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Right and Left-Wing Views: A Story of Disagreement on Environmental Issues but
Agreement on Solutions

Running head: POLITICAL ORIENTATION AND ENVIRONMENTAL ISSUES

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Abstract

Environmental issues are often presented as becoming increasingly polarised with the deepening of a political gap between left-wing (or liberal) and right-wing (or conservative) citizens. Going beyond the most investigated single issue of climate change, we look at prioritisation of multiple environmental issues across the political spectrum. We additionally investigate which environmental modes of action individuals evaluate as most effective, depending on political orientation. We finally aim to identify psychological attributes that make environmental issues and actions more likely to be prioritised by both sides of the political spectrum. Amongst a representative UK sample (Study 1, $N = 1,147$) results highlight an important political divide on several issues, most notably climate change, but also agreement on other issues. Comparison of the issues most selected by the left and the right reveals differential prioritisation associated with perceived psychological distance (Study 2, $N = 207$). Crucially, however, results show a broad consensus regarding modes of action. Across the political spectrum, respondents evaluate strong actions (i.e., compulsory, loss-framed, and challenging economic growth principles) as more effective, which might speak to the public's newest and accelerating urgency of tackling environmental issues. There are important implications for policy makers: if the aim is to achieve cross-political commitment to policies and action on environmental issues, then persuasive discourse should focus on modes of action rather than the prioritisation of particular issues. Given that the public recognises the need for ambitious actions, policy makers could seize this opportunity to propose forward strong (and objectively effective) action.

Key words: climate change; environmental issues; political orientation; political divide; psychological distance

Public Significance Statement

This paper shows that right-wing (or conservative) people care about different environmental issues (e.g., growing amount of waste) than do left-wing (or liberal) people (e.g., climate change). Despite these differences in the issues they prioritise, people across the political spectrum largely agree on the types of actions perceived as most effective and prioritise strong actions (e.g., changing consumption). This has implications for policy makers, environmental campaigns and media portrayals of environmental problems: Rather than focusing on the issues at hand, pointing to consensually supported actions could enhance widespread adoption of specific proenvironmental policies. With psychological evidence that there are objectively effective measures that the public is consensually willing to support, it is policy makers' responsibility to design and enact such measures.

Introduction

Environmental issues have been attracting increasing attention from citizens, governments, businesses, scholars and the media. Many suggest that environmental issues are becoming increasingly polarised, with the emergence and deepening of a political gap (Chinn et al., 2020; McCright & Dunlap, 2011) wherein left-wing (or liberal) political beliefs map onto proenvironmental views and right-wing (or conservative) beliefs map onto resistance to proenvironmental actions, and even climate change denial (e.g., Bugden, 2022). However, much of the aforementioned research has focused on climate change, overlooking other environmental issues, such as extinction of species and habitats, growing amount of waste, or marine pollution. Hence, it remains unclear whether the liberal-conservative difference *generalises* to most or all environmental issues, or whether it might be specific to the issue of climate change.

In addition, there is little research on the perception of different *modes of action* (i.e., possible ways of taking action to tackle environmental problems). Most studies have investigated perceptions of environmental issues or proenvironmental attitudes in general; or alternatively have manipulated the presentation of (co-)benefits of an environmental action and tested its impact on attitudes and perceptions (e.g., Bain et al., 2016). In other words, they described perceptions of *what* will be achieved as a result of – for example – mitigation strategies, but not *how* these strategies might be achieved and, crucially, whether political ideology plays a role in the acceptance of such modes of action. In the present research, we therefore test the implications of the political divide for people's (1) evaluations of a range of environmental issues (i.e., which environmental issues are perceived as most important) and (2) evaluations of actions (i.e., which modes of action are perceived as most effective to tackle these issues).

The Political Divide: Environmental Issues and Actions

Environmental Issues. Evidence suggests that liberal-conservative political differences might be associated with entrenched views specific to climate change. Indeed, Petrovic et al. (2014) found that removing climate change related terms (e.g., fossil fuels, carbon footprint, global warming, greenhouse gas emissions) from persuasive messages greatly reduced the political divide between US liberals and conservatives' attitudes. In other studies, messages referring to 'air pollution' rather than 'climate change' also increased support from conservative respondents (Hart & Feldman, 2018). Comparing different issues (climate change, global warming, carbon pollution, ocean acidification, and air pollution) similarly showed that the 'air pollution' message elicited higher support across the political spectrum (e.g., Mossler et al., 2017). Hence, climate change seems to be a more divisive issue, whereas air pollution (a different frame for a connected issue) attracted more consensus – with other issues falling in between. We thus expect to observe variations in the magnitude of the political divide across distinct environmental issues.

Environmental Modes of Action. The role of political orientation is not clear when it comes to acceptance of environmental policies or *modes of action*. Both in the USA and Europe (Hamilton & Saito, 2015; McCright et al., 2016) some findings suggest that left-wing respondents endorse all types of environmental actions more strongly than right-wing respondents. Other evidence suggests that the magnitude of the political gap varies across modes of action. For example Clayton (2018) observed a greater gap in support for the implementation of individual and business taxes and 'carbon credit' procedures for companies, but no gap in support for the implementation of prohibition measures and non-financial incentives. Right-wing people are also more likely to support climate actions arising from private sector initiatives than from government regulations (Gillis et al., 2021). These variations might be due to different perceptions of fairness and effectiveness: modes of action

that are perceived as fairer and more effective are more strongly supported, and perceptions are influenced by political orientation (Clayton, 2018; Jagers et al., 2018).

