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Inhibiting or Contributing? How Global Liberal Forces Impact Climate Change Scepticism

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Inhibiting or Contributing?

How Global Liberal Forces Impact Climate Change Scepticism

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ABSTRACT

A significant portion of the global population are skeptical about climate change. Yet, the determinants and deterrents of climate skepticism at a global scale have not been sufficiently examined. Utilising data spanning 37 countries from 2000 to 2020, we assess the impact of nations' embeddedness within global liberal frameworks on climate scepticism, generally and in the context of resistance against liberal ideals. Our findings, derived from multilevel modelling, indicate that increased embeddedness is linked with reduced climate scepticism; however, when global liberal forces encounter anti-liberal undercurrents within nation-states, the impact of liberal world society on tempering scepticism varies, mitigating scepticism at the national level, particularly within authoritarian regimes, but not at the individual level, especially among right-wing individuals. Paradoxically, the liberal world society appears to heighten polarisation of individual worldviews on climate change. Our analytical framework illuminates the contradictory role of the liberal world society, which simultaneously exacerbates and inhibits anti-liberal attitudes.

Key words: *Climate change scepticism; environment(alism); world society theory; cultural dissonance; anti-liberalism; populism; polarisation; IS-SP*

1 INTRODUCTION

Since the 1970s, a global environmental regime, legitimated by scientific theories and supported by a myriad of international treaties and organisations, has emerged and rapidly expanded

(Hironaka 2014). Indeed, nearly every nation-state today possesses some form of domestic framework devoted to environmental protection and is a party to multilateral environmental negotiations. For instance, the 2015 Paris Agreement, a legally binding international treaty on climate change, was almost universally adopted, with 195 signatories as of 2023.¹ Public and educational campaigns since the 1980s have additionally raised concern, awareness, and knowledge about environmental change and its harmful effects (Bromley et al. 2011). Yet, despite longstanding pro-environmentalism in the liberal world order, by the late-2000s, climate change and environmental degradation became a battleground for local, national, and global forces as growing public doubt about environmental trends became apparent (Capstick et al. 2015). Today, sizeable proportions of citizens around the world exhibit scepticism towards scientific claims of climate change, a top environmental threat (Zhou 2014).

Environmental and climate scepticism forms part of a broader landscape of populist contestations of previously established global liberal norms and frameworks (Cole et al. 2023; Jepperson/Meyer 2021). Widely depicted as “globalisation backlash”, these contestations have surged worldwide since the 2000s. Consequently, a significant body of recent literature examines how economic instability and political cleavages triggered by globalisation contribute to climate scepticism (Buzogány/

¹ The United States, under Donald Trump's presidency, withdrew from the agreement in 2020 but rejoined in 2021.

Mohamad-Klotzbach 2021; Meyer 2022). While these studies emphasise the global factors enabling climate scepticism, their potential to counteract such attitudes remains unexplored. World society research notably has demonstrated that linkages with global cultural frameworks foster liberally grounded environmental values (Frank et al. 2000; Hironaka 2014). However, few, if any, investigate whether these linkages inhibit *anti-liberal* populist sentiments. Thus, we know very little about the extent to which liberal global forces mitigate climate scepticism, particularly amidst nascent illiberalism.

Using three waves of data on 37 countries from the International Social Survey Program (ISSP) conducted between 2000 and 2020, we employ multilevel modelling to evaluate the impact of nations' embeddedness within global liberal frameworks on climate scepticism – both generally and amid anti-liberal pushback. Controlling for various political, economic, and socio-demographic characteristics, we find that global liberal embeddedness is linked to reduced scepticism. Yet when liberal and anti-liberal forces interact, a situation we refer to as “cultural dissonance”, the ability of liberalism to counteract illiberalism varies by the level at which dissonance occurs. At the national level, embeddedness is associated with lower scepticism in authoritarian regimes. However, on an individual level, among right-wing respondents, scepticism persists regardless of embeddedness. Thus, although global liberal frameworks remain a stalwart against rising anti-liberalism, they are not impervious. In developing cultural dissonance as an analytical angle, this paper pushes existing research forward by introducing a new framework for studying individual contestations of liberal narratives not only in relation to the environment and climate change but also the broader liberal agenda and its numerous offshoots. Results provide insights about which factors aggravate or reduce the mounting tension between liberal and anti-liberal forces and under

which conditions, in turn, shedding new light on these factors best fosters widespread support for pro-environment and climate change narratives.

