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When moderates endorse extreme means: moral foundations, powerlessness and support for illegal climate action

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Abstract

Political extremity is commonly attributed to the strength of moral conviction, yet moral conviction also sustains lawful participation. This study asks when moralisation channels citizens towards lawful engagement and when it becomes associated with support for illegal means, taking climate change as a case in which both repertoires are active. Drawing on Moral Foundations Theory and the literature on normative and non-normative collective action, a nationally representative online survey of South Korean residents aged 19 and over (June–July 2025; N = 1,970; regression N = 1,895) was analysed using hierarchical regression, modelling support for lawful and for illegal environmental action as distinct outcomes predicted by social solidarity, ideological radicalism and perceived climate injustice, with three binding moral foundations—Purity/Sanctity, Authority and Ingroup loyalty—entered as moderators. The outcomes had different antecedent structures: support for lawful action was associated with collective efficacy, perceived inequality, social trust and intergenerational justice, support for illegal action primarily with powerlessness and anarchism. Of 54 interaction terms, 25 reached $p < .05$, with small coefficients. Purity/Sanctity and Authority generally attenuated, and in one case reversed, the associations between grievance, ideology and support for illegal action, contradicting the expectation that sacralisation lowers the threshold for extreme means. The single systematic exception was powerlessness, whose association with support for illegal action strengthened as either foundation increased. Extremity therefore arises not from a level of moral conviction but from its conjunction with perceived inefficacy: the boundary between moderate and radical engagement is conditional rather than dispositional, and keeping lawful channels credibly effective is central to governing it.

Keywords: climate moralisation; moral foundations theory; radical environmental action; normative and non-normative collective action; powerlessness; South Korea

1. Introduction

The Republic of Korea emitted 624.2 million tonnes of CO2-equivalent greenhouse gases in 2023, a 4.4% decline from the previous year and the second consecutive reduction from the 2018 peak of 727.6 million tonnes (Ministry of Environment, Republic of Korea, 2024). This trajectory nonetheless remains far short of the committed 40% reduction relative to 2018 by 2030, and further still from the mid-century neutrality the Intergovernmental Panel on Climate Change regards as necessary to limit warming to approximately

1.5°C (IPCC, 2023). In August 2024, the Constitutional Court of Korea declared that the absence of legally binding reduction targets for 2031–2049 unconstitutionally shifted the mitigation burden onto future generations and ordered revision of the Carbon Neutrality Framework Act by February 2026 (Constitutional Court of Korea, 2024). The ruling, brought by youth plaintiffs and the first of its kind in Asia, indicated that climate policy in Korea has become a contest over rights, obligations, and, ultimately, morality.

When a public issue is moralised, ordinary trade-offs cease to be acceptable and the issue becomes an obligation to be honoured irrespective of cost (Rozin, 1999; Skitka, 2010). Moralisation is a powerful basis for civic engagement, sustaining participation when material incentives are weak and converting private concern into public demands (van Zomeren, Postmes, & Spears, 2012). Yet the same conviction that mobilises petitions and marches may also legitimise the view that ordinary rules need not constrain action in pursuit of a righteous cause (Skitka, Bauman, & Sargis, 2005; Zaal, Van Laar, Ståhl, Ellemers, & Derks, 2011). Climate activism has diversified accordingly: alongside lawful demonstrations, school strikes, and litigation, the movement now includes road blockades, infrastructure sabotage, and the defacement of artworks (Feinberg, Willer, & Kovacheff, 2020; Fisher & Nasrin, 2021). Understanding who supports which form of action, and under what conditions, has therefore become an important question for environmental governance.

Three gaps motivate this study. First, research on the moral foundations of environmental attitudes has concentrated on whether moral framing increases concern and policy support (Feinberg & Willer, 2013; Rottman, Kelemen, & Young, 2015; Wolsko, Ariceaga, & Seiden, 2016); much less is known about whether those foundations also shape the forms of action citizens endorse. Second, the collective-action literature has established that normative and non-normative action have partly distinct antecedents (Becker & Tausch, 2015; Tausch et al., 2011), but has treated moral conviction as a direct predictor rather than a condition altering how other motives operate. Third, much of the evidence derives from Western democracies and activist samples; whether comparable patterns emerge in a general-population sample from an East Asian society with a strong developmental state and a recently moralised climate debate remains unresolved.

We address these gaps using a nationally representative survey of 1,970 Korean residents, examining two outcomes: support for lawful environmental action (positive evaluation of, and willingness to participate in, environmental groups operating within the law) and support for illegal environmental action (endorsement of extra-legal means and willingness to join law-breaking groups or militant demonstrations). The predictors form three blocks: social solidarity (collective efficacy, powerlessness, and social trust), ideological radicalism (anarchism, eco-socialism, and political extremism), and perceived climate injustice (perceived inequality, distributive justice, and intergenerational justice). Three moral foundations—

Purity/Sanctity, Authority, and Ingroup loyalty—constitute climate moralisation in our data and are modelled as moderators.

The research question is: How do moral foundations differentially predict support for lawful and illegal environmental action? The study seeks the threshold at which a foundation ceases to channel concern towards lawful engagement and instead strengthens endorsement of illegal means. We make three theoretical contributions. First, we reposition moral foundations within collective-action theory. The moral-conviction literature links strong conviction to intolerance and, under some conditions, hostile collective action (Skitka et al., 2005; Zaal et al., 2011), whereas the normative/non-normative literature treats moral belief as one predictor among several (Becker & Tausch, 2015). We show instead that binding foundations function as boundary conditions governing the translation of other motives into tactics, and that the same foundation channels grievance towards lawful action while amplifying the association between powerlessness and support for illegal action. Second, we relocate the radicalisation threshold from a level of moral conviction to the conjunction of moral obligation and perceived inefficacy, linking the moralisation account of Rozin (1999) and Skitka (2010) with the closed-channel logic of Moghaddam (2005) and Tausch et al. (2011). Third, we show, in a non-Western general-population sample, that sanctification of nature and deference to authority can be empirically fused, qualifying the assumption that purity constitutes an independent moral lever (Feinberg & Willer, 2013) and suggesting that the discriminant validity of the binding foundations is context-dependent.

2. Theoretical Background

2.1 Lawful and illegal environmental action as distinct outcomes

Collective-action scholars distinguish normative action, which conforms to the rules of the existing social system, from non-normative action, which violates them (Wright, Taylor, & Moghaddam, 1990). The two are correlated, since both express dissatisfaction with the status quo, but not interchangeable. Tausch et al. (2011) demonstrated across three studies that normative action was predicted by anger and the belief that the group could achieve change, whereas non-normative action was predicted by contempt and low efficacy. Becker and Tausch (2015) integrated this evidence into a dynamic model in which tactical choice depends on whether legitimate channels are perceived to remain open.

Evidence from the environmental domain is consistent with this distinction. Fisher and Nasrin (2021) document the development of lawful climate activism into a mass phenomenon, Feinberg et al. (2020) show that extreme protest tactics can reduce public support even among sympathisers—the activist's dilemma—and Thomas and Louis (2014) found that non-violent protest generated stronger perceptions of issue illegitimacy and group efficacy among sympathisers than violent protest. Support for lawful and illegal

action is thus grounded in different judgments of legitimacy and effectiveness, and treating 'environmental activism' as unitary may obscure these mechanisms. We therefore treat the two forms of support as separate dependent variables and expect their antecedents to diverge.

2.2 Moralisation and moral foundations

Moralisation is the process through which a preference becomes a value: an object previously a matter of taste or prudence acquires the properties of a moral mandate—universality, resistance to trade-offs, and the licensing of sanctions against violators (Rhee, Schein, & Bastian, 2019; Rozin, 1999). Attitudes held with moral conviction are experienced as objectively true, resist persuasion and authority, and predict intolerance of dissenters and willingness to accept extreme means in their defence (Skitka, 2010; Skitka, Bauman, & Sargis, 2005; Skitka, Hanson, Morgan, & Wisneski, 2021). Sacred values, the limiting case, are those for which cost-benefit reasoning is offensive (Tetlock, 2003), and negotiations involving them can provoke greater hostility when material incentives are offered (Atran & Ginges, 2012).

Moral Foundations Theory (MFT) supplies the content of moralisation. Building on the proposition that human morality rests on several innate but culturally shaped intuitive systems (Haidt & Joseph, 2004), MFT identifies at least five foundations: Care/Harm, Fairness/Reciprocity, Ingroup/Loyalty, Authority/Respect, and Purity/Sanctity (Graham, Haidt, & Nosek, 2009; Graham et al., 2011, 2013; Haidt, 2012). The first two, 'individualising' foundations, concern the protection of individuals; the last three, 'binding' foundations, protect groups, hierarchies, and sacred objects (Haidt & Graham, 2007). Applied to the environment, Care-based moralisation frames climate change as harm to vulnerable people and species, whereas Purity-based moralisation frames nature as sacred and pollution as desecration (Rottman et al., 2015). Feinberg and Willer (2013) showed that reframing environmental messages in terms of purity reduced the liberal–conservative gap in environmental attitudes, and later work generalised moral reframing across political divides (Feinberg & Willer, 2019; Wolsko et al., 2016). Because Care and Fairness are widely shared, they differentiate individuals less; the binding foundations vary more across individuals and cultures and are most plausibly linked to judgments concerning legitimacy, obedience, and group interest.

The present study conceptualises climate moralisation through three binding foundations, each attached to a distinct object. Purity/Sanctity moralises nature itself: protecting nature is a self-evident obligation, and allowing climate change to continue is morally wrong. Authority moralises institutional compliance: citizens should respect government climate policy even when inconvenient, and the state may resort to coercion on the basis of scientific warnings. Ingroup loyalty, as measured here, moralises national interest, according industries and employment priority over climate response. The three are not interchangeable: Purity/Sanctity and Authority are strongly correlated in our data ($r = .613$) and both sacralise climate action, whereas Ingroup loyalty is uncorrelated with Purity/Sanctity ($r = -.002$) and

sacralises a competing value—allowing us to examine whether the moralisation of nature, institutions, and the nation works in the same or opposite directions.

2.3 Moral foundations as boundary conditions: amplification versus channelling

Why should moral foundations moderate, rather than merely add to, the effects of solidarity, ideology and injustice? Two positions yield contrasting predictions. The moral-amplification thesis holds that moral conviction lowers the threshold for extreme means: attitudes experienced as moral mandates are non-negotiable, and those who hold them are more willing to accept violence and law-breaking in their defence (Skitka et al., 2005; Skitka et al., 2021). Zaal et al. (2011) found that participants with strong moral conviction endorsed hostile collective action when prevention-oriented, and van Zomeren et al. (2012) linked moral conviction to collective action through the Social Identity Model of Collective Action (SIMCA) pathways. From this perspective, climate moralisation should amplify the effects of every motive on support for illegal action: the more sacred the cause, the more any grievance or rationale justifies extra-legal means.

The moral-channelling thesis yields a contrasting prediction based on the content of the foundations. Authority moralises deference to legitimate institutions: those high in it obey the law because obedience is right, not instrumentally useful (Tyler, 2006). Purity/Sanctity, attached to nature, sacralises protection rather than transgression, and where the state is the primary protector, sanctified concern may be expressed through institutional channels rather than against them. The binding foundations should therefore attenuate the effects of ideological radicalism and injustice on illegal action, redirecting them toward lawful engagement; Ingroup loyalty, because it moralises a competing value, should attenuate the effects of climate-related motives on both outcomes.

The balance between the two theses may depend on the motive being moderated. A foundation that redirects grievance towards the state has limited scope to do so when existing institutions are perceived as ineffective. Where powerlessness and moralisation coincide, the sacred obligation to act is accompanied by the conviction that lawful action is futile, creating conditions under which the amplification logic may prevail. Identifying which motives are channelled and which amplified therefore locates the threshold at which moralisation becomes associated with extreme action.