Other findings reveal agreement across the political spectrum (with the exception of the far-right) on policies targeting decarbonisation and renewable energy development (Thonig et al., 2021). Swim, Geiger and colleagues also find that preferences amongst climate change mitigation policies depend on policy attributes but not on political orientation (Geiger et al., 2021; Swim & Geiger, 2021).

Overall, existing studies have concentrated on a limited number of modes of action: most focus on top-down policies and specifically the introduction of environmental taxes and/or subsidies, which might have led to biased or only partial conclusions. A few have considered other forms of action (e.g., changes in individuals' behaviour, production and consumption habits, information and education campaigns; Clayton, 2018; Leiserowitz et al., 2021; energy production and energy use strategies, Swim & Geiger, 2021), making it difficult to draw clear conclusions. Accordingly, we expect to observe at least some variations in which modes of action are perceived as more effective by left- and right-wing respondents but remain tentative as to which modes of action would reveal a greater gap. We suggest, though, that people might be biased towards ideologically consistent actions (see Campbell & Kay, 2014). For example, actions that imply increased taxation and that may limit free-market capitalism seem more likely to be prioritised by left- than right-wing respondents.

Relevant Psychological Attributes

It seems likely that differences in the evaluation of environmental issues and actions would be underpinned by the psychological representation of the issue/action. To better understand respondents' prioritisation of specific issues and actions, it is therefore important to investigate the perception of relevant psychological attributes. Based on the existing literature, we identified different attributes that were likely to vary across issues or actions

and to influence people's evaluations (see Study 2). We chose here to focus on: degree of abstraction and corresponding psychological distance, positive-negative framing, mandatory vs. voluntary nature, economic impact, and actors targeted.

Construal Level and Psychological Distance. A large body of research shows how the abstract versus concrete perception of an object affects its evaluation. People are more concerned about and motivated by things that they perceive in more concrete and specific terms (e.g., McDonald et al., 2015). Importantly, psychological distance is related to this perceived degree of abstraction: things that are closer to oneself (temporally, spatially, socially and hypothetically) can be perceived as more concrete. Accordingly, research shows that people might fail to care about environmental issues because these are perceived as too abstract and pertaining to a distant and uncertain future. Conversely, contextualising issues in more concrete terms can motivate people to take action. In addition, support for abstract policies is more driven by values than support for concrete policies is (Brügger et al., 2015). These effects, however, seem to depend on political orientation (McDonald et al., 2015; Rickard et al., 2016). We hence investigated perceptions of the issues and modes of actions as relatively abstract versus concrete, and psychologically distant versus close.

Positive and Negative Framing. People generally tend to approach gains and avoid losses but weigh the importance of both differently. A tendency for loss aversion motivates people to avoid risk when *gains* are uncertain but also to seek risk when *losses* are uncertain (although loss aversion might vary between individuals, with some being more motivated by gain- than loss-frames; see e.g., Ferraro & Tracy, 2022). Favourable evaluations of a mode of action can therefore depend on its framing in rather 'positive' or 'negative' terms (Morton et al., 2011; Spence & Pidgeon, 2010). Accordingly, we measured perception of the modes of action as pertaining to gain versus loss, and reward versus punishment.

Coercion, Impact on Economic Development, and Actors Targeted. We consider three additional attributes for modes of action specifically. First, we reason that actions are likely to be perceived as differing in terms of coercion (Jagers et al., 2018). Given the human tendency to reject pressing persuasion attempts, to maintain a sense of control and autonomy, coercive actions might be perceived less favourably (Clayton, 2018; Swim & Geiger, 2021).

We also consider the impact of actions on economic development, reflecting the ‘dilemma’ often portrayed in the media that economy and ecology are negatively interdependent, whereby protecting one means sacrificing the other (McCright & Dunlap, 2011). Previous research has found that people prefer environmental actions that they believe will have a positive economic (as well as social and environmental) impact (Geiger et al., 2021), and this might be particularly relevant to those on the political right-wing given their priority for a strong economy (see Campbell & Kay, 2014).

Finally, actions differ in their primary target. They may focus more strongly on individuals and households, or businesses, or governments and national agencies (e.g., regulating the way goods are produced versus influencing the way people consume these goods), and this too might affect people’s perceptions (Chang et al., 2016; Fielding & Head, 2012; Gillis et al., 2021). From a self-serving perspective, people might tend to favour policies that target others and not themselves (thus preferring, for example, business-targeting policies); yet they might also consider that policies targeting the general public are more effective, ultimately encouraging them to support those as well (Swim & Geiger, 2021).

The Present Research

In two studies, we assess how people prioritise different environmental issues and actions, whether this depends on their political orientation, and how differences in prioritisation are related to psychological and structural attributes. Both studies received Ethics approval from the University of Kent. Study 1 used a representative sample of UK

respondents ($N = 1,147$) and tested how their evaluations of different environmental issues and actions were affected by political orientation. To investigate psychological attributes underpinning (dis)agreement on issues and actions across the political spectrum, we conducted a second study with a smaller sample of UK respondents ($N = 207$) whom we asked to rate the same issues and modes of action on a number of psychological attributes. This allowed us to determine which psychological attribute(s) were associated with greater prioritisation of each issue/solution in Study 1, and which attributes seemed to impact the political gap.