2 EXPLAINING CLIMATE SCEPTICISM

We understand climate scepticism as suspicion towards scientific claims that validate the authenticity, causation, and consequences of climate change as an environmental threat (see Capstick/Pidgeon 2014).² Globally, although it has mostly levelled off since 2010 and, in some places, slightly declined, climate scepticism remains a prominent stance (Capstick et al. 2015). Extrapolating from ISSP cross-national surveys, Figure 1 indicates that, on average, almost one-third (30%) of respondents agree that “many claims about environmental threats are exaggerated”, with scepticism rising slightly between 2000 and 2010, then declining in 2020. Still, national differences remain (Figure 2) – with the mean proportion of respondents expressing climate scepticism in 2020 ranging from approximately 0.12 in Japan to over 0.53 in the Philippines. Nevertheless, climate scepticism remains globally ubiquitous, appearing even within conventionally liberal Western nations such as the United States, Australia, and France at surprisingly high values (approximately 0.38).

What explains climate scepticism? Current literature identifies a myriad of micro-level factors. For example, Wouter Poortinga, Lorraine Whitmarsh, Linda Steg, Gisela Böhm, and Stephen Fisher (2019) find that older, male, less educated,

² In the literature, environmental and climate scepticism is variedly conceptualized (denial, uncertainty) and operationalized (attribution, trend, impact) (Poortinga et al. 2011); however, the common concern is waning public confidence in claims about the gravity of global warming and its consequences for environmental degradation.

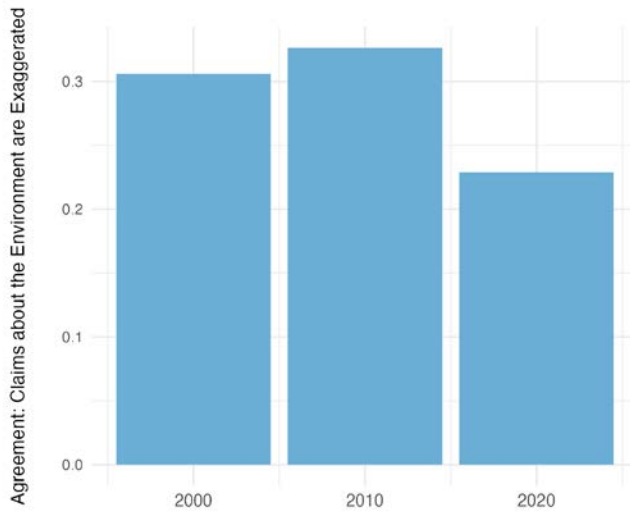
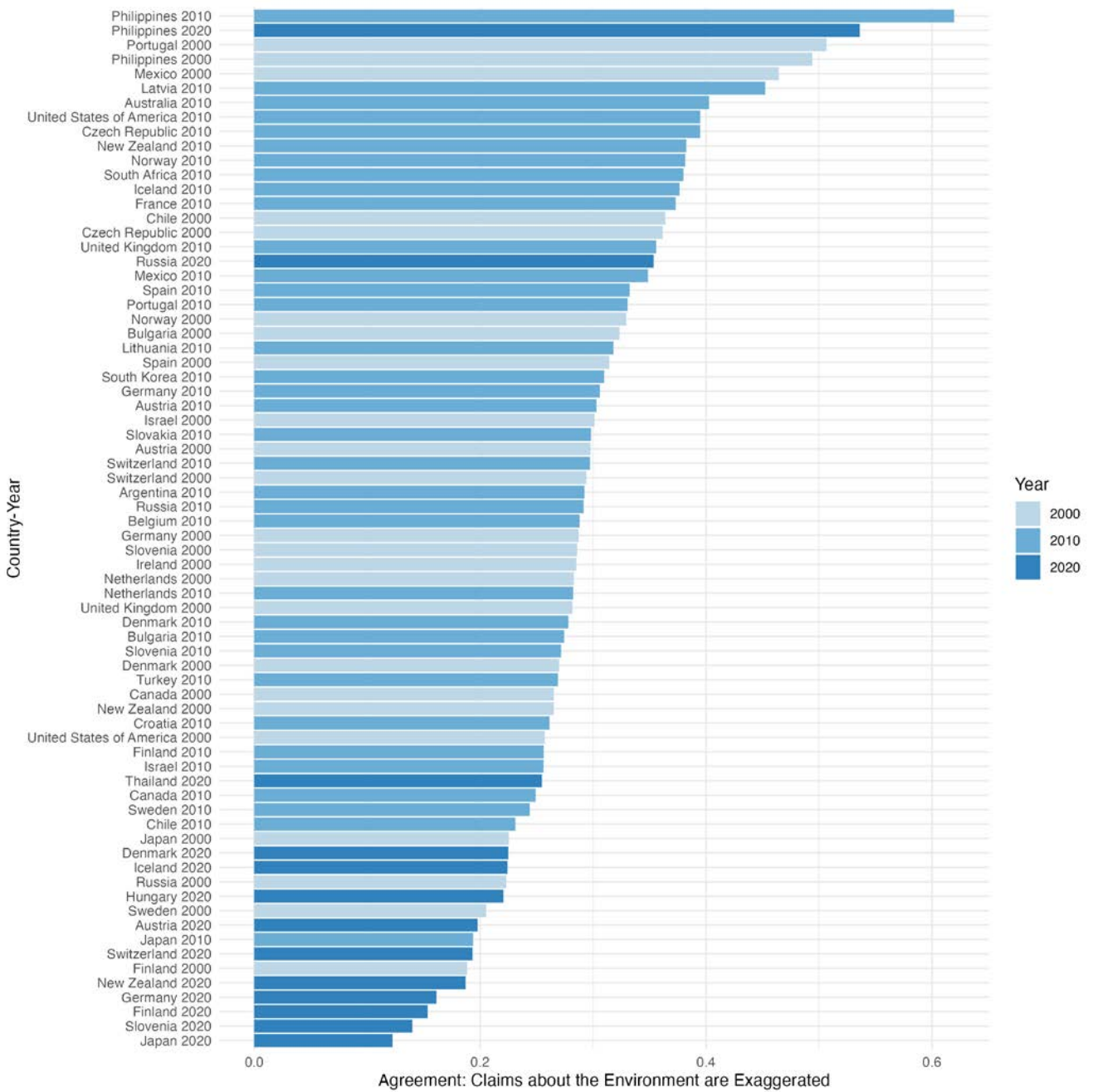