3. Research Model and Hypotheses

3.1 Research model

Figure 1 presents the research model. The three blocks of independent variables are linked to the two dependent variables through direct paths (H1–H3), while the three moral foundations constituting climate moralisation moderate those paths (H4); demographic characteristics are controls. The blocks progress from

the resources for action, through the ideological rationale informing its form, to the grievances motivating it, with the moral foundations conceptualised as the conditions under which these motives are translated into support for lawful or illegal actions.

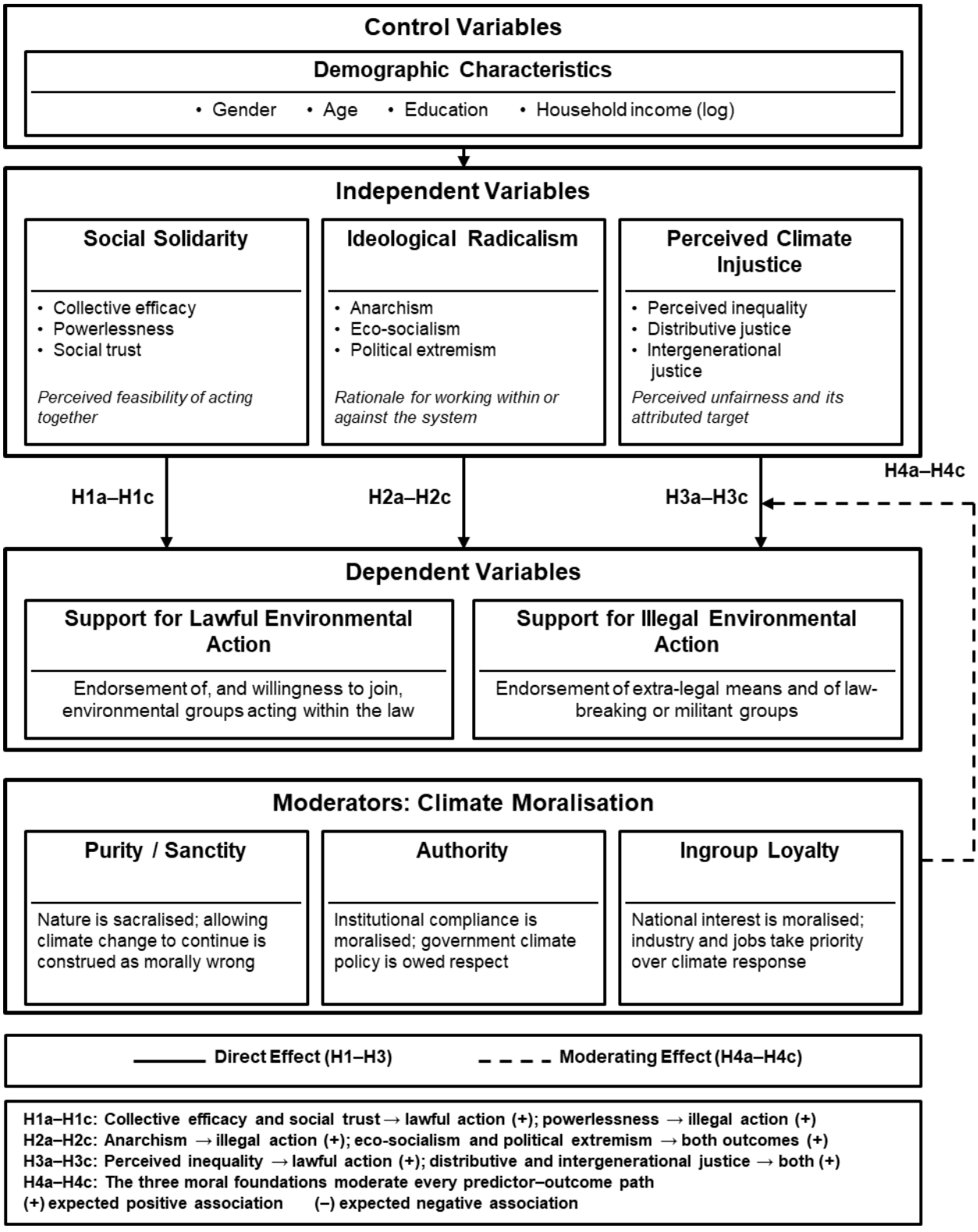


Figure 1. Research model. *Note.* The dependent variables are support for lawful environmental action (Q14_1–Q14_4) and support for illegal environmental action (Q14_5–Q14_8). The independent variables comprise three social-solidarity factors (collective efficacy, powerlessness, and social trust), three ideological-radicalism factors (anarchism, eco-socialism, and political extremism), and three perceived-climate-injustice factors (perceived inequality, distributive justice,

and intergenerational justice). The three climate-moralisation factors (Purity/Sanctity, Authority, and Ingroup loyalty) are modelled as moderators of every predictor–outcome path. Item identifiers refer to the 2025 National Opinion Survey on Energy.

The four substantive factors differ in theoretical origin, mechanism, and the forms of action they favour; Table 1 summarises these distinctions.

Social solidarity represents the resource dimension of collective action. SIMCA identifies perceived efficacy as one of three core antecedents of protest, alongside injustice and identity (van Zomeren et al., 2008), and the Social Identity Model of Pro-Environmental Action identifies collective efficacy as a central pathway to environmental engagement (Fritsche, Barth, Jugert, Masson, & Reese, 2018). Collective efficacy—the belief that one's group can bring about change through joint effort (Bandura, 2000)—has been associated with participation in community-based climate initiatives (Bamberg, Rees, & Seebauer, 2015); powerlessness is its individual-level negative counterpart, and social trust indexes the cooperative norms that reduce the cost of joint action (Ostrom, 1998; Putnam, 2000; Sampson, Raudenbush, & Earls, 1997). What unites the three is perceived feasibility—precisely the judgment Tausch et al. (2011) position at the point of differentiation between normative and non-normative action.

Ideological radicalism supplies the rationale dimension. Green political thought spans positions on whether environmental problems can be addressed within existing institutions (Dobson, 2007): anarchist ecology locates the problem in the state, eco-socialism in capitalism, and political extremism—absolute certainty in one's own political position—is a general orientation of cognitive simplicity and intolerance of compromise (van Prooijen & Krouwel, 2019). These beliefs concern not whether action is feasible but whether the system is worth working within.

Perceived climate injustice represents the grievance dimension (Klandermans, 1997; van Stekelenburg & Klandermans, 2013). Relative-deprivation research indicates that perceived unfairness, rather than disadvantage itself, mobilises protest (Smith, Pettigrew, Pippin, & Bialosiewicz, 2012). Climate justice has three established dimensions: the unequal distribution of harms, the distribution of the costs of mitigation and adaptation, and the obligations of the present generation towards the future (Gardiner, 2006; Schlosberg & Collins, 2014). Grievances differ in the targets to which they attribute injustice, and the target shapes the form of action deemed appropriate.

Climate moralisation, finally, is conceptualised not as a motive but as a frame. As argued in Section 2, the binding foundations may determine whether feasibility, rationale, and grievance are translated into support for lawful or illegal action. For this reason, they enter the model as moderators rather than as predictors.

Table 1. Comparison of the four substantive factors in the research model

Factor (role)	Sub-dimensions	Theoretical basis	Core mechanism	Expected link to support for lawful actions	Expected link to support for illegal actions	Key sources
Social solidarity (predictor)	Collective efficacy; powerlessness; social trust	SIMCA; efficacy route to normative vs. non-normative action; social capital	Perceived feasibility of acting together	Efficacy and trust raise it	Powerlessness raises it; efficacy does not	van Zomeren et al. (2008); Tausch et al. (2011); Ostrom (1998)
Ideological radicalism (predictor)	Anarchism; eco-socialism; political extremism	Green political theory; psychology of extreme ideology	Rationale for working within or against the system	Eco-socialism and extremism raise it; anarchism does not	All three raise it, anarchism most	Dobson (2007); van Prooijen & Krouwel (2019)
Perceived climate injustice (predictor)	Perceived inequality; distributive justice; intergenerational justice	Grievance and relative-deprivation theory; climate-justice scholarship	Perceived unfairness directed at a target	All three raise it; state-directed inequality grievance most	Diffuse justice claims raise it; state-directed grievance does not	Klandermans (1997); Smith et al. (2012); Schlosberg & Collins (2014)
Climate moralisation (moderator)	Purity/Sanctity; Authority; Ingroup loyalty	Moral Foundations Theory; moral conviction and sacred values	Frame that channels or amplifies the translation of motives into tactics	Purity/Sanctity and Authority channel motives toward it	Contested: amplification vs. channelling; Ingroup loyalty dampens	Graham et al. (2009); Skitka et al. (2005); Tyler (2006)

Note. Demographic controls (gender, age, education, and log income) are omitted from the comparison. Expected links summarise the hypotheses developed in Section 3.2.

3.2 Hypotheses

Collective efficacy. Those who believe conventional means are effective have no reason to abandon them; those who perceive them as ineffective may regard disruptive action as a last resort (Tausch et al., 2011). Collective efficacy, the belief that community members can respond to climate change through cooperation, presupposes that joint lawful effort is worthwhile.

The expectation derives from Bandura's (1997, 2000) distinction between outcome and efficacy expectancies: citizens may grant that climate action would have consequential effects while doubting that their group can produce them, and the latter belief governs whether effort is initiated and sustained. SIMCA accordingly treats group efficacy as an independent antecedent of collective action (van Zomeren et al., 2008), and SIMPEA extends the logic to the environmental domain (Fritsche et al., 2018). A belief that community cooperation can address climate change is, in addition, a judgment that the normative channel is open (Becker & Tausch, 2015).

- H1a. Collective efficacy is positively related to support for lawful environmental action and is unrelated, or negatively related, to support for illegal environmental action.

Powerlessness. The perception that legitimate channels are closed is a recurrent step on the 'staircase' towards extreme action (Moghaddam, 2005), and the significance-quest model proposes that the loss of personal significance motivates the pursuit of radical means through which it may be restored (Kruglanski et al., 2014). Jiménez-Moya, Spears, Rodríguez-Bailón, and de Lemus (2015) demonstrated that, under perceived hopelessness, even weakly identified group members endorse radical means because they have

'nothing to lose'. Powerlessness removes the rationale for lawful engagement and supplies the rationale for extra-legal action.

Powerlessness is not merely the low end of collective efficacy: Bandura (2000) distinguishes personal from collective efficacy, and respondents may credit the community with capacity while regarding their own contribution as negligible—the distinction the powerlessness items capture. Within collective-action theory, such individual-level perceptions of futility are the psychological manifestation of a closed channel, the barrier that Becker and Tausch (2015) identify as shifting tactical preferences towards transgression, and the staircase and significance-quest models suggest that the desire to restore agency persists but seeks other outlets when legitimate avenues are blocked (Kruglanski et al., 2014; Moghaddam, 2005).

- H1b. Powerlessness is positively related to support for illegal environmental action and is unrelated, or negatively related, to support for lawful environmental action.

Social trust. Trust reduces the transaction costs of cooperation and facilitates collective action in common-pool problems (Ostrom, 1998; Putnam, 2000), and neighbourhoods with high mutual trust display greater collective efficacy in enforcing shared norms (Sampson et al., 1997). Trust in one's community should therefore favour lawful, cooperative action.

Ostrom's (1998) behavioural theory treats trust, reciprocity, and reputation as mutually reinforcing mechanisms through which groups overcome second-order dilemmas without external enforcement, and Putnam (2000) generalises the argument to civic engagement: where generalised trust is high, the expected returns to cooperation rise and free-riding risk falls. The relationship with illegal action is less determinate because community trust is a horizontal resource rather than vertical trust in political institutions (Tyler, 2006); the negative prediction rests on the premise that cooperative norms presuppose that others will honour shared rules.

- H1c. Social trust is positively related to support for lawful environmental action and negatively related to support for illegal environmental action.