Study 1

Method

Participants and Procedure

The data are part of a large-scale research project aiming to track social cohesion in the UK during COVID-19 (see Abrams et al., 2021). Sample size was determined prior to data collection based on feasibility and funding capacities. A total of 1,147 UK residents (56.3% female, $M_{\text{age}} = 49.17$, $SD = 16.52$) completed the online questionnaire in August-September 2020 (see Electronic Supplementary Material: ESM1).¹

Measures

Political Orientation. Political orientation was measured on a 7-point scale (labelled: 1 = left-wing, 4 = centre, 7 = right-wing). Whenever possible, we use the continuous measure in analyses to allow for a more precise measurement. To simplify the presentation in tables and conclusions, we also refer to three separate categories of political affiliation. In this respect, 34.7% of participants self-described as left-wing (scoring 1, 2, or 3), 40.3% as centre (scoring 4), and 25.0% as right-wing (scoring 5, 6, or 7).

¹ All data are publicly available on the OSF webpage dedicated to the project: <https://osf.io/eq5az/>

Environmental Views. Items from Eurobarometer 2020 (the official polling instrument of the European Commission) were used to assess *most important environmental issues* (European Commission, 2020). The list included all 10 issues from the Eurobarometer (see Table 1) and participants could select up to four issues that they deemed most important. Almost all participants (96.3%) selected four with smaller numbers stopping at three (2.5%), two (0.3%) or one (0.9%). Similarly, we assessed *most effective modes of action*. Participants could select up to 3 actions from a list of 11 (taken from the Eurobarometer) that they thought “would be the most effective ways of tackling environmental problems” (plus the options of naming one ‘other’ and of saying ‘none’). 91.7% selected three modes of action, 3.9% selected two, and 4.4% selected just one (see Table 2). Political orientation did not influence the number of issues selected, $b = .004$, $SE = .042$, Wald’s $\chi^2(1) = 0.01$, $p = .93$, nor of modes of action selected, $b = .05$, $SE = .042$, Wald’s $\chi^2(1) = 1.48$, $p = .22$.

Results

Analytical Strategy

We conducted a series of logistic regression analyses to test whether political orientation (entered as a continuous predictor) was related to likelihood to select each issue (or mode of action, coded 0 = not selected, 1 = selected). Odd ratios (OR) significantly greater than 1 indicate that an issue/mode of action is more likely to be selected by more right-wing participants while odd ratios significantly smaller than 1 indicate that an issue/action is more likely to be selected by more left-wing participants. Given the number of tests run and potential increased risk of type I error, we set $\alpha = .005$ as threshold for significance. Sensitivity power analyses set on those parameters indicated the sample size allowed to detect $OR = 1.25$ for issues, and $OR = 1.29$ for actions, with .80 power (see ESM2 & 3). To account for demographic differences, all analyses included age and gender as

covariates. The complete output showing the effects of these covariates appears in ESM2 & 3.

Most Important Environmental Issues

Logistic regression analyses detected a significant effect of political orientation on four out of ten issues (see Table 1 and Figure 1): *Climate change*, *Decline or extinction of species and habitats and of natural ecosystems*, *Pollution of rivers, lakes and ground water*, and *Noise pollution*.

Differences between Political Groups. *Climate change* was the most frequently selected issue (71%), consistent with previous data from the Eurobarometer. However, this average figure hides important variations. Climate change was in fact selected by 85.7% of left-wing respondents but only 56.1% of right-wing respondents. In a similar vein, *Decline or extinction of species and habitats*, ranking third overall (56%) was selected by 64.6% of left-wing respondents but only 49.5% of right-wing respondents. Conversely, right-wing respondents were more likely than left-wing respondents to select *Pollution of rivers, lakes and ground water* (44.6% versus 29.1%), and *Noise pollution* (12.2% versus 5.3%, respectively).

Consensus within Political Groups. We also examined how issues were prioritised within each political group, comparing percentage of selection amongst left-wing, and amongst right-wing participants, separately. For left-wing respondents *Climate change* was clearly the primary issue of concern (85.7%), followed by *Decline and extinction of species/habitat* (64.6%), and then *Growing amount of waste* (59.3%). In contrast, for right-wing respondents *Growing amount of waste* was the primary issue (60.6%), exceeding *Climate change* (56.1%) by over 4 percentage points. In general, there was a greater consensus amongst left-wing respondents (with only 4 out of 10 issues being selected by more than 40% of respondents, and highest percentage of selection of 85.7%) than right-wing

respondents (amongst whom 6 issues were selected by more than 40% of respondents, and the highest percentage of selection was 60.6%).

Table 1

Percentage of respondents who picked each issue as one of “the four they considered as the most important” as a function of their political orientation (Study 1)

	Percentage selected				Eurobarometer 2020 (UK)	Logistic regression			
	Left	Centre	Right	Overall		Wald's $\chi^2(1)$	<i>p</i>	Exp(B)	
1	Climate change	85.7%	67.5%	56.1%	71%	65%	61.81	< .001	0.55
2	Decline or extinction of species and habitats, and of natural ecosystems	64.6%	51.5%	49.5%	56%	43%	16.15	< .001	0.78
3	Growing amount of waste	59.3%	62.1%	60.6%	61%	53%	0.23	.63	1.03
4	Marine pollution	49.5%	41.1%	47.0%	47%	37%	0.34	.56	1.04
5	Air pollution	38.7%	46.3%	45.6%	44%	54%	7.26	.007	1.18
6	Pollution of rivers, lakes and ground water	29.1%	41.6%	44.6%	38%	35%	17.90	< .001	1.32
7	Frequent droughts and floods	22.1%	29.2%	27.9%	26%	21%	0.68	.41	1.06
8	Agricultural pollution and soil degradation	21.6%	17.7%	24.0%	21%	20%	0.06	.81	1.02
9	Shortage of drinking water	20.1%	21.6%	21.6%	21%	16%	0.48	.49	1.05
10	Noise pollution	5.3%	13.2%	12.2%	10%	12%	8.61	.003	1.35

