59.06%	56.97%	56.79%	62.57%
Environmental concern	1–5	3.54 (1.14)	3.56 (1.20)	3.58 (1.09)	3.40 (1.12)	3.62 (1.13)
Follow environmental group on social media	0,1	25.09%	23.88%	24.63%	25.48%	26.82%
Perceived influence on national/federal government	1–5	2.46 (1.22)	2.64 (1.26)	2.33 (1.21)	2.37 (1.27)	2.46 (1.12)
Signed a petition (online or offline) about an environmental issue	0,1	28.87%	26.65%	31.34%	28.25%	29.61%
Taken part in a protest or demonstration about an environmental issue	0,1	15.66%	12.37%	13.93%	20.50%	17.04%
Participated in a boycott of a company, service, or product because of poor environmental practices	0,1	13.58%	14.07%	13.18%	13.02%	13.97%

and forest preservation, how concerned are you about the environment?' Respondents were then asked to rate their concern using a scale: not at all concerned (1), low concern (2), moderate concern (3), high concern (4), and very high concern (5). The original ISSP (2010) question did not label each response category, but research suggests doing so improves reliability (Maitland 2009). Young respondents rated their concern, on average, as 3.54 on this five-point scale with small differences by country.

We asked respondents how much influence they have on a variety of institutions (H1). For this paper, we follow existing research on protests that focuses on influence over national or federal government (Boulianne, Copeland, and Bemis 2019). We asked, 'How much influence do you think someone like you can have over the national/federal government?' (H1). The question originates with Craig, Niemi, and Silver (1990), but scholars have adapted it in several ways, including referring to different levels of government and changing the agree–disagree response scale into a unidimensional scale of degree of influence (Boulianne 2018; Lin 2016). Respondents were provided with a scale: not at all (1), a little (2), a moderate amount (3), a lot (4), and a great deal (5). Young respondents rated their ability to influence government as 2.46, on average, on this five-point scale.

We also asked a series of questions about social media use (H2). One of these questions asked about following different types of groups on social media. For this paper, we examine whether people checked off the box pertaining to following an 'environmental group.' Approximately 25.09% of young respondents followed an environmental group on social media, with few cross-national differences.

Controls

To assess differences among the subset of young respondents, we focused on whether or not the respondent had a post-secondary degree, as well as whether or not they self-identified as female. The original sex question offered three categories, with 'non-binary' as the third category (see Medeiros, Forest, and Öhberg 2020). Fifteen young

adults self-identified as non-binary. Because this is too few to conduct a separate analysis and the cases were largely in a single country (Canada), these respondents were excluded from the analysis. Among the subsample of young respondents, female respondents outnumbered males in a 66:34 split. Large country differences were apparent in terms of education, with only 41.55% of French young adults versus 65.08% of Canadian young adults having post-secondary training.

Results

The first research question (RQ1) examines the role of environmental concern and participating in three types of environmental activism: participating in marches, joining a boycott, or signing a petition (Table 2). As mentioned, we only asked about environmentally motivated activism. For the pooled sample, environmental concern does not correlate with participation in environmental marches. However, environmental concern is a strong, positive, and significant predictor of boycotting products (ExpB = 1.661, $p < .001$) and signing petitions (ExpB = 1.711, $p < .001$). Thus, while environmental concern predicts some forms of environmental activism, the correlation was not significant for the most intense of the three types of environmental activism, i.e. participating in marches and demonstrations.

With respect to the first hypothesis (H1), we examine the role of political efficacy in environmental activism (Table 2). Political efficacy is a positive and significant predictor of boycotting products (ExpB = 1.349, $p < .001$) and participating in marches and demonstrations (ExpB = 1.772, $p < .001$), but not signing petitions.

With respect to the second hypothesis (H2), we examine the connection between following environmental groups on social media and environmental activism (Table 2). This variable has a consistent connection to environmental activism, tripling the odds of participating in each activity. Specifically, following environmental groups triples the odds of participating in marches and demonstrations (ExpB = 3.154, $p < .001$), boycotting (ExpB = 2.667, $p < .001$), and signing petitions (ExpB = 2.914, $p < .001$).