Anarchism. Anarchist ecology holds that the state constitutes part of the environmental problem and that self-governing communities should manage the environment without government (Dobson, 2007). By denying the state's legitimacy, it provides a direct rationale for extra-legal action while offering little justification for engagement through state-sanctioned channels.

The theoretical basis lies in social ecology, which holds that the domination of nature originates in the domination of humans by other humans and that ecological problems cannot be resolved through the hierarchical state that produced them (Bookchin, 1982). In Dobson's (2007) mapping of green political thought, anarchist ecology regards the state as illegitimate rather than merely inadequate. Because normative action is defined by conformity to the existing system's rules (Wright et al., 1990), an ideology

denying the system's authority to set those rules reframes rule-breaking as consistent with one's commitments, while remaining indifferent rather than hostile to lawful environmental groups.

- H2a. Anarchism is positively related to support for illegal environmental action and unrelated to support for lawful environmental action.

Eco-socialism. Eco-socialism holds that capitalist growth is inherently destructive and that the ecological crisis can be resolved only through a departure from capitalism. Unlike anarchism, it critiques the economic system rather than the state as such and is compatible with both lawful political mobilisation for structural reform and radical action.

Eco-socialist thought locates the driver of ecological destruction in capital's imperative to expand and regards sustainability as unattainable without transforming the mode of production (Kovel, 2002). The decisive difference from anarchism lies in the object of critique: because eco-socialism indicts the economic system rather than political authority as such, it retains the state and electoral politics as instruments of structural change (Dobson, 2007), while the diagnosis that capitalism is inherently destructive still provides a rationale for extra-legal means where reform appears too slow.

- H2b. Eco-socialism is positively related to both outcomes.

Political extremism. Extreme ideologies at both ends of the spectrum are characterised by overconfidence and intolerance of alternative views (van Prooijen & Krouwel, 2019). Because certainty reduces the willingness to compromise, extremism should be more closely associated with illegal than with lawful action.

Extremism is measured here as certainty that one's own party is absolutely correct rather than as ideological position. Adherents at both poles share cognitive simplicity, overconfidence, and intolerance (van Prooijen & Krouwel, 2019), and motivated social cognition research links conservatism specifically to needs for order, structure and closure (Jost, Glaser, Kruglanski, & Sulloway, 2003). Such certainty may reduce willingness to accommodate competing views, while the politicisation associated with protest participation may increase engagement in collective action (van Stekelenburg & Klandermans, 2013).

- H2c. Political extremism is positively related to both outcomes, with a stronger association with support for illegal environmental action.

Perceived inequality. Perceived inequality, as measured here, holds that the state must remedy the unequal distribution of climate harms across social strata. It constitutes a demand addressed to government, and a grievance that identifies an institution as the remedy is most naturally expressed through engagement with that institution.

Grievance theory holds that a grievance mobilises only when attributed to an agent that could act otherwise (Klandermans, 1997; van Stekelenburg & Klandermans, 2013), and relative-deprivation research confirms that perceived injustice rather than objective disadvantage is the proximate motivator (Smith et

al., 2012). The perceived-inequality items do not merely register unequal harms but assert that government must resolve the disparity, identifying the state as a legitimate and capable remedial agent. A claim addressed to the state presupposes the state's authority (Schlosberg & Collins, 2014), and endorsement of illegal action would contradict that presupposition.

- H3a. Perceived inequality is positively related to support for lawful environmental action, with a stronger association than with support for illegal environmental action.

Distributive and intergenerational justice. Distributive justice concerns who should bear the costs of mitigation and adaptation; intergenerational justice concerns what the present generation owes the future, the obligation Gardiner (2006) places at the core of the 'perfect moral storm' of climate change (see also Schlosberg & Collins, 2014). Both are diffuse moral claims about sacrifice and responsibility that identify no specific remedy; as grievances, they should increase support for action in general and, where combined with the belief that institutions will not deliver, for illegal action as well.

These dimensions concern principles of allocation rather than a remedial agent; Gardiner (2006) shows the intergenerational problem is structurally intractable because those who bear the costs of inaction cannot bargain with those who impose them. Claims of this kind have the properties of moralised attitudes—experienced as universal obligations, resistant to trade-offs (Skitka, 2010; Tetlock, 2003)—and because they specify a standard of fairness without identifying the institution responsible for meeting it, their tactical implications remain open: where institutions are perceived to violate the standard, the obligation persists while the lawful channel loses credibility.

- H3b. Distributive justice is positively related to both outcomes.
- H3c. Intergenerational justice is positively related to both outcomes.

Purity/Sanctity. The moral-amplification thesis (Section 2.3) predicts that sacralising nature lowers the threshold for extreme means (Skitka et al., 2005; Zaal et al., 2011). The channelling thesis predicts the opposite. We formalise the amplification prediction, which is the more direct interpretation of the moral-conviction literature, while treating the direction as contested.

MFT treats Purity/Sanctity as the foundation that renders objects sacred and their violation contaminating (Graham et al., 2011; Haidt, 2012), and Rottman et al. (2015) argue it is the foundation most readily attached to nature. Once nature is sacralised, inaction becomes desecration and the attitude acquires the properties Tetlock (2003) attributes to sacred values: shielded from trade-offs, with proposals to compromise provoking outrage (Atran & Ginges, 2012). Because strong moral conviction can override objections to hostile collective action (Zaal et al., 2011), Purity/Sanctity should strengthen the translation of grievance and ideology into support for illegal action—although Feinberg and Willer's (2013) finding that purity framing increases environmental concern is also consistent with channelling.

- H4a. Purity/Sanctity amplifies the positive associations between the predictors and support for illegal environmental action.

Authority. Authority moralises obedience to legitimate institutions (Tyler, 2006); the channelling prediction is therefore unambiguous for this foundation.

Authority/Respect moralises deference to legitimate hierarchy and the maintenance of social order (Graham et al., 2009; Haidt & Graham, 2007); its tactical implications are more determinate than Purity/Sanctity's because its object is compliance itself. Tyler (2006) shows that obedience to law rests on perceived legitimacy rather than deterrence: those who regard authorities as legitimate comply as a matter of obligation even at cost. The items used here presuppose the state's standing to direct citizen behaviour, so for respondents high in Authority, illegal action would violate the very foundation that motivates their climate concern.

- H4b. Authority attenuates the positive associations between the predictors and support for illegal environmental action.

Ingroup loyalty. Ingroup loyalty, measured as the prioritisation of national industry and jobs over climate response, moralises a value that competes with climate action; it should dampen the translation of climate-related motives into support for either form of action.

Ingroup/Loyalty moralises the interests of one's group and treats sacrifice for it as virtuous (Graham et al., 2009; Haidt, 2012). Anchored here at the national level and opposed to climate response, it represents a competing form of moralisation. System-justification research provides a related bridge: resistance to environmental action can increase when climate change threatens the legitimacy of the existing system, whereas system-sanctioned framing can reduce it (Feygina, Jost, & Goldsmith, 2010). Loyalty should therefore reduce the conversion of climate-related motives into support for either form of action.

- H4c. Ingroup loyalty attenuates the positive associations between the predictors and both forms of support.

4. Method

4.1 Data and sample

The data come from the 2025 National Opinion Survey on Energy, an online panel survey of the general population of the Republic of Korea aged 19 and over, conducted from 19 June to 1 July 2025 across all 17 metropolitan cities and provinces using proportional quota sampling by gender, age, and region. The realised sample comprised 1,970 respondents: 973 men (49.4%) and 997 women (50.6%); 15.7% aged 19–29, 15.0% aged 30–39, 17.1% aged 40–49, 19.3% aged 50–59, and 32.9% aged 60 or over. Seoul (18.7%) and Gyeonggi (26.3%) together accounted for 45.0% of respondents, consistent with the population distribution. Educational attainment was high: 435 respondents (22.1%) had completed high school or less and 1,535 (77.9%) had some college education or more. Household monthly income was distributed across below 3 million KRW (409), 3–4.99 million KRW (531), and 5 million KRW or more (1,018), with 12

cases missing. Because income was log-transformed for the regressions and zero-income cases treated as missing, the regression analyses are based on 1,895 cases after listwise deletion.

4.2 Measures

All substantive constructs were measured on five-point Likert scales (1 = strongly disagree, 5 = strongly agree) and scored as the mean of their items; Table 2 lists the items, sub-dimensions, and reliabilities, with wording translated from the Korean questionnaire. The two dependent variables (α = .854 and .912) were correlated at r = .551 but had distinct correlates. A composite climate-moralisation score is reported for descriptive purposes only and, given the weak correlations of Ingroup loyalty with the other two foundations, is not used in hypothesis tests. Controls are gender (0 = male, 1 = female), age (five ordered categories), education (0 = high school or less, 1 = some college or more), and the natural logarithm of household monthly income.

Four scales fall below the conventional α = .70 threshold: eco-socialism (.618), Authority (.602), distributive justice (.640), and Purity/Sanctity (.676). Two-item scales necessarily constrain alpha, but measurement error attenuates observed associations. Effects involving these constructs, particularly interactions involving Purity/Sanctity and Authority, should therefore be interpreted as conservative estimates.

Table 2. Measurement items, sub-dimensions, and reliabilities

Block	Variable	Items	Item wording (translated)	α	Scale
Dependent variables	Support for lawful environmental action	Q14-1, 2, 3, 4	I am positive towards the activities of environmental groups working on climate change. / I support the actions of environmental groups responding to climate change. / I am willing to join an environmental group working on climate change. / I am willing to participate in demonstrations of environmental groups working on climate change.	.854	5-point Likert
	Support for illegal environmental action	Q14-5, 6, 7, 8	Because climate change cannot be solved within the current legal system, unlawful action is necessary. / Because climate change cannot be solved within the current institutions or system, the current institutions or system must be dismantled. / I am willing to join a radical environmental group that sometimes breaks the law to solve climate change. / I am willing to participate in large-scale demonstrations of a somewhat militant environmental group to solve climate change.	.912	5-point Likert
Social solidarity	Collective efficacy	Q6-128, 129	If members of our community cooperate, we can respond well to climate change. / If members of our community cooperate, we can overcome climate change.	.784	5-point Likert
	Powerlessness	Q6-53, 54	My behaviour has no effect on climate change. / Even if I act, I cannot contribute at all to the climate change problem.	.829	5-point Likert
	Social trust	Q2-14, 15	A culture of mutual trust is established in our community. / Our community can solve internal problems by itself.	.770	5-point Likert

Block	Variable	Items	Item wording (translated)	α	Scale
Ideological radicalism	Anarchism	Q1-60, 61	Environmental problems are solved when everything runs autonomously without government intervention. / Resident communities should solve environmental problems themselves without government.	.788	5-point Likert
	Eco-socialism	Q1-82, 83	Capitalist development necessarily causes environmental destruction. / Environmental problems can be solved only by moving away from capitalism.	.618	5-point Likert
	Political extremism	Q1-35, 36	The political goals and direction of the party I support are absolutely correct. / The party I support absolutely contributes to the national interest.	.826	5-point Likert
Perceived climate injustice	Perceived inequality	Q6-73, 74	The gap in climate damage between social classes must be resolved by government. / The damage climate change inflicts on the economically vulnerable must be resolved by government.	.816	5-point Likert
	Distributive justice	Q6-83, 84, 85	To minimise climate impacts, those with more resources should sacrifice. / Climate damage relief should be concentrated on the vulnerable low-income group rather than everyone. / Responsibility for climate change should be borne first by developed countries rather than all countries.	.640	5-point Likert
	Intergenerational justice	Q6-93, 94	The responsibility for responding to climate change should be borne entirely by the present generation rather than future generations. / Nature damaged through the sacrifices of the present generation must be fully restored for future generations.	.741	5-point Likert
Climate moralisation (moderators)	Purity/Sanctity	Q6-122, 123	Climate action is a self-evident moral duty of humans to protect nature. / The continuation of climate change is a result of humans committing a moral sin.	.676	5-point Likert
	Authority	Q6-120, 121	Citizens should respect government climate policy even if it is inconvenient. / Governments may implement compulsory policies following scientists' climate warnings.	.602	5-point Likert
	Ingroup loyalty	Q6-118, 119	Protecting the nation's industry and jobs is more important than responding to climate change. / Policies that put our country's interests ahead of climate response are needed.	.809	5-point Likert
	Climate moralisation (composite)	Q6-118 to 123	Mean of the six Purity/Sanctity, Authority, and Ingroup loyalty items	.678	5-point Likert
Controls	Gender / Age / Education / Income	SQ1, SQ2, SQ5, BQ8	SQ1 gender (0 = male, 1 = female) / SQ2 age (five groups: 19–29 to 60+) / SQ5 education (0 = high school or less, 1 = some college or more) / BQ8 household monthly income (log-transformed in regressions)	—	Nomina l / ratio

Note. N = 1,970. Cronbach's α and item counts are taken from the reliability output (four-item scales .854/.912; three-item scale .640; two-item scales .602–.829). Item numbers refer to the 2025 National Opinion Survey on Energy; variable names correspond to Q1→Q1B–D, Q2→Q2, Q6→Q6B–D, and Q14→Q14. Social trust is the mean of Q2-14 and Q2-15, both positively worded. Eco-socialism (.618), Authority (.602), distributive justice (.640), and Purity/Sanctity (.676) show somewhat low reliability. Income was log-transformed (logincome) for the regressions; zero-income cases were treated as missing, giving a regression N of 1,895.