Note. Participants were free to select less than four issues. The logistic regression tests the effect of political orientation as a continuous measure but the results are presented here for 3 discrete groups for ease of interpretation (see above). All analyses include age and gender as covariates. Findings in bold indicate significant differences in issue prioritisation as a function of political position, $p < .005$.

Table 2

Percentage of respondents who picked each mode of action as one of “the three most effective ways of tackling environmental problems,” as a function of their political orientation (Study 1)

		Percentage selected				Logistic regression			
		Left	Centre	Right	Overall	Eurobarometer 2020 (UK)	Wald's $\chi^2(1)$	p-val	Exp(B)
1	Changing the way we consume	36.7%	39.2%	32.8%	37%	37%	0.94	.33	0.94
2	Making the food system more sustainable from production to consumption	35.2%	29.9%	34.1%	33%	25%	3.14	.077	0.89
3	Introducing heavier fines for breaches of legislation	32.4%	31.6%	31.4%	32%	22%	2.05	.15	0.91
4	Changing the way we produce and trade	27.6%	27.7%	21.3%	26%	30%	1.35	.25	0.92
5	Introducing stricter environmental legislation	27.4%	27.3%	24.0%	27%	27%	0.09	.76	0.98
6	Encouraging businesses to engage in sustainable activities	27.1%	28.4%	24.0%	27%	22%	0.03	.86	0.99
7	Investing in research and development to find technological solutions	24.1%	20.6%	25.8%	23%	24%	1.04	.31	1.08
8	Introducing or increasing financial incentives to businesses and people taking measures to protect the environment	21.4%	16.2%	19.9%	19%	17%	0.01	.91	0.99
9	Introducing or increasing taxation, or removing subsidies, on environmentally harmful activities	20.9%	11.9%	16.4%	16%	14%	9.57	.002	0.77
10	Providing more information and education, e.g. on waste separation, energy consumption	19.3%	24.5%	19.2%	21%	27%	0.01	.92	1.01
11	Ensuring better enforcement of legislation	19.1%	24.7%	25.4%	23%	17%	3.40	.065	1.15
12	Other (please specify which)	1.5%	1.5%	1.7%	2%	0%	0.22	.64	1.12
13	None of these	1.3%	2.4%	4.9%	3%	1%	11.68	< .001	1.97

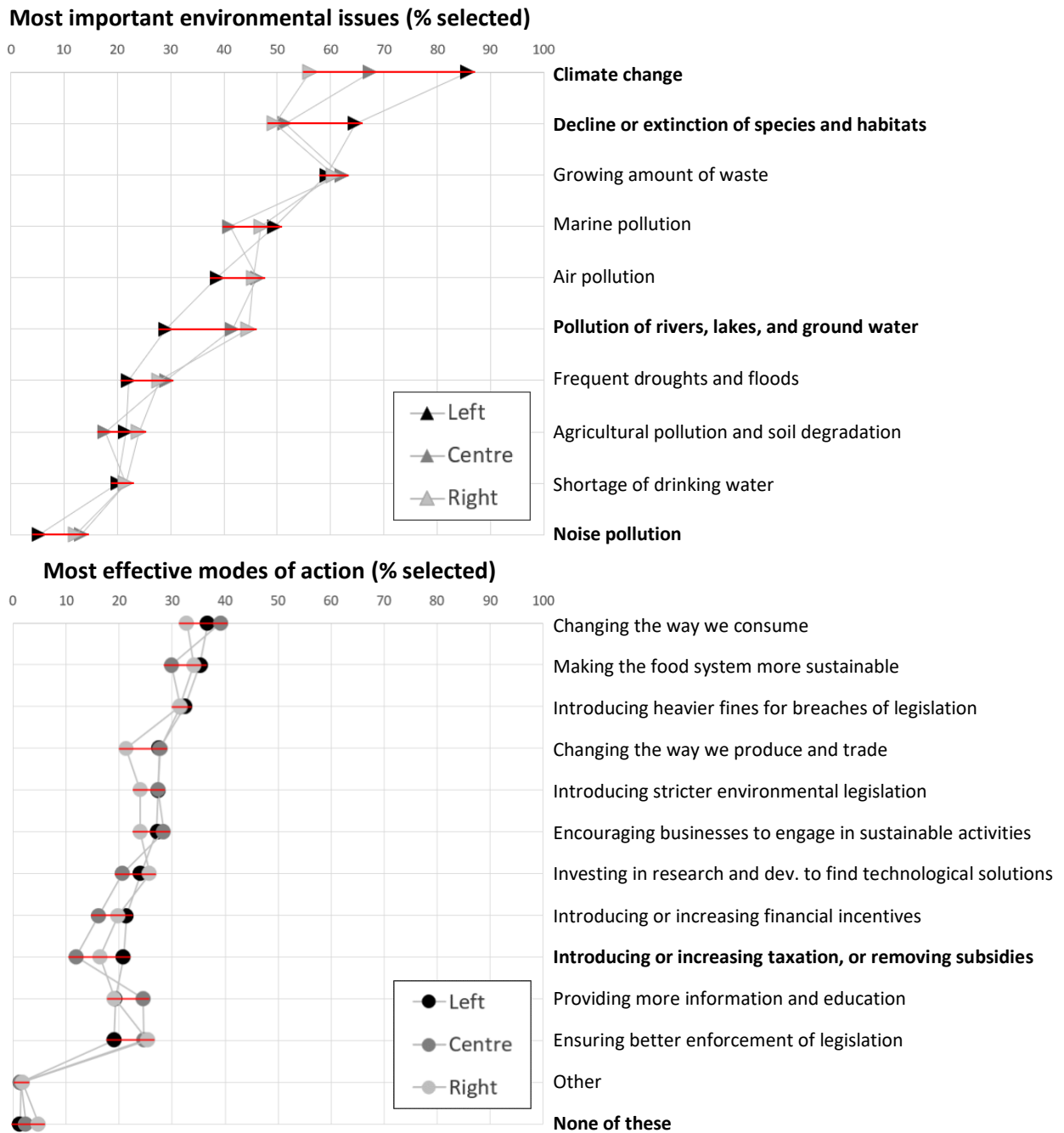
Note. Participants were free to select less than three modes of action. The logistic regression tests the effect of political orientation as a continuous measure but the results are presented here for 3 discrete groups for ease of interpretation (see above). All analyses include age and gender as covariates. Findings in bold indicate significant differences in mode of action prioritisation as a function of political position, $p < .005$. There were not enough “other” responses ($n = 18$) to allow for any coding. For information purposes, participants’ exact answers are reported in ESM3.