Figure 1. Average climate scepticism by year, ISSP

Figure 2 (below). Climate scepticism by country-year



and politically conservative individuals are more likely to question climate change. Other studies corroborate these findings (McCright/Dunlap 2011; Tranter/Booth 2015; Zhou 2014). Lower socioeconomic status and rural residence are also linked to greater scepticism (Lübke 2022; Poortinga et al. 2011), as is religious affiliation (Morrison et al. 2015) and, less consistently, religiosity (Haltinner/Sarathchandra 2022). In psychology, scholars attribute increased scepticism to individualistic traits (Kahan et al. 2011; Wang/Kim 2018), confirmation bias (Whitmarsh 2011), and having traditional, as opposed to self-transcendent, universalistic values (Poortinga et al. 2011). Together, these findings offer a solid foundation for understanding the micro-level determinants of climate change attitudes.

However, as Figure 2 suggests, climate scepticism is a global phenomenon. Thus, we expect that broader contextual factors, global in scope, are also at play. Recent studies begin to acknowledge this by theorising about climate scepticism in the context of broader global economic and political developments. They argue that climate scepticism is a symptom of a broader, macro-level backlash against economic (Rodrik 2011) and societal globalisation (Gidron/Hall 2019; McCright et al. 2016; Norris/Inglehart 2019) among those who have been “left behind” by these processes (Lockwood 2018). Encouraged and amplified by right-wing populist rhetoric, this, in turn, fosters hostility toward the mainstream “cosmopolitan elite agenda” – of which climate change mitigation is a key component (Buzogány/Mohamad-Klotzbach 2021; Forchtner 2019).³ People who subscribe to these narratives consequently become distrustful of climate science and policies while questioning

the credibility of climate scientists and environmentalists, resulting in climate scepticism.