4.3 Analytic strategy

Group differences were tested using one-way analysis of variance (ANOVA) (Table 3), and zero-order correlations were computed (Table 4). H1–H3 were tested with hierarchical OLS regression for each outcome, entering demographic controls (Step 1), social solidarity (Step 2), ideological radicalism (Step 3), and perceived climate injustice (Step 4); the increment in R^2 at each step and the final-step coefficients are reported in Table 5. H4 was tested by adding, one at a time, the product of each standardised predictor with

each standardised moderator to the fully controlled model (Aiken & West, 1991), yielding 54 tests (Appendix Table A1). Significant interactions were decomposed with PROCESS Model 1 (Hayes, 2018), estimating the conditional slope at −1 SD, the mean, and +1 SD of the moderator, with all covariates and the other eight predictors controlled (Figures 3–8; Appendix Table A2). Testing 54 product terms raises the family-wise error rate, so three safeguards are adopted. First, inference is organised by moderator rather than individual term: a genuine boundary condition should leave a systematic, theory-consistent signature across the nine predictors, chance findings a scattered one. Second, the yield is benchmarked against chance and a conservative correction: at $\alpha = .05$, approximately 2.7 significant terms would be expected by chance, whereas 25 were observed and 11 reached $p < .001$, approaching the Bonferroni-adjusted criterion of $.05/54 \approx .0009$. These 11 terms anchor the confirmatory interpretation; the 14 significant only at $.01 < p < .05$ are treated as exploratory. Third, significance is reported separately from magnitude: the product-term coefficients range from $|\beta| = .036$ to .100, so the contribution lies in the direction and shape of the conditional effects rather than variance explained; all 54 tests appear in Appendix Table A1. All measures are single-survey self-reports, so common method variance cannot be excluded (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), although near-zero correlations among distinct constructs and the differentiated coefficients across outcomes argue against a pervasive method factor.

5. Results

5.1 Response distributions

Figure 2 shows the distribution of the eight outcome items after recoding the five-point responses into disagree (1–2), neutral (3), and agree (4–5). More than half of respondents evaluated environmental groups positively (53.9%) and supported their actions (53.4%), but fewer than one-third were willing to join such a group (28.6%) or participate in its demonstrations (29.6%). Support for illegal action was lower still but far from negligible: 27.3% agreed that unlawful action is necessary because the legal system cannot solve the problem, 23.4% that the current institutions must be brought down, 22.8% that they would join a law-breaking group, and 22.4% that they would join militant demonstrations. Roughly one adult in five thus endorsed extra-legal means at least in principle, while one-third to one-half were neutral on each item—exactly the population for whom boundary conditions such as moral foundations may matter most.

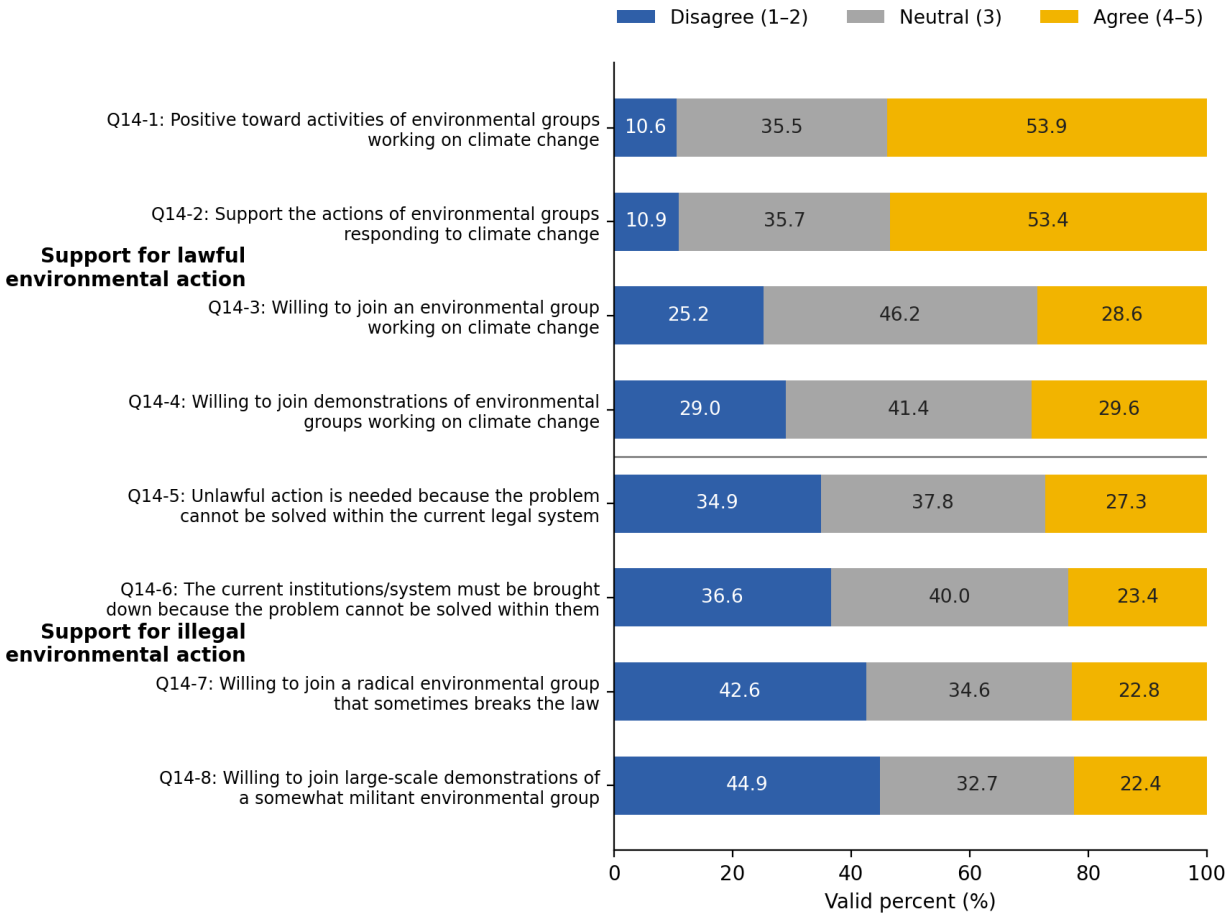


Figure 2. Response distributions of the outcome items (five-point scale recoded to three categories, %). *Note.* Five-point Likert responses were recoded as 1–2 = disagree, 3 = neutral, and 4–5 = agree. Values are valid percentages; each item sums to 100%. N = 1,970.

5.2 Group differences by demographic characteristics

Table 3 reports the mean of each study variable by gender, age, education, and income. Neither outcome differed by gender, although several antecedents did: men scored higher on powerlessness, social trust, anarchism, political extremism, distributive justice, and Ingroup loyalty, women on eco-socialism and perceived inequality. Age produced the sharpest contrasts: collective efficacy, perceived inequality, intergenerational justice, Purity/Sanctity, Authority, and support for lawful actions increased with age, whereas powerlessness (F = 13.76), anarchism, Ingroup loyalty, and support for illegal actions (F = 7.07) were highest among the youngest respondents and declined markedly after 60. Younger respondents thus combined a stronger sense that their own actions are futile with greater support for action outside the law, consistent with the powerlessness route of Tausch et al. (2011). Respondents with high school education or less scored higher on anarchism, eco-socialism (F = 18.27), political extremism, and support for illegal actions; support for lawful actions did not differ by education. Income was positively associated with

collective efficacy (F = 11.25), social trust (F = 15.54), support for lawful actions (F = 12.76), intergenerational justice, Purity/Sanctity, Authority, and the moralisation composite; support for illegal actions was highest in the top and lowest in the middle income group.

Table 3. Mean differences by demographic characteristics (ANOVA / t-test)

Variable	Men	Women	F	19–29	30s	40s	50s	60+	F	HS or less	College +	F	Low income	Middle income	High income	F
Collective efficacy	3.47	3.51	1.45	3.37	3.42	3.51	3.50	3.56	4.40**	3.45	3.50	1.41	3.37	3.44	3.55	11.25***
Powerlessness	3.03	2.90	9.35**	3.06	3.13	3.06	3.03	2.76	13.76***	3.01	2.95	1.14	3.02	2.88	2.98	3.23*
Social trust	3.21	3.14	4.00*	3.15	3.13	3.19	3.20	3.18	0.43	3.18	3.17	0.02	3.09	3.05	3.26	15.54***
Anarchism	2.79	2.66	9.32**	2.85	2.82	2.72	2.70	2.65	3.15*	2.81	2.70	4.57*	2.80	2.64	2.73	3.64*
Eco-socialism	3.05	3.12	4.38*	3.11	3.21	3.04	3.15	3.00	4.45**	3.23	3.04	18.27***	3.16	3.07	3.05	2.69
Political extremism	2.92	2.82	6.15*	2.87	2.88	2.84	2.90	2.85	0.32	2.96	2.84	5.78*	2.91	2.84	2.85	0.82
Perceived inequality	3.62	3.71	6.83**	3.52	3.60	3.63	3.72	3.74	5.94***	3.62	3.67	1.72	3.59	3.65	3.69	2.62
Distributive justice	3.22	3.16	4.52*	3.24	3.26	3.22	3.18	3.12	2.80*	3.20	3.19	0.04	3.18	3.13	3.21	2.10
Intergenerational justice	3.40	3.42	0.49	3.29	3.34	3.38	3.44	3.49	4.91***	3.43	3.40	0.44	3.33	3.37	3.45	4.75**
Purity/Sanctity	3.57	3.63	3.63	3.41	3.48	3.58	3.64	3.73	13.77***	3.59	3.60	0.03	3.51	3.59	3.64	4.69**
Authority	3.51	3.56	2.67	3.44	3.46	3.49	3.61	3.61	6.53***	3.51	3.54	0.75	3.45	3.49	3.59	9.12***
Ingroup loyalty	3.19	3.06	12.46***	3.24	3.20	3.10	3.15	3.03	4.88***	3.17	3.11	1.64	3.11	3.04	3.17	4.82**
Climate moralisation (composite)	3.42	3.42	0.06	3.36	3.38	3.39	3.47	3.46	3.45**	3.43	3.42	0.05	3.36	3.37	3.47	9.99***
Support for lawful environmental action	3.21	3.26	2.43	3.11	3.14	3.26	3.35	3.26	5.27***	3.17	3.25	3.73	3.10	3.18	3.31	12.76***
Support for illegal environmental action	2.74	2.71	0.43	2.78	2.88	2.76	2.79	2.57	7.07***	2.83	2.70	6.54*	2.68	2.63	2.78	4.79**

Note. ***p < .001, **p < .01, *p < .05. Group means and case counts are taken from the means output; F values were computed from each group's mean, standard deviation, and N using the one-way ANOVA formula. Gender (men 973, women 997); age (19–29: 310, 30s: 295, 40s: 336, 50s: 381, 60+: 648); education (high school or less 435, some college or more 1,535); income (below 3 million KRW 409, 3–4.99 million KRW 531, 5 million KRW or more 1,018). N = 1,970 (income: 1,958). The youngest age category comprises respondents aged 19–29 in accordance with the sampling frame.