Beyond our three hypotheses, we find other patterns. We include a dummy variable to denote youth between the ages of 18 and 24 years (Generation Z) and compare this group to Millennials (aged 25–33 years). We find the younger age group is more likely to participate in environmental marches and demonstrations (ExpB = 1.747, $p < .001$) and environmental boycotting (ExpB = 1.448, $p = .021$). However, among these two young age groups, there are no differences in the likelihood of signing environmental petitions. Education does not correlate with participation in environmental activism among these young adults (Table 2). We also do not find differences between males and females in terms of participation in environmental activism (Table 2).

As for cross-national differences, we created a series of dummy variables for each country, then used the United States as the reference group. We only find one significant difference once we account for other demographics and the three variables of interest (environmental concern, political efficacy, and following environmental groups on social media). This one exception relates to France and participation in marches and demonstrations; young French respondents are more likely to participate in environmental marches compared to young respondents in other countries. This pattern is apparent

Table 2. Binary Logistic Regression Of Environmental Activism

	Enviro. Marches				Enviro. Boycott				Enviro. Petition			
	b	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)	*b*	SE	*p*	Exp (B)
Female	−0.210	0.158	.185	0.811	−0.065	0.169	.701	0.937	0.182	0.134	.174	1.199
Advanced education	0.234	0.157	.137	1.264	0.252	0.164	.125	1.287	0.204	0.126	.104	1.226
18–24 years	0.558	0.153	<.001	1.747	0.370	0.160	.021	1.448	0.067	0.124	.588	1.070
UK	0.335	0.219	.127	1.398	0.051	0.217	.814	1.052	0.245	0.166	.140	1.278
France	0.817	0.211	<.001	2.264	0.108	0.222	.625	1.114	0.214	0.172	.214	1.238
Canada	0.494	0.218	.023	1.639	0.013	0.219	.953	1.013	0.080	0.172	.641	1.083
Environmental concern	−0.002	0.071	.975	0.998	0.507	0.082	<.001	1.661	0.537	0.061	<.001	1.711
Follow enviro. group on SM	1.149	0.160	<.001	3.154	0.981	0.163	<.001	2.667	1.070	0.133	<.001	2.914
Perceived influence on government	0.572	0.064	<.001	1.772	0.299	0.064	<.001	1.349	0.049	0.051	.338	1.050
Sample size, model fit	*n*=1574 Cox & Snell r-square = .125				*n*=1574 Cox & Snell r-square = .094				*n*=1574 Cox & Snell r-square = .133			

Reference groups: for gender, males; for age, 25–33 years; and for country, the United States. SE, standard error. SM, social media.

in the bivariate analysis (Table 1) and this difference remains significant with a full set of statistical controls (Table 2).

To examine the robustness of our models across a variety of contexts, we present the country-specific results in Table 3. Following environmental groups on social media has a consistent and positive role in all four countries for all three activities related to environmental activism, but the strengths of these relationships differ. For example, following an environmental group on social media quintuples the likelihood of participating in marches, quadruples the likelihood of signing petitions, and triples the likelihood of boycotting in the United States. The relationship is weakest in the United Kingdom for following environmental groups on social media and boycotting (ExpB = 1.866, $p = .059$, n = 400).

When considering political efficacy, we see patterns that differ by country, which is to be expected given the reference for political efficacy is the respective national or federal government. In other words, the institution being asked about (and their responsiveness to youth concerns) differs for each country, so we expect some cross-national variation with respect to this variable (RQ2). Political efficacy positively influences the likelihood of marching and demonstrating in each of the four countries. For the United States, Canada, and the United Kingdom, perceived ability to influence government doubles the odds of participating in environmental marches; the relationship is slightly smaller in France (ExpB = 1.497, $p < .001$). However, political efficacy predicts environmental boycotting in only two of the countries: the United States (ExpB = 1.455, $p = .001$) and the United Kingdom (ExpB = 1.488, $p = .002$). Political efficacy does not have a significant relationship with signing petitions in any of the four countries; this pattern replicates what was observed in Table 2 using the pooled sample.