Empirical evidence supports this explanation. For example, from a survey of twenty European countries, Christiane Lübke (2022) finds that individuals who feel insecure about their economic future or live in an economically precarious region are more likely to deny climate change. In the US, both national (Meyer 2022) and local (Benegal 2018) unemployment is linked to reduced belief in climate change, particularly after global economic downturns or shocks such as the Great Recession. Individuals endorsing right-wing populist ideologies (Huber et al. 2021; Kulin et al. 2021) and expressing low trust in the government, society, and science (Tranter/Booth 2015; Zhou 2014) are also more likely to be climate sceptics.

Nevertheless, this exploration of how the backlash against globalisation contributes to anti-climate change stances offers only a partial snapshot of how global forces influence individual climate attitudes. In addition to the effects of global *economic* forces, we suspect that global *cultural* forces contribute to individual environmental and climate orientations. In fact, a long history of sociological scholarship – often referred to as world society theory – validates this premise.

3 WORLD SOCIETY, GLOBAL LIBERAL CULTURE, AND ITS EFFECT ON CLIMATE SCEPTICISM

Broadly speaking, world society scholarship theorises and empirically documents how global culture spreads (Schofer et al. 2012). Over the last several decades, countless studies have demonstrated not only the existence of a broader (conventionally liberal) world culture since the end of WWII but also its widespread diffusion. This process, world society scholars argue, is particularly

³ Studies analysing populist party discourse within Europe find that right-wing populist parties tend to oppose climate-friendly policies, utilise anti-elite rhetoric to deny anthropogenic climate change, and deny or express doubt about environmental risks (Huber et al. 2021; Kulin et al. 2021).

likely among countries exhibiting high *embeddedness*, or linkages, to a broad contingent of global actors and institutions (e.g. INGOs, IGOs, and international treaties), which facilitate the flow of global culture to national contexts. Global embeddedness has been historically attributed to the integration of liberal norms into nations' policies, practices, and opinions across numerous subject areas such as women's rights, human rights, science, education, and environmentalism (Boyle et al. 2002; Drori et al. 2003; Hironaka 2014; Kim 2020a; Meyer et al. 1992; Ramirez et al. 1997; Schofer 2004; Schofer/Meyer 2005).

Regarding the environment, integration into world society, and the liberal cultural framework it supports, is associated with more environmentally friendly policies (Longhofer et al. 2016) as well as the proliferation of national parks, environmental impact assessment laws, environmental ministries, and domestic environmental associations (Frank et al. 2000; Hironaka 2002; Longhofer/Schofer 2010). Similar effects have been found in relation to practices. Whether measured as a reduction in carbon emissions, deforestation, or chemical fertiliser and pesticide use, studies repeatedly illustrate liberal world society's capacity for improving environmental outcomes (Jorgenson 2009; Jorgenson et al. 2011; Longhofer/Jorgenson 2017; Schofer/Hironaka 2005; Shorette 2012). Concerning individual attitudes, world society integration is also linked to increased environmental concern (Givens/Jorgenson 2013) and action (e.g. recycling and protesting) (Hadler/Haller 2011; Hadler 2016).

Thus, considering world society's ability to diffuse liberal pro-environmental norms and attitudes, it is reasonable to infer that linkages to global actors promoting pro-science, pro-environment, and pro-climate worldviews would not only foster environmentalism but would also make it more difficult for narratives opposing climate science

and environmentalism to take root. We hypothesise that:

H1: Overall, people living in nations highly embedded within world society will exhibit lower climate scepticism.

However, world society and its culture are not inherently liberal. Indeed, the liberal model is being increasingly challenged by emergent anti-liberal international organisations and increased funding restrictions on NGOs – the long-hypothesised carriers of liberal culture (Bromley et al. 2019; Cupać/Ebetürk 2022; Glasius et al. 2020). Attacks on higher education and science (Bromley et al. 2023; Schofer et al. 2022; Zapp 2022), reduced women's participation in public life (Lerch et al. 2021), LB-GT+ repression (Hadler/Symons 2018; Velasco 2020), and the deterioration of democracy (Diamond 2015) further point to the decline of the liberal international order (Bromley et al. 2019; Ikenberry 2018; Lake et al. 2021).