5.3 Correlations

Table 4 presents the zero-order correlations. Support for lawful and illegal action was correlated at r = .551, yet their correlates diverged: support for lawful actions was most strongly associated with collective efficacy (.472), Authority (.495), Purity/Sanctity (.484), intergenerational justice (.458), and perceived inequality (.454); support for illegal actions with powerlessness (.505), anarchism (.470), Ingroup loyalty (.398), and distributive justice (.396). Negative correlations were almost entirely absent and trivial where present (powerlessness–Purity/Sanctity, −.007; anarchism–perceived inequality, −.012), underscoring the need for regression to distinguish the outcomes. Purity/Sanctity and Authority were strongly related to one another (.613) and to the efficacy and injustice variables, whereas Ingroup loyalty was unrelated to Purity/Sanctity (−.002), weakly related to Authority (.179), and substantially related to powerlessness (.479) and anarchism (.346). The correlations between the climate-moralisation composite and its components (.598–.810) are part–whole correlations.

Table 4. Pearson correlations among the study variables (N = 1,970)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Collective efficacy	1														
2. Powerlessness	.062**	1													
3. Social trust	.331**	.180**	1												
4. Anarchism	.133**	.348**	.351**	1											
5. Eco-socialism	.165**	.231**	.208**	.322**	1										
6. Political extremism	.190**	.248**	.379**	.418**	.353**	1									
7. Perceived inequality	.451**	.037	.224**	−.012	.206**	.132**	1								
8. Distributive justice	.345**	.357**	.246**	.227**	.343**	.283**	.362**	1							
9. Intergenerational justice	.452**	.182**	.302**	.196**	.236**	.247**	.460**	.478**	1						
10. Purity/Sanctity	.533**	−.007	.211**	.006	.227**	.126**	.559**	.372**	.530**	1					
11. Authority	.534**	.086**	.298**	.079**	.206**	.207**	.526**	.426**	.519**	.613**	1				
12. Ingroup loyalty	.172**	.479**	.254**	.346**	.149**	.307**	.029	.365**	.205**	−.002	.179**	1			
13. Climate moralisation (composite)	.568**	.283**	.359**	.217**	.272**	.308**	.502**	.547**	.577**	.728**	.810**	.598**	1		
14. Support for lawful environmental action	.472**	.134**	.380**	.193**	.298**	.278**	.454**	.372**	.458**	.484**	.495**	.111**	.497**	1	
15. Support for illegal environmental action	.219**	.505**	.330**	.470**	.351**	.373**	.152**	.396**	.321**	.142**	.229**	.398**	.373**	.551**	1

Note. ***p < .001, **p < .01, *p < .05. Significance was determined by the t test of the correlation coefficient at N = 1,970. Because the climate-moralisation composite is the mean of the six Purity/Sanctity, Authority, and Ingroup loyalty items, its correlations with the three components (.598–.810) are part–whole correlations.

5.4 Direct effects: hierarchical regression

Table 5 reports the final (Step 4) coefficients of the hierarchical regressions with the R^2 at each step. Both models were significant (lawful: $F = 92.233$, $R^2 = .389$, adjusted $R^2 = .385$; illegal: $F = 108.646$, $R^2 = .429$, adjusted $R^2 = .425$; both $p < .001$), and every step added significant explanatory power. For support for lawful actions, the solidarity block contributed the largest increment ($\Delta R^2 = .266$), followed by injustice ($\Delta R^2 = .067$), with ideological radicalism adding relatively little ($\Delta R^2 = .042$); for support for illegal actions, solidarity again contributed most ($\Delta R^2 = .308$), but ideological radicalism ($\Delta R^2 = .088$), rather than injustice ($\Delta R^2 = .017$), provided the second-largest increment. Grievances about climate injustice thus explained support for lawful activities, ideological rejection of the system support for illegal activities.

Social solidarity (H1). Collective efficacy was the strongest predictor of support for lawful actions ($\beta = .207$, $p < .001$) and unrelated to support for illegal actions ($\beta = .034$, n.s.), supporting H1a. Powerlessness was unrelated to support for lawful actions ($\beta = -.002$) but was the single strongest predictor of support for illegal actions ($\beta = .314$, $p < .001$), supporting H1b. This efficacy–powerlessness contrast is the clearest structural difference between the outcomes and extends the efficacy route of Tausch et al. (2011) to the climate domain. Social trust predicted both outcomes positively (lawful $\beta = .149$; illegal $\beta = .074$; both $p < .001$), so H1c was supported only for lawful actions: community trust indexes a general readiness for collective engagement rather than a preference for lawful means.

Ideological radicalism (H2). Anarchism was unrelated to support for lawful actions ($\beta = .018$) but was the second strongest predictor of support for illegal actions ($\beta = .221$, $p < .001$), supporting H2a. Eco-socialism predicted both outcomes (lawful $\beta = .121$; illegal $\beta = .096$; both $p < .001$), supporting H2b; the slightly larger coefficient for lawful actions is consistent with a critique of capitalism being pursued through reformist politics. Political extremism predicted both outcomes (lawful $\beta = .068$, $p < .01$; illegal $\beta = .089$, $p < .001$), more strongly for illegal activities, supporting H2c. An ideology denying the state's legitimacy thus translates into rejection of lawful means; one targeting the economic system leaves the political system available as an instrument.

Perceived climate injustice (H3). Perceived inequality was the second strongest predictor of support for lawful actions ($\beta = .194$, $p < .001$) and had no effect on support for illegal actions ($\beta = .002$), supporting H3a in its strong form. Distributive justice (lawful $\beta = .064$, $p < .01$; illegal $\beta = .099$, $p < .001$) and intergenerational justice (lawful $\beta = .141$; illegal $\beta = .092$; both $p < .001$) predicted both outcomes, supporting H3b and H3c. A grievance that assigns the remedy to government mobilises lawful engagement and nothing else; the diffuse justice claims spill over into support for illegal means.

Controls. Age and education were positively associated with support for lawful actions (β = .040 and .048) and negatively with support for illegal actions (β = −.042 and −.040), all p < .05; log income was positively associated with both outcomes (β = .038 and .043), and gender was not significant. The demographic block explained only 1.5% of the variance in each outcome, indicating that the sociodemographic profile in Table 3 is largely mediated by the psychological variables.

Table 5. Hierarchical regression: determinants of support for lawful and illegal environmental action (final Step 4 model)

Block	Variable	Model 1: Lawful B	S.E.	β	Model 2: Illegal B	S.E.	β
	(Constant)	−0.404*	0.159		−0.957***	0.191	
Step 1: Demographic controls	Gender (female)	−0.038	0.028	−0.025	−0.044	0.034	−0.023
	Age	0.021*	0.010	0.040	−0.027*	0.012	−0.042
	Education	0.090*	0.035	0.048	−0.093*	0.042	−0.040
	Income (log)	0.042*	0.020	0.038	0.058*	0.024	0.043
Step 2: Social solidarity	Collective efficacy	0.223***	0.023	0.207	0.046	0.028	0.034
	Powerlessness	−0.002	0.017	−0.002	0.332***	0.021	0.314
	Social trust	0.151***	0.021	0.149	0.093***	0.026	0.074
Step 3: Ideological radicalism	Anarchism	0.014	0.018	0.018	0.223***	0.021	0.221
	Eco-socialism	0.118***	0.020	0.121	0.116***	0.024	0.096
	Political extremism	0.059**	0.019	0.068	0.096***	0.022	0.089
Step 4: Perceived climate injustice	Perceived inequality	0.200***	0.023	0.194	0.002	0.027	0.002
	Distributive justice	0.069**	0.025	0.064	0.133***	0.030	0.099
	Intergenerational justice	0.144***	0.023	0.141	0.117***	0.028	0.092
F (Step 4)		92.233***			108.646***		
R^2 / adjusted R^2 (Step 4)		0.389 / 0.385			0.429 / 0.425		
R^2 by step (1→2→3→4)		.015*** → .281*** → .322*** → .389***			.015*** → .323*** → .411*** → .429***		
ΔR^2 by step (1 / 2 / 3 / 4)		.015 / .266 / .042 / .067			.015 / .308 / .088 / .017		

Note. ***p < .001, **p < .01, *p < .05. Final (Step 4) coefficients of hierarchical regressions entering demographic controls (Step 1), social solidarity (Step 2), ideological radicalism (Step 3), and perceived climate injustice (Step 4). The F change for every ΔR^2 is significant at p < .001. Listwise N = 1,895. Model 1 = support for lawful environmental action; Model 2 = support for illegal environmental action.

5.5 Moderating effects of climate moralisation

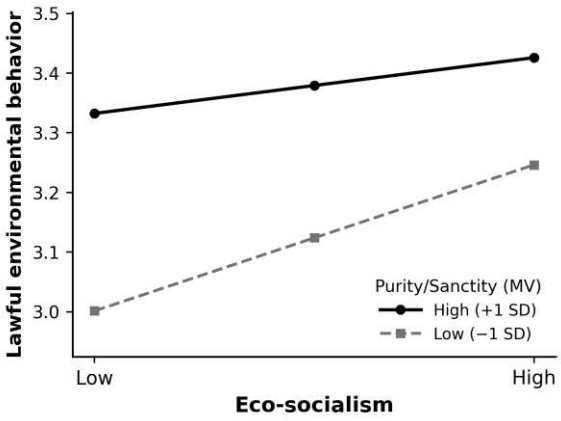
5.5.1 Overview

Of the 54 product terms tested, 25 reached p < .05 (Appendix Table A1): 10 involved Purity/Sanctity, 11 Authority, and 4 Ingroup loyalty; 11 concerned support for lawful and 14 support for illegal activities. The sign of the product term was negative for 19 of the 21 Purity/Sanctity and Authority terms and positive for

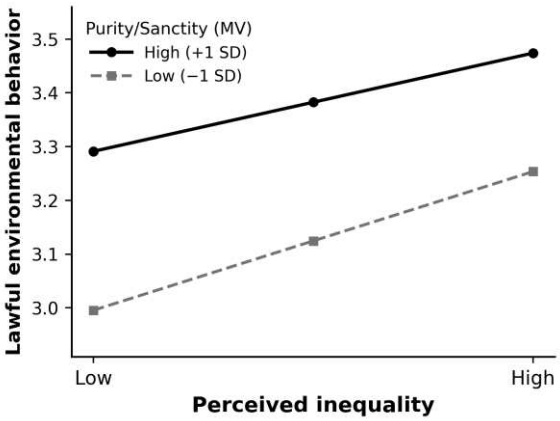
all four Ingroup loyalty terms; the largest |β| was .100 (intergenerational justice × Purity/Sanctity for support for illegal actions) and the median .057. Per the analytic strategy, the 11 terms at $p < .001$ are confirmatory, the 14 at $.01 < p < .05$ exploratory. The conditional slopes below are taken from Appendix Table A2; the figures display the −1 SD and +1 SD conditions.