We replicate findings about environmental concern and participation in environmental marches (Table 3). In three of the four countries, this variable does not have a significant correlation with participating in marches and demonstrations. For the UK, on the other hand, we find environmental concern has a negative correlation with participating in marches and demonstrations (ExpB = 0.604, $p = .001$). This is contrary to our expected positive relationship. As observed with the pooled sample, environmental concern has a significant and positive relationship with the two other activities—boycotting products for environmental reasons as well as signing environmental petitions— and these patterns are consistent in all four countries.

In sum, the cross-national comparisons reveal environmental concern has a distinct relationship with marching in the United Kingdom. To examine if this distinction is statistically significant, we re-ran the model outlined in Table 2 and then added an interaction term for the UK and environmental concern. This interaction term was significant (ExpB = .538, $p < .001$). In other words, the relationship between environmental concern and participation in environmental marches is distinct in the United Kingdom; being concerned about the environment decreases the odds of participation in environmental marches and demonstrations.

Discussion

This paper examines the pathways to environmental activism for two generations of young people: Generation Z (18- to 24-year-olds) and Millennials (25- to 33-year-olds). We find social media use is critical with respect to the mobilization of these groups,

Table 3. Environmental Activism By Country

	Enviro. Marches				Enviro. Boycott				Enviro. Petition			
	b	SE	*p*	Exp (B)	*b*	SE	*p*	Exp (B)	*b*	SE	*p*	Exp (B)
USA												
Environmental concern	−0.092	0.141	.515	0.912	0.545	0.155	<.001	1.725	0.306	0.105	.004	1.357
Follow enviro. group on SM	1.595	0.333	<.001	4.929	1.172	0.303	<.001	3.228	1.395	0.250	<.001	4.035
Perceived influence on government	0.678	0.133	<.001	1.970	0.375	0.115	.001	1.455	0.119	0.091	.189	1.127
Sample size, model fit		n=463				*n*=463				n=463		
		Cox & Snell r-square = .143				Cox & Snell r-square = .122				Cox & Snell r-square = .123		
UK	b	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)
Environmental concern	−0.504	0.155	.001	0.604	0.591	0.172	0.001	1.806	0.615	0.126	<.001	1.850
Follow enviro. group on SM	1.198	0.352	.001	3.314	0.624	0.331	0.059	1.866	1.042	0.265	<.001	2.836
Perceived influence on government	0.660	0.135	<.001	1.935	0.397	0.131	0.002	1.488	0.061	0.104	.559	1.063
Sample size, model fit		n=400				n=400				n=400		
		Cox & Snell r-square = .134				Cox & Snell r-square = .081				Cox & Snell r-square = .157		
France	b	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)
Environmental concern	0.216	0.134	.108	1.241	0.452	0.167	.007	1.572	0.535	0.126	<.001	1.707
Follow enviro. group on SM	0.936	0.301	.002	2.549	0.916	0.348	.008	2.498	0.931	0.282	.001	2.538
Perceived influence on government	0.403	0.113	<.001	1.497	0.142	0.132	.284	1.152	−0.003	0.104	.980	0.997
Sample size, model fit		n=361				n=361				n=361		
		Cox & Snell r-square = .117				Cox & Snell r-square = .084				Cox & Snell r-square = .127		
Canada	b	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)
Environmental concern	0.306	0.164	.062	1.358	0.419	0.178	.018	1.521	0.782	0.144	<.001	2.186
Follow enviro. group on SM	1.087	0.326	.001	2.966	1.225	0.346	<.001	3.404	0.850	0.283	.003	2.339
Perceived influence on government	0.575	0.150	<.001	1.776	0.238	0.155	.124	1.269	0.038	0.121	.755	1.039
Sample size, model fit		*n*=350				*n*=350				*n*=350		
		Cox & Snell r-square = .147				Cox & Snell r-square = .115				Cox & Snell r-square = .160		

*Age, gender, and education effects are not shown, but are included in the model. See the Appendix. SE, standard error. SM, social media.

following patterns observed in existing research (Boulianne and Theocharis 2020; Leyva 2017; Marquart, Ohme, and Möller 2020; Scherman, Arriagada, and Valenzuela 2015). Moving scholarship forward, we examine ties to organizations on social media and find that social media groups act as low-threshold, semi-public ways of establishing a community around political topics; they present an especially important pathway to participation in collective action as they function as a hub that addresses different stages of mobilization in one digital space (Flanagin, Stohl, and Bimber 2006; Tsatsou 2018; Van Laer 2017). Using social media to follow environmental groups has a large impact on the likelihood of participating in environmental marches, boycotts, and signing petitions. This relationship is consistently positive and significant in all countries. Following political groups on social media can generate support for ideas, circulate information about where and how to become active, and overall be a recruitment tool for collective action.