Most Effective Modes of Action

Turning to respondents’ evaluations of the most effective ways of tackling environmental problems, results from the logistic regression analyses showed a quite different picture. First, contrary to the general consensus about the most pressing issues, there was less consensus about the most selected mode of action: *Changing the way we consume* was only selected by 37% of participants (consistent with previous data from the

Eurobarometer). Second, crucially, there was mostly agreement across the political spectrum. Out of 12 proposed modes of action, political orientation had a significant impact on only one (see Table 2 and Figure 1). This only difference arose for *Introducing or increasing taxation on environmentally harmful activities*, which right-wing respondents were less likely to select (16.4%) than left-wing respondents (20.9%). In addition, the likelihood of selecting no action (“none of these”) was significantly higher amongst right-wing (4.9%) than left-wing respondents (1.3%), although absolute numbers remain very low.

Figure 1. Political divides in prioritising environmental issues and modes of action (Study 1)



Note. Findings in bold indicate significant differences as a function of political orientation, $p < .005$

Study 2

Study 1 revealed which issues were deemed most important and which modes of action considered most effective, depending on people’s political orientation. However, it remains unclear *why* certain issues or modes of action feature more predominantly. We therefore investigated ratings of each environmental issue and mode of action on a number of

psychological attributes. Drawing from recent environmental psychology literature and as explained above, we focused on construal level and psychological distance of the object, positive-negative framing, economic impact, voluntariness of the action, and actors involved. We identified these attributes as potentially relevant in light of the existing literature. Aside from conjecture about the role of political orientation on economic impact, we did not make specific hypotheses about the relative role each attribute might play, and therefore considered their effect in an exploratory manner.

Method

Participants and Procedure

Participants (UK residents) were recruited through Prolific. We used existing pre-filled information on the platform to recruit equal numbers of participants self-describing as left-wing, right-wing, or politically centred, aiming for roughly $n = 70$ of each (planned $N = 210$). Participants who missed an initial attention check question were automatically rerouted out of the survey and their slot reopened for new respondents. The final sample included 207 participants (50.24% female, 1 person of undisclosed gender, $M_{\text{age}} = 39.13$, $SD = 14.32$). The survey was introduced as trying to understand “how people perceive different issues related to the environment.” Participants were presented with the list of issues and actions described exactly as in Study 1 (items randomised within each block, issues first vs. modes of action first randomised; see Tables 1 and 2 for full wording) and asked to rate the wording of each “as objectively as they could, regardless of their personal opinion on the issue or action.”

Material

For the 10 environmental issues, we asked about five attributes on semantic differential scales (“This environmental issue is described in a way that is...”): *abstraction* (1 = concrete, 7 = abstract), *specificity* (1 = specific, 7 = generalised), *temporal distance* (1 = focuses on the near future, 7 = focuses on the far future), *spatial distance* (1 = focuses on

places close from here, 7 = on places far away from here), and *social distance* (1 = relates to me and close others, 7 = to other people who are distant from me).² For the 11 modes of action, we asked about the same five attributes and seven additional ones (“This way of action is described in a way that ...”): *reward-punishment* (1 = focuses on rewards, 7 = focuses on punishment), *gain-loss frame* (1 = focuses on making good things possible, 7 = focuses on preventing bad things from happening), *economic impact* (1 = encourages economic growth, 7 = discourages economic growth), and *voluntariness* (1 = emphasises voluntary actions, 7 = emphasises compulsory actions). Finally, we asked whether each mode of action “was mostly requiring action from” (1) *individuals / households*, (2) *businesses*, and (3) *governments* on Likert-scale (all three items: 1 = not at all, 7 = very much).³

Results

We initially conducted multilevel analyses including actions (or issues) and attributes as within-participant variables and political orientation as a between-participant predictor (see Geiger et al., 2021). These analyses showed that most of the variance was within-person (i.e., linked to actions/issues and attributes: 94%) and very little was between-person (indicating that individuals differed very little from each other when evaluating a given action/issue: 6%). Accordingly, political orientation was not related to the evaluations made, confirming that ratings were as politically unbiased as possible (see details in ESM4).