5.5.2 Support for lawful environmental action

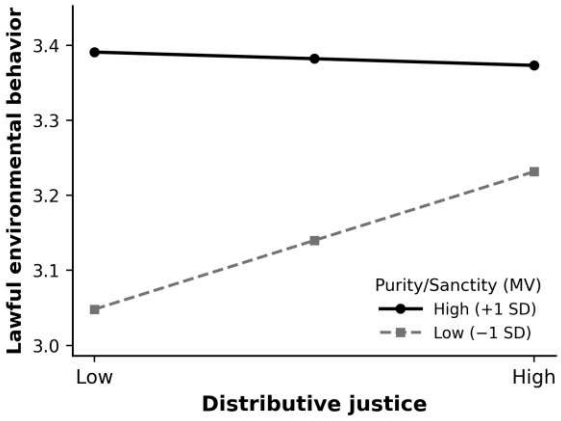
Purity/Sanctity (Figure 3). Four predictors were attenuated. The slope of eco-socialism declined from 0.124 ($p < .001$) at low Purity/Sanctity to 0.047 ($p = .011$) at high Purity; perceived inequality from 0.130 to 0.092 (both $p < .001$); intergenerational justice declined from 0.110 ($p < .001$) to 0.046 ($p = .023$); and distributive justice declined from 0.093 ($p < .001$) to a non-significant −0.009. All four interactions were ordinal: the high-Purity/Sanctity line remained above the low-Purity/Sanctity line throughout, and the lines converged at high levels of the predictor.



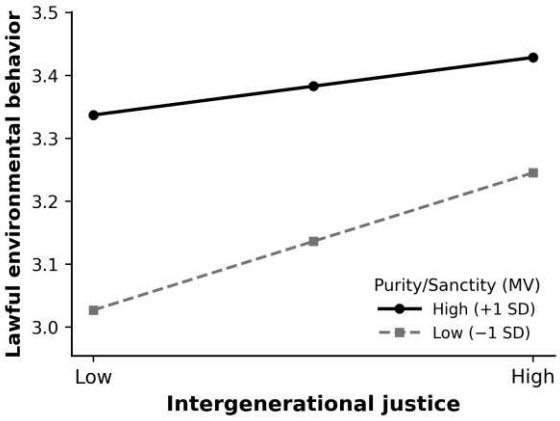
Panel 3-1. Eco-socialism × Purity/Sanctity



Panel 3-2. Perceived inequality × Purity/Sanctity



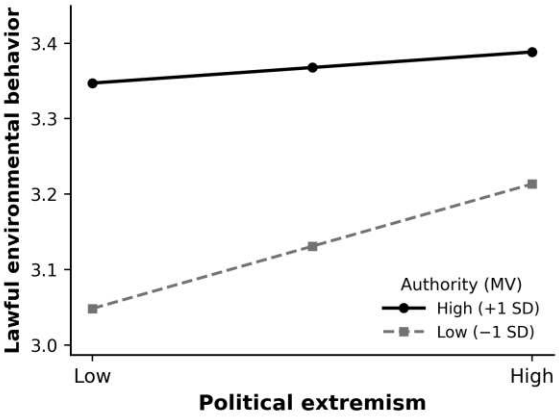
Panel 3-3. Distributive justice × Purity/Sanctity



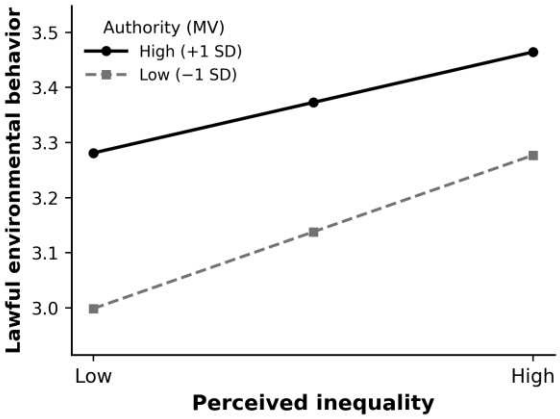
Panel 3-4. Intergenerational justice × Purity/Sanctity

Figure 3. Simple-slope plots for support for lawful environmental action moderated by Purity/Sanctity (panels 3-1 to 3-4). *Note.* N = 1,895. The focal predictor is shown on the horizontal axis. The solid black line represents the slope at high (+1 SD) and the dashed grey line the slope at low (−1 SD) levels of the moderator. Predictors and moderators were standardised. The vertical axis is labelled 'lawful environmental behaviour' in the plots and corresponds to support for lawful environmental action. Conditional estimates at low, mean, and high moderator levels are reported in Appendix Table A2.

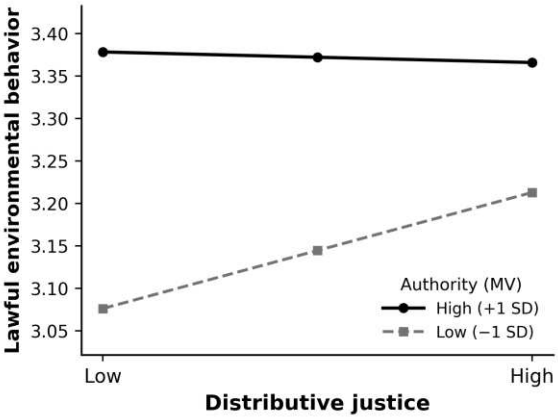
Authority (Figure 4). Political extremism was attenuated to null (0.083, $p < .001$, at low Authority; 0.021, n.s., at high Authority), as was distributive justice (0.069, $p = .001$, to −0.006, n.s.). Perceived inequality (0.140 to 0.092, both $p < .001$) and intergenerational justice (0.115, $p < .001$, to 0.054, $p = .008$) were attenuated but remained significant.



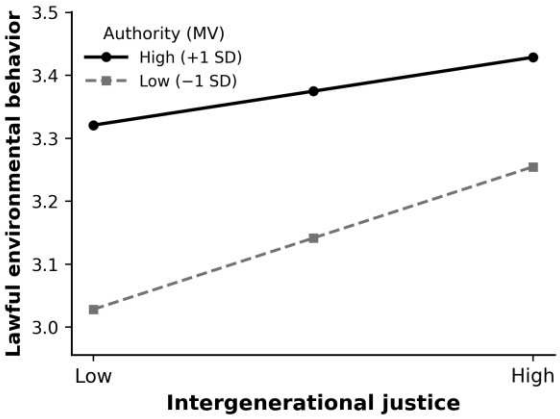
Panel 4-1. Political extremism × Authority



Panel 4-2. Perceived inequality × Authority



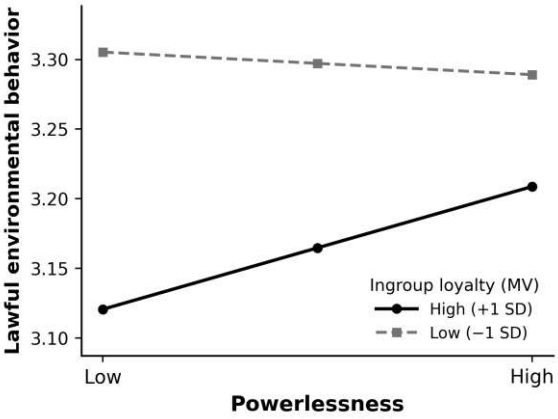
Panel 4-3. Distributive justice × Authority



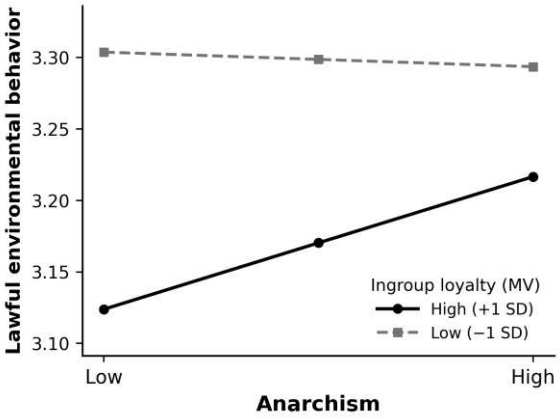
Panel 4-4. Intergenerational justice × Authority

Figure 4. Simple-slope plots for support for lawful environmental action moderated by Authority (panels 4-1 to 4-4). *Note.* N = 1,895. The solid black line represents the slope at high (+1 SD) and the dashed grey line the slope at low (−1 SD) levels of the moderator. Predictors and moderators were standardised. Conditional estimates at low, mean, and high moderator levels are reported in Appendix Table A2.

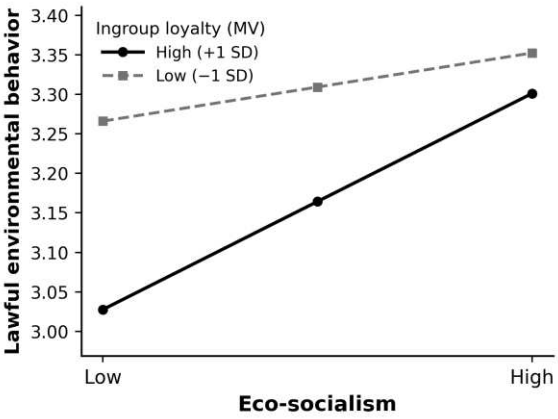
Ingroup loyalty (Figure 5). Powerlessness changed from a null slope (−0.008) at low Ingroup loyalty to a positive slope (0.044, $p = .025$) at high Ingroup loyalty, and anarchism showed the same crossover (−0.005 to 0.047, $p = .024$). Eco-socialism was amplified, with its slope rising from 0.043 ($p = .023$) to 0.138 ($p < .001$).



Panel 5-1. Powerlessness × Ingroup loyalty



Panel 5-2. Anarchism × Ingroup loyalty

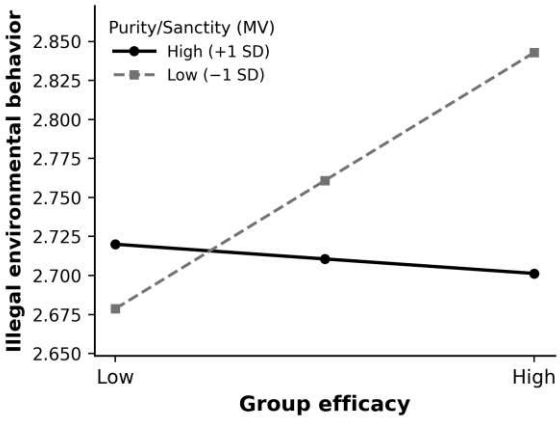


Panel 5-3. Eco-socialism × Ingroup loyalty

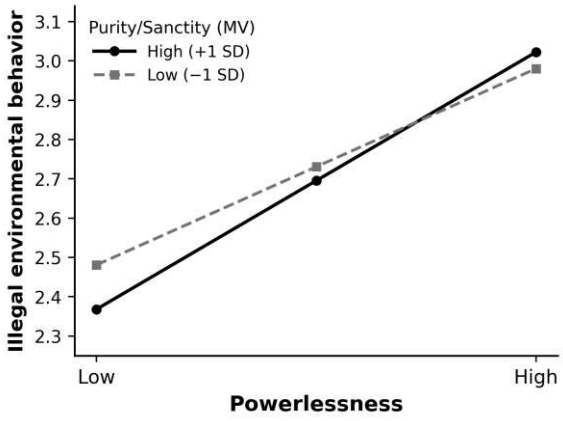
Figure 5. Simple-slope plots for support for lawful environmental action moderated by Ingroup loyalty (panels 5-1 to 5-3). *Note.* N = 1,895. The solid black line represents the slope at high (+1 SD) and the dashed grey line the slope at low (−1 SD) levels of the moderator. Predictors and moderators were standardised. Conditional estimates at low, mean, and high moderator levels are reported in Appendix Table A2.