In light of these trends, although world society research shows how integration into the liberal world order expedites pro-environmentalism, its ability to hinder climate scepticism amidst anti-liberal pushback remains unclear. Does embeddedness within liberal world society insulate individuals against the rising tide of illiberalism? Or does anti-liberal backlash override its effects?

4 CULTURAL DISSONANCE AS PATHWAYS TO CLIMATE SCEPTICISM

The waning dominance of the liberal order in the face of anti-liberal contestations is now widely acknowledged. However, the ways in which these concurrent yet conflicting cultural forces *clash* or *interact* with one another are underexplored. We expand upon existing research by focusing on the mounting tension between liberal and anti-liberal forces – a phenomenon we refer

to as *cultural dissonance* – and the outcomes they produce. By examining the extent to which liberal global culture withstands the effects of anti-liberal ideologies and cultural orientations within nation-states, both at the country and individual levels, we shed new light on how, and under what circumstances, populist contestations manifesting as climate scepticism weaken.

4.1 COUNTRY: DISSONANCE IN AUTHORITARIAN REGIMES

One way cultural dissonance manifests is at the *country* level. Unlike democracy, which constitutes the core of the liberal international order and world society (Ikenberry 2018; Kim 2020b), authoritarianism directly contradicts liberal norms – prioritising authority over freedom and individualism, status quo and tradition over universalism and progress (Cooley 2015). Since the mid-2000s, authoritarian regimes and their related norms have gained traction and legitimacy (Diamond 2015), producing significant cultural tensions, or dissonance, between the liberal and illiberal models across several issues, including the environment and climate change.

Whereas democracy⁴ is associated with greater environmentalism (Inglehart 1990; Marquart-Pyatt 2012), right-wing, authoritarian politics are linked to anti-environmentalism (Gemenis et al. 2012) and climate scepticism (Forchtner 2019). In addition to using climate change denial rhetoric – both as a political tool and to signal an anti-liberal stance (Zehndorfer 2022) – authoritarian leaders are also more likely to demonise, delegitimise, or otherwise silence pro-climate change scientists and narratives who threaten their authority (Žuk/Szulecki 2020). For example, Veli-Pekka Tynkkynen and Nina Tynkkynen (2018) show the

link between the expansion of authoritarianism in Russia and the regime’s increased use of public climate denial discourse over the last decade as a means of upholding the status quo.

Given these trends, we expect the impact of liberal world society on climate scepticism to vary by regime type. Indeed, prior studies show that a nation’s “ideological profile” – roughly designated as “Left” (democracy) or “Right” (authoritarian) – determines citizens’ openness to liberal narratives (Cole 2023; Kim/Fallon 2023). As liberal global linkages increase, so too do the number of passages through which liberal narratives can more easily flow. When this occurs, cultural dissonance in authoritarian regimes will be relatively high; in democracies, dissonance will be relatively low. It is this level of dissonance, we argue, which determines the impact of world society on individual attitudes.

Specifically, within authoritarian regimes, the increased connections to liberal world society should uniquely expose and acclimatise citizens to alternative and possibly otherwise censored liberal perspectives concerning climate change. Simultaneously, these connections should offer the essential resources, information, and support that empower citizens to actively participate and engage in critical dialogue about environmental concerns (Finnemore/Sikkink 1998; Keck/Sikkink 1999), ultimately leading to a reduction in climate scepticism. On the other hand, because democracies are linked to greater endorsement of environmental norms and agreements (Neumayer 2002) and, by design, support open, public dialogue through which civil society organisations can increase public awareness about and belief in climate change (Povitkina 2018), individuals in these spaces are already socialised to liberal narratives – often regardless of liberal world society. Thus, more world society linkages may do little to additionally boost already abundant pro-climate

⁴ Although different conceptualisations and typologies of democracy exist (e.g. electoral, liberal, participatory), this issue is beyond the scope of our paper. Thus, we focus here on overall democracy.

change positions in democracies where cultural dissonance is low.

In sum, when dissonance is high, the ability of liberal global forces to *counteract* national-level illiberal cultural forces and therefore *drown out* climate sceptic narratives will be unmatched. When such dissonance is low, liberal global pressures will change very little, as liberal cultural norms are already pervasive. We therefore hypothesise that:

H2a: World society embeddedness is linked to lower climate scepticism within authoritarian regimes.