² We decided to leave out hypothetical distance, the fourth dimension of psychological distance, because we wanted ratings to be as objective as possible and we considered that evaluating the hypotheticality dimension, that is, the likelihood of an environmental issue taking place, would necessarily reflect some subjectivity or the personal beliefs of the respondents.

³ As could be expected, evaluations on the two dimensions of construal level (abstraction and specificity) were highly correlated (across issues: $r = .96, p < .001$, across actions: $r = .98, p < .001$). We hence aggregated them into single scores of *construal level*. Similarly, the spatial and social distance indicators were highly correlated (across issues: $r = .90, p < .001$, across actions: $r = .87, p < .001$), which echoes similar findings from the literature (Liviatan et al., 2008; Lujala et al., 2015). We aggregated them into single scores of *spatial-social distance*.

Psychological Attributes of the Most Important Environmental Issues

Analytical Strategy. Study 1 showed that the between-participant ranking of issues (i.e., decreasing percentage of selection) was mostly similar for left- and right-wing respondents (except for one issue). We therefore focused this analysis, instead, on the difference between the two issues selected most frequently by each political group: *Climate change* versus *Growing amount of waste* (see ESM5 for a description of the rating of all issues). Sensitivity power analysis showed that the sample size allowed to detect differences as small as $\eta^2_p = .01$ with .80 power ($\alpha = .005$; see ESM4).

Climate Change versus Growing Amount of Waste. A multilevel ANOVA including Issue and Attribute as within-participant predictors compared the ratings of the two issues on each attribute (see details in ESM6). There were two significant effects (Table 3). Specifically, *Climate change* (the issue most pressing for left-wing respondents) was characterised by a greater level of abstraction but also greater spatial and social proximity. It was also slightly more distant in time. Conversely, *Growing amount of waste* (most pressing for right-wing respondents) was characterised by a lower level of abstraction but greater spatial and social distance, as well as being slightly closer in time. This ‘reverse’ effect of the spatial and social distance (i.e., greater concern for more distant issues) seems in contradiction with construal level theory, which states that people will be more concerned and engaged for psychologically closer issues. However, past findings have identified similar dynamics (e.g., Zhou, 2016) – which we address in the general discussion.

Table 3*Differences in the evaluation of Climate change versus Growing amount of waste in Study 2*

	Issue: <i>M</i> (<i>SD</i>)		Test of difference		
	Climate change	Growing waste	<i>F</i> (1, 206)	<i>p</i> -value	η^2_p
Construal level (abstraction)	3.90 (1.90)	2.82 (1.64)	49.90	< .001	.195
Temporal distance	3.58 (1.90)	3.28 (1.65)	5.04	.026	.024
Spatial-social distance	3.51 (1.57)	3.92 (1.31)	41.49	< .001	.168

Note. Findings in bold are significant at the $p < .005$ level.

Psychological Attributes of The Most Effective Modes of Action

Analytical Strategy. We investigate whether more frequently selected modes of action in Study 1 shared attributes; for example, whether actions that were perceived as more or less distant, more or less stringent, and so on, were more likely to be recognised as ‘most effective’. Given the overall agreement across the political spectrum, we retrieved the global prioritisation percentages of the modes of action observed in Study 1 (see Table 2) and relied on a multilevel ANOVA to test how each attribute in Study 2 was related to the (linear) ranking of the modes of action’s effectiveness as determined in Study 1. Sensitivity power analysis showed that the sample size allowed to detect differences as small as $\eta^2_p = .01$ with .80 power (see ESM4).

Results. Table 4 shows that actions that were most prioritised in Study 1 were those that (in decreasing order of importance): focus on punishment rather than reward, are more abstract rather than concrete, do *not* necessitate actions from governments, discourage rather than encourage economic growth, necessitate more action from individuals, are loss- rather than gain-framed, and are compulsory rather than voluntary (all descriptive statistics are reported in ESM7).

Table 4

Linear effects of each psychological attribute on the ranking of modes of action in Study 2

	Test of linear effect			
	<i>F</i> (1, 206)	<i>p</i> -value	η^2_p	Direction of effect
Reward-punishment	105.47	< .001	.339	↗
Construal level	74.24	< .001	.265	↗
Action from governments	64.41	< .001	.238	↘
Economic growth	56.55	< .001	.215	↗
Action from individuals	32.37	< .001	.136	↗
Gain-loss	17.94	< .001	.080	↗
Voluntary-compulsory	9.50	.002	.044	↗
Action from businesses	6.44	.012	.030	↗
Temporal distance	3.88	.050	.018	↗
Spatial-social distance	3.01	.083	.014	↘

Note. Findings in bold are significant at the $p < .005$ level. Direction of effect indicates whether an increase in the dimension makes the modes of action more (↗) or less (↘) likely to be prioritised.

Discussion

Building upon perceptions that environmental issues are becoming increasingly politicised and polarised, the present research examined whether a political divide (left- vs. right-wing) manifests in the environmental issues people prioritise, above and beyond climate change, as well as in the modes of action they consider most effective to address these issues. We also investigated the psychological attributes of these issues and actions.