5.5.3 Support for illegal environmental action

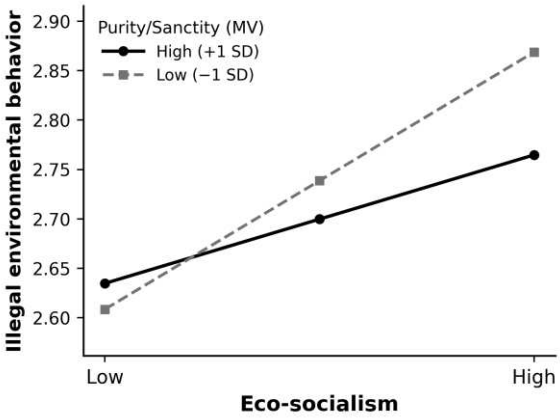
Purity/Sanctity (Figure 6). Six predictors were moderated. Collective efficacy was attenuated to null (0.083, p = .001, to −0.009, n.s.), as was intergenerational justice (0.164, p < .001, to 0.028, n.s.); eco-socialism (0.131 to 0.066, p = .004) and distributive justice (0.156, p < .001, to 0.047, p = .050) were attenuated. Perceived inequality crossed over from weakly positive at low Purity/Sanctity (0.047, p = .044) to negative at high Purity/Sanctity (−0.053, p = .035). Powerlessness showed the opposite pattern, its slope rising from 0.250 at low to 0.328 at high Purity/Sanctity (both p < .001).



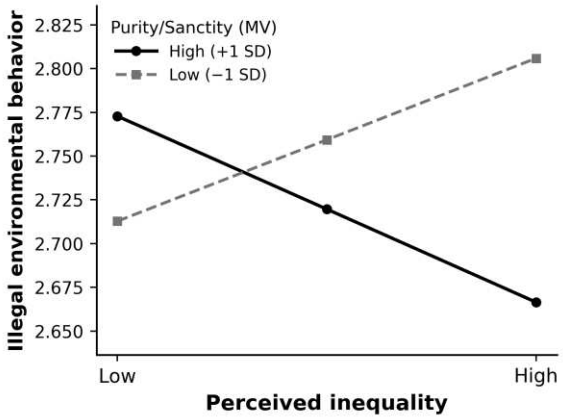
Panel 6-1. Collective efficacy × Purity/Sanctity



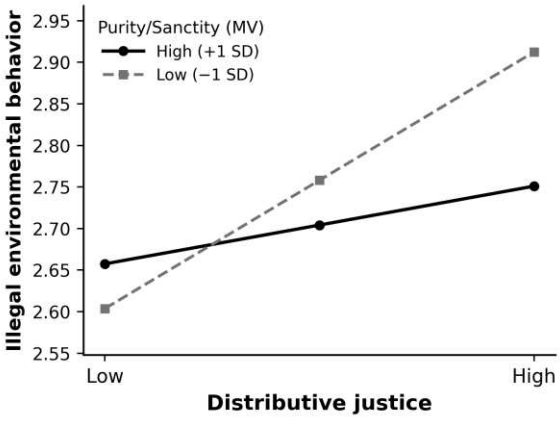
Panel 6-2. Powerlessness × Purity/Sanctity



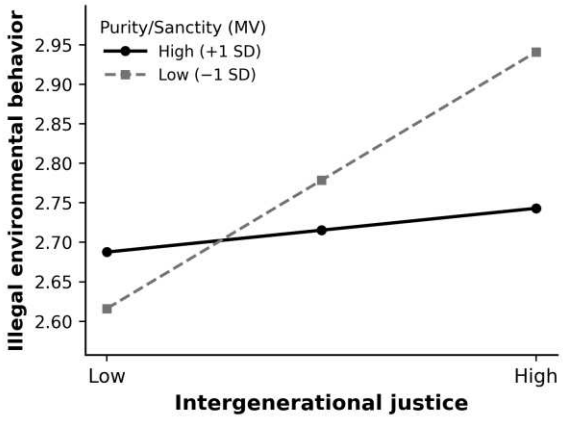
Panel 6-3. Eco-socialism × Purity/Sanctity



Panel 6-4. Perceived inequality × Purity/Sanctity



Panel 6-5. Distributive justice × Purity/Sanctity

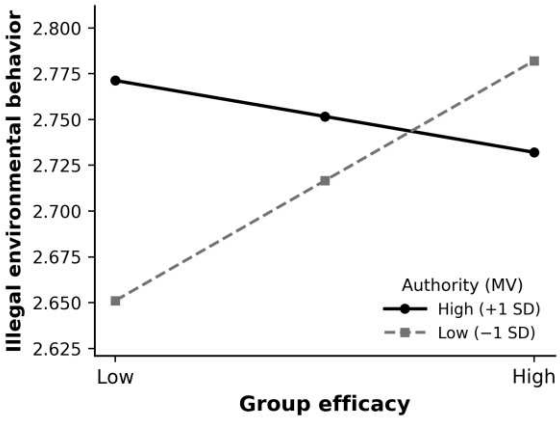


Panel 6-6. Intergenerational justice × Purity/Sanctity

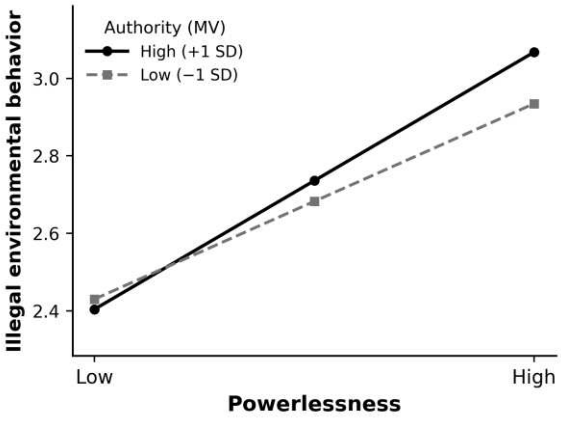
Figure 6. Simple-slope plots for support for illegal environmental action moderated by Purity/Sanctity (panels 6-1 to 6-6). *Note.* N = 1,895. The solid black line represents the slope at high (+1 SD) and the dashed grey line the slope at low (−1 SD) levels of the moderator. Predictors and moderators were standardised. The vertical axis is labelled 'illegal environmental behaviour' in the plots and corresponds to support for illegal environmental action. Conditional estimates at low, mean, and high moderator levels are reported in Appendix Table A2.

Authority (Figure 7). Seven predictors were moderated, broadly reproducing the Purity/Sanctity pattern. Collective efficacy (0.066, p = .005, to −0.020, n.s.) and intergenerational justice (0.143, p < .001,

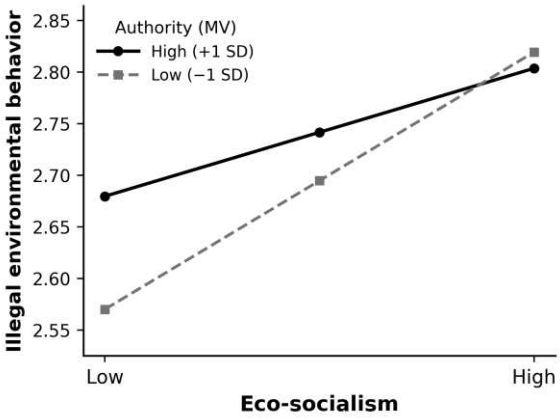
to 0.020, n.s.) were attenuated to null; eco-socialism (0.126 to 0.062, $p = .006$), political extremism (0.132, $p < .001$, to 0.047, $p = .044$), and distributive justice (0.129, $p < .001$, to 0.053, $p = .030$) were attenuated. Perceived inequality crossed over from a non-significant 0.041 to a significant −0.076 ($p = .003$). Powerlessness was amplified from 0.253 to 0.333 (both $p < .001$).



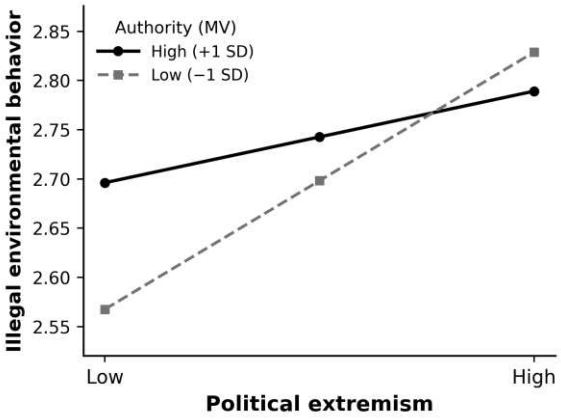
Panel 7-1. Collective efficacy × Authority



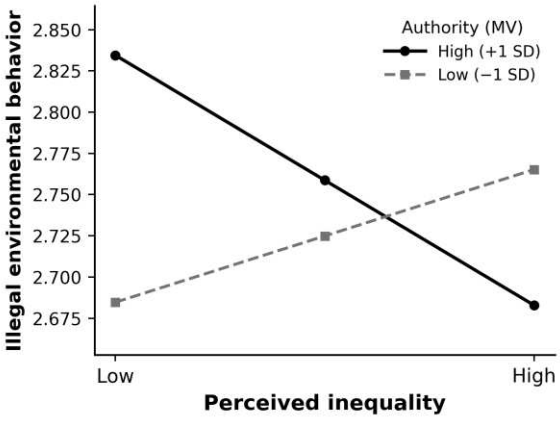
Panel 7-2. Powerlessness × Authority



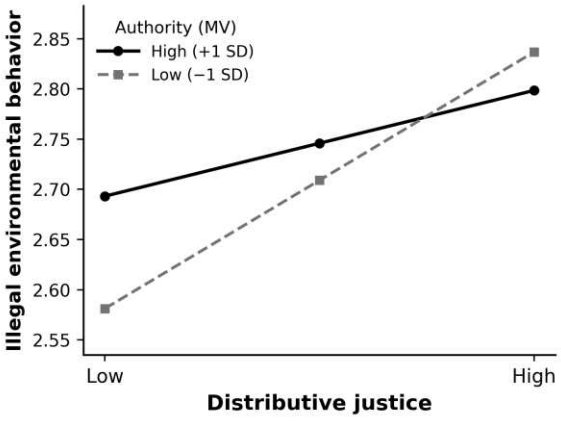
Panel 7-3. Eco-socialism × Authority



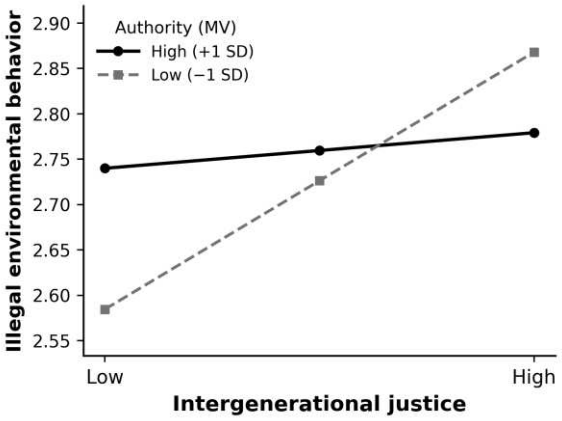
Panel 7-4. Political extremism × Authority



Panel 7-5. Perceived inequality × Authority



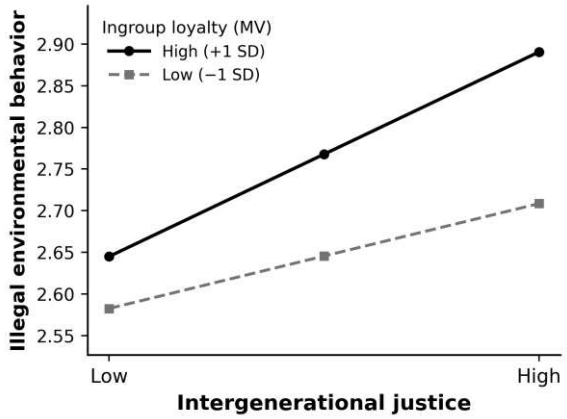
Panel 7-6. Distributive justice × Authority



Panel 7-7. Intergenerational justice × Authority

Figure 7. Simple-slope plots for support for illegal environmental action moderated by Authority (panels 7-1 to 7-7). *Note.* N = 1,895. The solid black line represents the slope at high (+1 SD) and the dashed grey line the slope at low (−1 SD) levels of the moderator. Predictors and moderators were standardised. Conditional estimates at low, mean, and high moderator levels are reported in Appendix Table A2.