H2b: World society embeddedness will have no impact on climate scepticism within democratic regimes.

4.2 INDIVIDUAL: DISSONANCE AMONG RIGHT-WINGERS

We also expect that cultural dissonance at the *individual* level will shape attitudes. Recent studies show how the expansion and intensification of liberal world society can empower local opposition, in turn, triggering polarisation between liberal and anti-liberal world views on issues such as climate, vaccination, and science (Cole et al. 2023; Koopmans/Zürn 2019; Zapp 2022). According to world society scholarship, this polarisation can be partially explained by the triumph of the “hyper-empowerment” of individuals through the neo-liberal transformations of the global cultural frameworks and its diffusion (Cole et al. 2023; Lerch et al. 2016; Lerch et al. 2022). Manifesting within individuals who regard themselves as agentic and capable – and increasingly self-assured and overconfident of their own views and beliefs – this hyper-empowerment becomes “a disruptive force, even to the point of challenging the liberal order from within”, as it grounds mistrust and

dismissal of expert and scientific knowledge and broadly liberal institutions (Cole et al. 2023: 24).

Psychological studies of this phenomenon draw similar conclusions, finding that overconfident individuals who “overestimate their knowledge and ability” and are easily persuaded by unsubstantiated claims (e.g. climate change denial) are more likely to express populist sentiments, such as climate scepticism (Rico et al. 2020: 805; van Prooijen et al. 2022). This phenomenon may be particularly rife amidst a changing global order. As illiberal cultural models gain traction and spread, so too do their associated norms and narratives, leading to a global resurgence of the traditional values agenda (Cooley 2015) and illiberal, right-wing political ideologies (Doval/Souroujon 2021; Laruelle 2022) – both of which should reinforce distrust of liberal actors and their agenda.

In such a context, we expect cultural dissonance at the individual level to sustain anti-climate-change positions. Specifically, we anticipate that individuals with anti-liberal leanings will “dig their heels in” when exposed to liberal world society frameworks. When inundated with pressures from what they perceive as “the elite establishment”, these individuals will cling to preexisting beliefs, reinforcing and rationalising their perspective. This expectation comports with existing studies, which find that individuals expressing right-wing populist ideologies (Huber et al. 2021; Kulin et al. 2021) and low trust in the government, society, and science (Tranter/Booth 2015; Zhou 2014) are also more likely to be climate sceptics. On the other hand, we expect liberal and moderate individuals to be more amenable to the influence of global liberal frameworks. For liberals, liberal world society reinforces already existing beliefs about how things “ought” to be. Because moderates lack a compulsive anti-liberal bias, they are also less likely to feel threatened by rejections of climate scepticism and, as research shows, are most receptive to adjusting