The consistent findings across the four countries are important. Social media present an important pathway to activism across countries. Also, the findings suggest that groups or organizations remain important to mobilization when we consider their social media presence. These groups help turn the 'Do-It-Yourself' (DIY) (Thorson 2015) idea into 'Do-It-Ourselves' (DIO) (Pickard 2019). Our findings suggests that youth are not merely clicking 'like' or 'follow' but then avoiding more intense forms of participation; following groups on social media is positively associated with protesting, boycotting, and signing petitions. We contribute to a growing consensus in scholarship refuting clicktivism and slacktivism claims (Boulianne and Theocharis 2020), highlighting results related to environmental activism.

We did not find education and gender differences in participation in environmental activism when examining the pooled sample of young adults for the four countries. Marquart-Pyatt (2012) finds that education predicts environmental activism in Canada and the United States, but not the United Kingdom. She finds that gender predicts environmental activism in Canada, but not the United Kingdom or United States; she does not have results for France. Her study uses a survey of adults in 16 countries (ISSP 2010), whereas our study only explores young adults. In the Appendix, we include full regression tables for the country-specific results. In sum, education and gender are not significant predictors of environmental activism among young adults in each country: the exception is that females are more likely than males to sign environmental petitions in the United Kingdom.

In terms of cross-national differences, we observe two patterns: (1) political efficacy and boycotting are only significantly related in the United States and United Kingdom and (2) the relationship between environmental concern and marching is negative and significant in the United Kingdom. More generally, we can conclude the United Kingdom is quite distinct in relation to environmental activism. These patterns can be explained in a variety of ways. Perhaps the two activities (marching vs. boycotting) compete for prominence in individual and environmental organizations' tactical toolkits. Given the popularity of environmental marches (Bailey 2020), perhaps this tactic has lost some of its impact or appeal, encouraging youth to turn to other tactics such as boycotting. Pickard, Bowman, and Arya (2020) point out how Extinction Rebellion activists are concerned about possible arrest; this sentiment would deter marching and perhaps encourage less risky activities, such as boycotting. A meta-analysis of 66 studies on political consumerism suggests political efficacy is not a strong predictor of participating in

boycotts (Copeland and Boulianne 2020). In this body of research, it is rare to find that internal or external efficacy predicts boycotting, so the significant findings for the United States and United Kingdom are noteworthy.

Kyroglou and Henn (2020) elaborate on the complex relationship between political efficacy and political consumerism in the United Kingdom and Greece. In both countries, youth are being pushed out of traditional politics while being pulled in by political consumerism (Kyroglou and Henn 2020). However, for Greek youth, their motivation for participation in political consumerism relates to high levels of internal political efficacy and distrust of political actors (Kyroglou and Henn 2020). For youth in the United Kingdom, their participation relates to confidence in the marketplace to respond to their needs (Kyroglou and Henn 2020). In other words, their participation relates to efficacy, but it is a perception related to the marketplace, rather than the government. In our survey, we found that political efficacy is correlated with environmental boycotting in the United Kingdom; albeit of the four countries, young respondents in the UK report the lowest level of political efficacy.

An older line of research suggests the United Kingdom has always been different in relation to environmental views and action. Mayerl and Best (2019) present simple bivariate correlations between environmental concern and the willingness to sacrifice to protect the environment. For Canada, France, and the United States, the correlations are strongly positive (ranging from .505 to .615), whereas for the United Kingdom the correlation is only .121 (using the ISSP 2010). Marquart-Pyatt (2012) uses older data (ISSP 2010) and does not find differences for the United Kingdom, United States, and Canada in relation to the correlation of environmental attitudes and activism. As such, the pattern is more contemporary and points to generational differences. The pattern is not consistent with the wealthy-poor country theory offered by Mayerl and Best (2019). Instead, the patterns point to a unique situation in the United Kingdom related to environmental concern and the ability to act upon this concern. Perhaps this young generation of British citizens might be experiencing greater precarity (see Sloam 2020), which makes them unable to engage in environmental marches; that idea, combined with the diminishing efficacy of protest, might explain the unique situation in the United Kingdom.