Ingroup loyalty (Figure 8). Only intergenerational justice was moderated, with its slope rising from 0.064 ($p = .007$) at low Ingroup loyalty to 0.124 ($p < .001$) at high loyalty; the other 17 loyalty terms for support for illegal actions were not significant.



Panel 8-1. Intergenerational justice × Ingroup loyalty

Figure 8. Simple-slope plot for support for illegal environmental action moderated by Ingroup loyalty (panel 8-1). *Note.* N = 1,895. The solid black line represents the slope at high (+1 SD) and the dashed grey line the slope at low (−1 SD) levels of the moderator. Predictors and moderators were standardised. Conditional estimates at low, mean, and high moderator levels are reported in Appendix Table A2.

5.5.4 A typology of moderation patterns

Table 6 organises the 25 patterns into three logics. Attenuation, in which a positive effect shrinks or becomes non-significant at high levels of the moderator, accounted for 17 terms and was the modal pattern for Purity/Sanctity and Authority. Amplification accounted for four: powerlessness under Purity/Sanctity and Authority for support for illegal actions, eco-socialism under Ingroup loyalty for support for lawful actions, and intergenerational justice under Ingroup loyalty for support for illegal actions. Reversal, in

which the sign changes across levels of the moderator, accounted for four: perceived inequality under Purity/Sanctity and under Authority for support for illegal actions (positive to negative), and powerlessness and anarchism under Ingroup loyalty for support for lawful actions (null to positive). Purity/Sanctity and Authority behaved alike, weakening or reversing every grievance and ideological route to support for illegal actions while strengthening the powerlessness route; Ingroup loyalty amplified the associations it moderated.

Table 6. Typology of the 25 significant moderation patterns

Pattern	Definition	Purity/Sanctity	Authority	Ingroup loyalty	n
Attenuation	Positive slope shrinks or becomes non-significant at high moderator	Lawful: eco-socialism, perceived inequality, distributive justice (to null), intergenerational justice. Illegal: collective efficacy (to null), eco-socialism, distributive justice, intergenerational justice (to null)	Lawful: political extremism (to null), perceived inequality, distributive justice (to null), intergenerational justice. Illegal: collective efficacy (to null), eco-socialism, political extremism, distributive justice, intergenerational justice (to null)	—	17
Amplification	Positive slope grows at high moderator	Illegal: powerlessness	Illegal: powerlessness	Lawful: eco-socialism. Illegal: intergenerational justice	4
Reversal	Sign of slope changes across moderator levels	Illegal: perceived inequality (+ → −)	Illegal: perceived inequality (n.s. → −)	Lawful: powerlessness (n.s. → +), anarchism (n.s. → +)	4
Not moderated	Product term $p \geq .05$	8 of 18 terms	7 of 18 terms	14 of 18 terms	29

Note. Classification is based on the conditional slopes at −1 SD and +1 SD of the moderator reported in Appendix Table A2. 'To null' indicates that the slope at +1 SD was not significantly different from zero. Lawful = support for lawful environmental action; Illegal = support for illegal environmental action.

6. Summary and Discussion

6.1 Summary of hypothesis tests

Table 7 summarises the results. Eight of the nine direct-effect hypotheses were supported in full, with H1c only partially supported because social trust was positively, rather than negatively, associated with support for illegal actions. Among the moderation hypotheses, H4a (amplification by Purity) was rejected for every predictor except powerlessness; H4b (attenuation by Authority) was supported for six of seven moderated predictors, again with powerlessness as the exception; and H4c was rejected because Ingroup loyalty amplified rather than attenuated the few predictors it moderated.

Table 7. Summary of hypothesis tests

Hypothesis	Prediction	Result	Evaluation
H1a	Collective efficacy: + lawful; 0/− illegal	β = .207*** lawful; .034 n.s. illegal	Supported
H1b	Powerlessness: + illegal; 0/− lawful	β = .314*** illegal; −.002 n.s. lawful	Supported
H1c	Social trust: + lawful; − illegal	β = .149*** lawful; .074*** illegal	Partially supported
H2a	Anarchism: + illegal; 0 lawful	β = .221*** illegal; .018 n.s. lawful	Supported
H2b	Eco-socialism: + both	β = .121*** lawful; .096*** illegal	Supported
H2c	Political extremism: + both, stronger illegal	β = .068** lawful; .089*** illegal	Supported
H3a	Perceived inequality: + lawful > illegal	β = .194*** lawful; .002 n.s. illegal	Supported
H3b	Distributive justice: + both	β = .064** lawful; .099*** illegal	Supported
H3c	Intergenerational justice: + both	β = .141*** lawful; .092*** illegal	Supported
H4a	Purity/Sanctity amplifies predictors of support for illegal actions	Attenuation for 4 predictors, reversal for 1; amplification only for powerlessness	Rejected (except powerlessness)
H4b	Authority attenuates predictors of support for illegal actions	Attenuation for 5 predictors, reversal for 1; amplification for powerlessness	Largely supported
H4c	Ingroup loyalty attenuates predictors of both outcomes	Amplification/reversal for 3 lawful and 1 illegal predictors; no attenuation	Rejected

Note. ***p < .001, **p < .01. Standardised coefficients are from the Step 4 models in Table 5; moderation evaluations are based on Table 6 and Appendix Tables A1–A2.

6.2 Two outcomes, two motivational structures

Despite their correlation, the two forms of support rely on different motivational structures. Efficacy, community trust, and a state-directed sense of grievance were associated with support for lawful actions, powerlessness and anarchism with support for illegal actions, system-critical ideology far outweighing injustice as an explanatory source. This replicates the efficacy route of Tausch et al. (2011) and the argument of Becker and Tausch (2015) that the perceived availability of legitimate channels helps distinguish tactical preferences, here in a general-population sample from an East Asian democracy with state-led climate policy. Two refinements follow. Not all system critique is alike: rejecting the state was associated with support for illegal actions, rejecting capitalism with support for both forms. And grievance theory (Klandermans, 1997; Smith et al., 2012) leaves open the form of action a grievance mobilises; the results specify that a grievance naming an institution as the remedy mobilises engagement with that institution, whereas a diffuse grievance can spill into extra-legal forms.

6.3 Locating the threshold: moralisation plus powerlessness

The moral-amplification thesis was not supported as a general proposition: Purity/Sanctity, the foundation that sacralises nature, attenuated or reversed the effects of grievance and ideology on support for illegal action much as Authority did. The two were highly correlated (r = .613), and in the Korean context sanctified concern for nature appears embedded in, rather than opposed to, deference towards the state as guardian of the environment. This qualifies the assumption, drawn largely from Western samples, that

purity-based environmental concern constitutes an independent moral lever (Feinberg & Willer, 2013; Rottman et al., 2015): where the state has led both development and environmental regulation, moralising nature and moralising compliance may be closely intertwined.

The threshold at which moralisation converts into support for extreme action is located in its conjunction with powerlessness. Under both Purity/Sanctity and Authority, the powerlessness slope for support for illegal action increased from approximately 0.25 to approximately 0.33—the only amplification observed for either foundation—while the grievance and ideology slopes diminished towards zero. The logic is that of a closed channel. A moralised citizen is obliged to act, and the obligation is non-negotiable (Tetlock, 2003); a citizen high in Authority, or in a Purity/Sanctity orientation entangled with it, is also obliged to act through legitimate means. As long as action appears capable of making a difference, the two obligations coexist and grievance is channelled into lawful engagement; once one's own action appears futile, the duty to act remains while the lawful channel loses credibility, leaving greater scope for extra-legal means, consistent with the ascent described by Moghaddam (2005) and Kruglanski et al. (2014). Climate moralisation is therefore double-edged in a specific sense: it accompanies more lawful engagement among those who perceive action as effective and stronger support for illegal action among those who feel powerless. The pool of potential supporters of illegal action is not the most moralised citizens but those who have concluded that conventional action is ineffective—reframing the activist's dilemma (Feinberg et al., 2020) as a question of whether lawful channels are seen to deliver.

6.4 The competing moralisation of national interest and theoretical contributions

Ingroup loyalty, which moralises a value competing with climate action, moderated few relationships but strengthened every association it moderated. Among respondents high in loyalty, eco-socialism, powerlessness, and anarchism were associated with greater support for lawful action, plausibly because lawful environmental action provides a low-cost outlet for discontent that does not threaten their loyalty; intergenerational justice was associated with greater support for illegal action, echoing the sacrificial logic of the loyalty foundation (Haidt, 2012). Both interpretations are tentative, given the small effects and that only four of the 36 Ingroup loyalty interactions were significant.

The three contributions set out in the introduction are supported by these results, which also carry an implication that neither the moral-conviction nor the collective-action tradition anticipates: because the binding foundations can both channel and amplify, the intuition that moral framing is either safe or dangerous is incorrect. Moral framing appears associated with more lawful engagement among efficacious respondents and greater support for illegal action among powerless respondents, making the balance a property of the audience rather than of the message. This turns the amplification–channelling dispute into a specifiable interaction and gives the typology of moderation logics predictive content: which motives a

given foundation will reinforce, neutralise, or reverse for a given audience. The 'purity lever' of Western moral-reframing research (Feinberg & Willer, 2019) thus appears, in a state-led environmental regime, to operate in close conjunction with institutional trust rather than independently of it.

7. Implications and Conclusion

Interventions that make individual and collective contributions visible and consequential, and that demonstrate institutional responsiveness to inequality in climate impacts, may strengthen support for lawful action; by reducing powerlessness, they also weaken the one route to support for illegal actions that moralisation amplifies. Moral messaging that sacralises nature or invokes civic duty is not, on this evidence, a radicalising force in itself; its risk lies among populations, such as the young respondents here, who combine high powerlessness with support for extra-legal action and for whom moral appeals without evidence of efficacy could reinforce the conjunction identified above. The age gradient in radical sympathy should not be read as generational ideology: younger respondents reported greater powerlessness and support for illegal actions but lower Purity/Sanctity and Authority, so retaining their engagement in lawful forms requires a credible belief that participation makes a difference. The Constitutional Court's ruling in favour of youth plaintiffs is, in this context, an efficacy signal whose effect on young Koreans' tactical preferences is worth tracking.

Because the design is cross-sectional, the moderation effects describe conditional associations rather than causal contingencies, and the language of channels and thresholds remains theoretical; panel designs measuring moral foundations, efficacy, and action support over time would allow the implied sequence to be tested, and behavioural or event-based measures are needed since the outcomes are self-reported support and willingness rather than participation. Fifty-four interaction terms were tested without an omnibus block test; although the observed count far exceeds chance and 11 terms reached $p < .001$, terms near the .05 boundary—notably perceived inequality × Purity/Sanctity for support for lawful actions ($p = .049$) and anarchism × Ingroup loyalty ($p = .045$)—should be treated as provisional until replicated, and all interaction effects are small in variance terms. Four scales had reliabilities below .70, the Care and Fairness foundations were not measured, and common method variance cannot be excluded (Podsakoff et al., 2003). Future research should pursue longitudinal tests of the moralisation–powerlessness conjunction, behavioural outcome measures, preregistered replications using full moral-foundations batteries, and cross-national comparisons of whether the fusion of Purity/Sanctity and Authority characterises state-led environmental regimes generally.

Climate moralisation has a double edge, and its two edges affect different people. Where citizens believe action makes a difference, sacralising nature and moralising institutional compliance channel grievance and

ideology towards lawful environmental action and away from illegal means; where citizens have concluded their own action is futile, the same foundations accompany a stronger pull towards extra-legal action. What turns moralisation extreme is thus not a level of moral conviction but a conjunction: moral obligation without perceived efficacy. Governing that threshold means keeping lawful channels credibly open to those most convinced that the cause is sacred.

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