Environmental Issues and Actions: Where Is the Political Divide?

Environmental Issues. Overall, respondents prioritised the issue *Climate change*, followed by *Growing amount of waste* and *Decline and extinction of species and habitats*. This selection obscures important political differences. Consistent with previous research, right-wing (or conservative) respondents were much less likely to prioritise climate change than left-wing (or liberal) respondents (see McCright & Dunlap, 2011; McCright et al., 2016). However, right-wing respondents selected as many issues on average as left-wing respondents, demonstrating they prioritised not fewer, but different environmental issues,

mostly *Growing amount of waste*. Right-wing respondents were also more likely than left-wing respondents to select *Pollution of rivers, lakes and ground water*, *Noise pollution*, and to an extent *Air pollution*. This later finding is consistent with previous research that specifically compared views on climate change versus air pollution (Hart & Feldman, 2018; Petrovic et al., 2014).

Overall, we observe greater consensus amongst left-wing respondents, who substantially prioritise *Climate change*, than amongst right-wing respondents, whose priorities span a wider set of issues. It is interesting to note that most *Pollution* issues showed a reverse political gap with greater endorsement by right-wing respondents. It might be that *Pollution* triggers concerns about the violation of purity and sanctity values, which are usually endorsed to a greater extent by right-wing individuals (Feinberg & Willer, 2013).

In Study 2, we explored the key differences in the psychological representation of the two issues most selected by both political groups, respectively *Climate change* (on the left) and *Growing amount of waste* (on the right). Consistent with past findings (e.g., Spence et al., 2012), *Climate change* is perceived as a more abstract and generalised issue compared to *Growing amount of waste*. However, the temporal distance of both issues is similar. In addition, *Growing amount of waste* is spatially and socially more distant, which could be due to the documented export of plastic waste from Western countries to developing countries, making it a more distant issue amongst UK respondents (Barnes, 2019). These results highlight, first, that degree of abstraction and psychological distance do not necessarily go hand in hand (Calderon et al., 2020), and second that more concrete and closer issues are not always considered as more important (for similar findings, see e.g., Maiella et al., 2020). More specifically, they suggest that while left-wing respondents are more likely to give highest priority to a spatially and socially closer issue, the reverse is true of right-wing respondents.

Past research has yielded mixed findings when it comes to political orientation and the psychological distance of environmental issues. Some showed that a more abstract construal level triggers decision-making more in line with one's values than a concrete level, leading left-wing participants to express stronger proenvironmental views than their right-wing counterparts when an abstract frame is used (Brügger et al., 2015). However, others found that a closer distance manipulation only affects the proenvironmental views of right-wing participants (Chu & Yang, 2018; Hart & Nisbet, 2011), but also that different distances (e.g., temporal vs. spatial) have different impacts on right-wing participants' attitudes (Rickard et al., 2016). Indeed, the combination of very close distances may trigger fear and avoidance and produce boomerang effects on environmental engagement (Morton et al., 2011). Things are complicated further by the fact that support for different measures is differentially predicted by psychological distance. For example perception of *local* risks predicts support for specific adaptation strategies whilst perception of *global* risks predicts support for general mitigation strategies (Haden et al., 2012). In sum, more work is needed to better understand the relationship between political orientation and the construal level (and psychological distance) of both environmental issues and environmental actions.

Environmental Actions. Turning to prioritisation of different modes of action, we find quite a different picture, with mostly agreement across the political spectrum. Respondents in Study 1 only disagree on one mode of action out of 12: *Introducing or increasing taxation on environmentally harmful activities*, which was less likely to be selected by right-wing than left-wing respondents. Thus, even if people disagree about which issues should be tackled most urgently, they mostly agree on the modes of action that would most effectively address them. Obviously, the perceived effectiveness of the different actions might not equate to their objective effectiveness. Therefore, our results do not necessarily point to the actions that should be prioritised to tackle environmental problems most

effectively. However, they show there could be agreement across the political spectrum in supporting (objectively) effective actions, depending on their psychological attributes. As such, they can inform policy makers considering different (equally effective) actions about which one is more likely to be positively perceived and accepted by the public.

Indeed, in Study 2 we identify key psychological attributes associated with modes of action's perceived effectiveness. Prioritised actions most often focus on punishment rather than reward, are more abstract rather than concrete, discourage rather than encourage economic growth, are loss- rather than gain-framed, compulsory rather than voluntary, and necessitate more action from individuals and less from governments. This latter might indicate that people doubt the efficacy of their governments to implement effective actions, or that they favour more bottom-up actions coming from individual citizens (see Gillis et al., 2021; Swim & Geiger, 2021).

These findings differ from past evidence that suggested an advantage of reward-oriented and “pull” measures (de Groot & Schuitema, 2012; Swim & Geiger, 2021), or a greater impact of gain-framed messages (Nabi et al., 2018). However, the public's perception of a climate urgency has greatly accelerated in very recent years and it is possible that opinions are changing. Consistent with this idea, Thonig et al. (2021) recently found that governments and citizens alike across the political spectrum support “ambitious” environmental measures. Our data similarly suggest that respondents (left- and right-wing alike) now recognise the need for strong measures compelling clear action, and we would expect that this stronger perceived effectiveness leads to greater support for the relevant actions (Gillis et al., 2021; Swim & Geiger, 2021). Consistently, Kenward and Brick (2021) recently observed that a majority of conservative voters in the UK want the environment to be at the heart of the post-COVID-19 economic reconstruction, in a proportion similar to that of other voters.