As we described, each generation is marked by a different set of formative events that shape their views about politics. Each of these countries has a different history related to environmental activism that shapes these younger generations' views about their ability to influence government and the role of social media in this effort. The climate marches of 2018-9 will undoubtedly shape an entire global generation of youth and their views about the importance of climate change, their perceived ability to influence government policy on climate change, and the role of social media in cause-oriented activism. Being involved in the climate movement during one's formative years will likely have a strong impact on the self-identity of these young people. Hence, the pathways to environmental activism found in this study may continue over the life course of Generation Z (18- to 24-year-olds) and Millennials (25- to 33-year-olds) members.

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Appendices

Appendix Survey Questions

Environmental Concern

FR	EN
Penser à les questions environnementales, telles que la conservation de la faune, la pollution de l'air ou de l'eau et la préservation des forêts, êtes-vous préoccupé par l'environnement?	**Thinking about environmental issues, such as wildlife conservation, air or water pollution, and forest preservation, how concerned are you about the environment?**
1. Pas du tout concerné	1. Not at all concerned
2. Faible préoccupation	2. Low concern
3. Préoccupation modérée	3. Moderate concern
4. Haute préoccupation	4. High concern
5. Très haute préoccupation	5. Very high concern

Political efficacy

FR	EN
Quelle influence pensez-vous que quelqu'un comme vous puisse avoir sur:	**How much influence do you think someone like you can have over:**
ITEMS	
a. Le gouvernement national/fédéral	a. National/federal government
SCALE	
1. Pas du tout	1. Not at all
2. Un peu	2. A little
3. Moyennement	3. A moderate amount
4. Beaucoup	4. A lot
5. Enormément	5. A great deal

Social Media Following Groups

FR	EN
Penser á toutes les plateformes de réseaux sociaux que vous utilisez, suivez-vous l'un des groupes ou organisations suivants?	**Thinking about all the social media platforms that you use, do you follow any of the following groups or organizations?**
ITEMS	
(e) Groupes environnementaux	(e) Environmental groups
SCALE	
0. Non	0. No
1. Oui	1. Yes

Enviromental activism

FR	EN
Au cours des cinq dernières années, avez-vous eu l'une des activités suivantes?	**In the last five years, have you done any of the following activities?**
ITEM	
(a) signé une pétition (en ligne ou hors ligne) sur un problème environnemental	(a) signed a petition (online or offline) about an environmental issue
(b) Participé à une manifestation ou à une manifestation sur un problème environnemental	(b) taken part in a protest or demonstration about an environmental issue
(c) participé à un boycott d'une entreprise, d'un service ou d'un produit en raison de mauvaises pratiques environnementales	(c) participated in a boycott of a company, service, or product because of poor environmental practices
SCALE	
0. Non	0. No
1. Oui	1. Yes

Appendix Table 1: United States Only

Binary Logistic Regression Of Environmental Activism

	Enviro. Marches				Enviro. Boycott				Enviro. Petition			
	b	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)	*b*	SE	*p*	Exp (B)
Female	0.135	0.326	.679	1.144	−0.177	0.306	.562	0.838	−0.044	0.241	.854	0.957
Advanced education	−0.322	0.340	.344	0.725	−0.098	0.316	.755	0.906	0.122	0.245	.619	1.130
18–24 years	0.765	0.333	.022	2.148	0.139	0.313	.656	1.149	−0.076	0.248	.760	0.927
Enviro. concern	−0.092	0.141	.515	0.912	0.545	0.155	<.001	1.725	0.306	0.105	.004	1.357
Follow enviro. group on SM	1.595	0.333	<.001	4.929	1.172	0.303	<.001	3.228	1.395	0.250	<.001	4.035
Perceived influence on government	0.678	0.133	<.001	1.970	0.375	0.115	.001	1.455	0.119	0.091	.189	1.127
Sample size, model fit	n=463 Cox & Snell r-square = .143				n=463 Cox & Snell r-square = .122				n=463 Cox & Snell r-square = .123			

Reference groups: for gender, males and for age, 25–33 years. SE, standard error. SM, social media.