Limitations and Future Directions

A limitation of the present research is its focus on a single country, the UK. Given that the magnitude of the political gap on environmental views varies between different countries (Hornsey et al., 2018; Ziegler, 2017), further research is needed to understand the role of the relevant cultural and contextual attributes.

Second, we focused on the list of issues and modes of action identified by the Eurobarometer (European Commission, 2020) and adopted their exact phrasing. While relatively extensive, this set is not entirely comprehensive. The phrasing of the modes of action can also be considered rather broad, potentially leaving room for interpretation as to what concrete actions would be implied. Further research might want to assess and compare more specific actions. In addition, we do not know what factors respondents ponder when evaluating “effectiveness”. They might have reflected on outcome-based effectiveness, or on feasibility (e.g., based on perceived social acceptance or financial feasibility), or both. Research indeed suggests that people consider first the feasibility of a policy, which in turn influences perceived effectiveness (and mediates the link from effectiveness to policy support; Gillis et al., 2021). It is also possible that perceived effectiveness depends on the environmental issue respondents have in mind, as specific measures might be more effective to address specific actions. Our research was not designed to address such complexities given the important numbers of issues and actions considered (10×12). However, exploratory tests suggest mostly agreement in perceived effectiveness of the different actions when comparing groups of respondents who had versus had not prioritised a given issue (see ESM8). Finally, our measure of perceived effectiveness must not be confused with policy support. Although work shows that perceived policy effectiveness is positively related to policy support (Gillis et al., 2021; Swim & Geiger, 2021), perceived fairness might be an even stronger predictor

(Clayton, 2018; Jagers et al., 2018). Further work would need to investigate how much perceived effectiveness of the present modes of action translates into actual support for them.

Relatedly, other psychological attributes than the ones presently considered might be worth investigating. In addition, it is possible that the psychological attributes of a mode of action interact with each other. For example, Swim and Geiger (2021) found that support for policy based on incentives was greater than for those based on disincentives but only when these policies targeted individuals, not businesses. The present study was not conceived to test for such interactive effects but future studies might want to pursue such tests to elucidate further what combination of attributes would lead to greater public support.

We focused here on the effect of political orientation without considering other demographics such as gender or ethnicity nor their interaction with political views. Analyses in Study 2 reveal very little between-person variance, suggesting that demographic characteristics most likely did not play an important role in the evaluation of the issues and actions. Nonetheless, future studies might want to investigate the effects of demographics further, as they might relate to different perceptions of, and engagement in, environmental problems and solutions (e.g., Goldsmith et al., 2013).

Finally, in line with previous studies, we examined the political left to right continuum (largely resembling the liberal vs. conservative distinction), but that does not tell us which element(s) of political orientation drive people's different views. Political orientation is related to many ideologies and values, including social dominance orientation, authoritarianism, moral foundations, trust in science, and so on. These elements may help to account for differences and similarities across the political spectrum, something future studies should explore further (see Häkkinen & Akrami, 2014; Kerr & Wilson, 2021; Wolsko, 2017).

Implications and Conclusions

In conclusion, the present findings point to a political divide about the relative importance of different environmental issues, but *not* about the (subjectively) most effective modes of action. This has several important implications for policy makers and the media.

First, if the aim is to achieve a cross-political commitment to policies and action on environmental issues, then persuasive discourse should focus on the modes of action rather than the prioritisation of particular issues. Every year on *Earth overshoot day*, (“the date when humanity’s demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year”), media across the globe report on how ecological resources are drained beyond what the Earth can provide. Our findings imply that, instead of reporting on the issue of how resources are wasted, poorly distributed or over-stretched, it might be more beneficial to present possible ways of action that could help push back Earth overshoot day. Interestingly this is precisely what the *100 Days of Possibility* campaign proposes to “#MoveTheDate” (see overshootday.org). As another positive example, the Veganuary NGO articulates their entire agenda around a mode of action (moving to a plant-based diet) with low emphasis on issues (they in fact mention several issues that would be addressed through the action, including “protecting the environment, preventing animal suffering, and improving the health of millions of people”: see veganuary.com).

Second, when issues are the focus, care should be taken to balance the magnitude of various psychological distances so that issues are perceived as relevant but not too overwhelming (McDonald et al., 2015), especially when addressing a composite audience (Myers, 1999). When possible, the message should also be framed to fit the audience. For example, a politician giving a speech about environmental issues may be well-advised to stress the social and spatial closeness of the issue when giving that speech in a rather liberal area, but not in rather conservative areas. For the latter, framing issues as more concrete but also spatially more distant would be more beneficial.

Third, if the public is ready to endorse ambitious actions, policy makers should seize this opportunity to propose strong actions. Now might be the time to start phasing out coal and fossil fuel (see for example OECD's proposed 25 actions: oecd.org), even if the necessary measures redefine the way we consume, produce and trade, and ultimately the way we live. Ultimately, it is the policy makers' responsibility to design and enact measures that are objectively effective; from the psychological point of view, we can at least suggest that the public is likely to lend consensual support for many of these measures. In the end, while individuals might still disagree on *which* environmental issue is in the forefront, it is promising that there is at least more agreement on *whether*, and *through which* modes of action we might tackle environmental challenges.

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