Appendix Table 2: United Kingdom Only

Binary Logistic Regression Of Environmental Activism

	Enviro. Marches				Enviro. Boycott				Enviro. Petition			
	b	SE	*p*	Exp (B)	*b*	SE	*p*	Exp (B)	*b*	SE	*p*	Exp (B)
Female	0.004	0.359	.992	1.004	0.112	0.395	0.776	1.119	0.742	0.324	0.022	2.099
Advanced education	0.524	0.336	.119	1.688	0.217	0.325	0.504	1.243	0.131	0.242	0.590	1.139
18–24 years	0.505	0.318	.113	1.656	−0.146	0.316	0.645	0.865	0.258	0.239	0.280	1.295
Enviro. concern	−0.504	0.155	.001	0.604	0.591	0.172	0.001	1.806	0.615	0.126	<.001	1.850
Follow enviro. group on SM	1.198	0.352	.001	3.314	0.624	0.331	0.059	1.866	1.042	0.265	<.001	2.836
Perceived influence on government	0.660	0.135	<.001	1.935	0.397	0.131	0.002	1.488	0.061	0.104	0.559	1.063
Sample size, model fit	*n*=400 Cox & Snell r-square = .134				*n*=400 Cox & Snell r-square = .081				*n*=400 Cox & Snell r-square = .157			

Reference groups: for gender, males and for age, 25–33 years. SE, standard error. SM, social media.

Appendix Table 3: France Only

Binary Logistic Regression Of Environmental Activism

	Enviro. Marches				Enviro. Boycott				Enviro. Petition			
	B	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)	b	SE	*P*	Exp (B)
Female	−0.399	0.287	.165	0.671	−0.148	0.342	.666	0.863	0.224	0.267	.401	1.251
Advanced education	0.477	0.282	.091	1.610	0.590	0.334	.077	1.804	0.461	0.256	.071	1.586
18–24 years	0.386	0.285	.175	1.471	0.757	0.338	.025	2.131	0.053	0.257	.835	1.055
Enviro. concern	0.216	0.134	.108	1.241	0.452	0.167	.007	1.572	0.535	0.126	<.001	1.707
Follow enviro. group on SM	0.936	0.301	.002	2.549	0.916	0.348	.008	2.498	0.931	0.282	.001	2.538
Perceived influence on government	0.403	0.113	<.001	1.497	0.142	0.132	.284	1.152	−0.003	0.104	.980	0.997
Sample size, model fit	*n*=361 Cox & Snell r-square = .117				*n*=361 Cox & Snell r-square = .084				*n*=361 Cox & Snell r-square = .127			

Reference groups: for gender, males and for age, 25–33 years. SE, standard error. SM, social media.

Appendix Table 4: Canada Only

Binary Logistic Regression Of Environmental Activism

	Enviro. Marches				Enviro. Boycott				Enviro. Petition			
	b	SE	*p*	Exp (B)	b	SE	*p*	Exp (B)	*b*	SE	*p*	Exp (B)
Female	−0.433	0.333	.194	0.649	0.082	0.369	.825	1.085	−0.010	0.289	.973	0.990
Advanced education	0.334	0.350	.341	1.396	0.521	0.377	.167	1.684	0.127	0.284	.655	1.135
18–24 years	0.656	0.323	.042	1.926	0.736	0.341	.031	2.087	−0.140	0.276	.613	0.869
Enviro. concern	0.306	0.164	.062	1.358	0.419	0.178	.018	1.521	0.782	0.144	<.001	2.186
Follow enviro. group on SM	1.087	0.326	.001	2.966	1.225	0.346	<.001	3.404	0.850	0.283	.003	2.339
Perceived influence on government	0.575	0.150	<.001	1.776	0.238	0.155	.124	1.269	0.038	0.121	.755	1.039
Sample size, model fit	*n*=350 Cox & Snell r-square = .147				*n*=350 Cox & Snell r-square = .115				*n*=350 Cox & Snell r-square = .160			

Reference groups: for gender, males and for age, 25–33 years. SE, standard error. SM, social media.