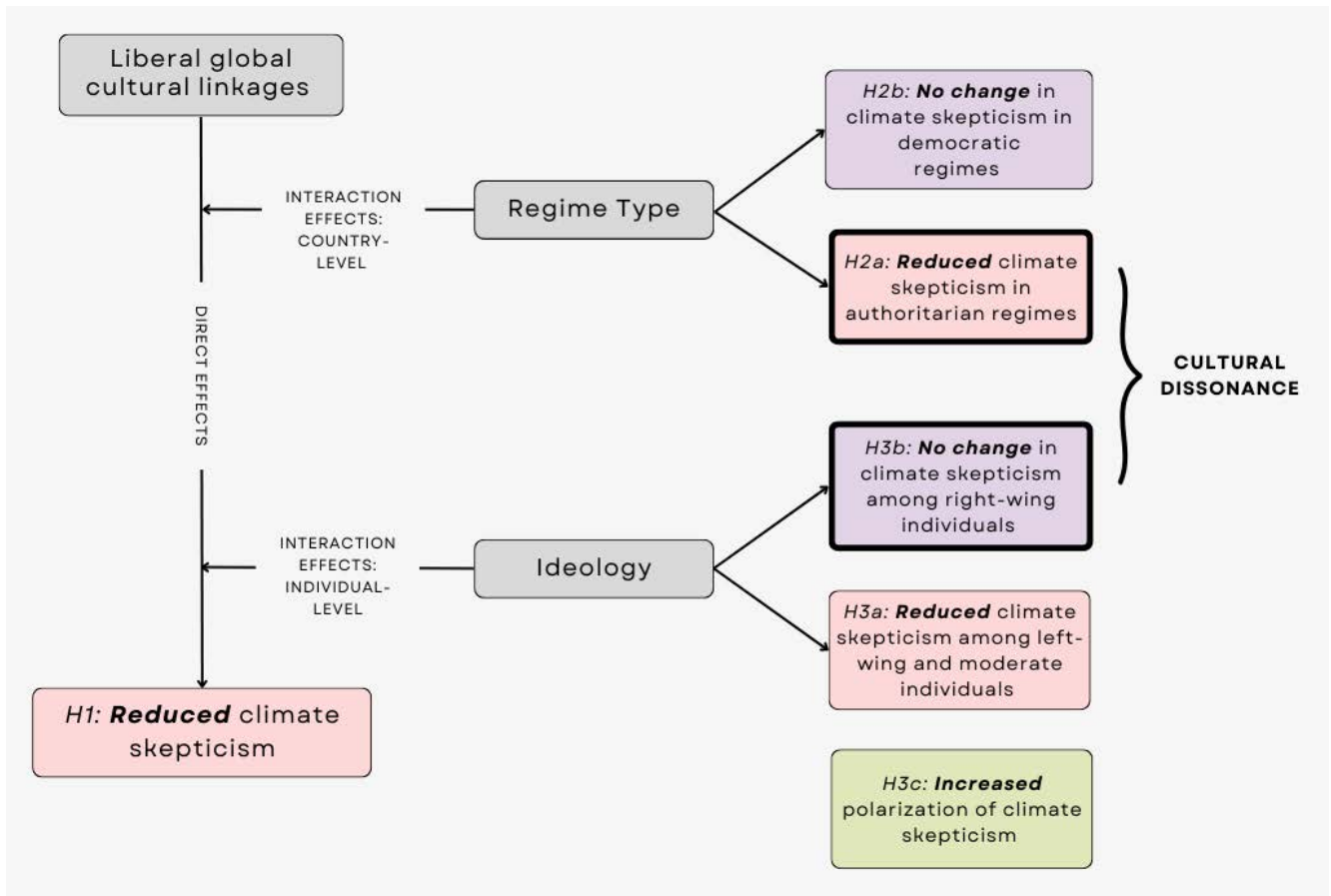


Figure 3. Proposed hypotheses

their beliefs following a factual correction (Wood/Porter 2019). We, therefore, expect moderates, like liberals, to exhibit lower climate scepticism as liberal embeddedness increases.

This tendency to welcome new information – often uncritically – when it is consistent with one’s worldview and, conversely, to react in a hostile, defensive, and dismissive manner when it undercuts that worldview has been widely documented in psychological studies examining biased reactions to political evidence across several issue areas (Nyhan/Reifler 2010; Taber/Lodge 2006), including climate change (Whitmarsh 2011). Thus, we hypothesise that embeddedness reinforces and further polarises preexisting worldviews split along ideological lines. Specifically, we anticipate that:

H3a: World society embeddedness will have no impact on climate scepticism among right-wing individuals.

H3b: Greater world society embeddedness is linked to lower climate scepticism among non-right-wing individuals (i.e. liberals and moderates).

H3c: As world society embeddedness increases, the average difference in climate scepticism between right- and non-right-wing individuals will increase.

Figure 3 depicts our hypothesised process of attitude formation.

5 DATA AND METHODS

To analyse our hypotheses, we draw upon the ISSP Environment survey module, which measures individual environmental and climate scepticism across nations in 2000, 2010, and 2020 (ISSP 2003, 2019, 2022).⁵ We analyse 65'333 individuals from 37 countries and 67 country-years (see Appendix I). Unlike other international surveys measuring environmental beliefs, the ISSP Environment module specifically evaluates scepticism, not just pro-environmentalism. By using the ISSP, our study benefits from a larger and more diverse sample of nations and a longer time span than the scope of existing cross-national studies (Hadler 2016; Knight/Messer 2012; Lübke 2022; Zhou 2014). This extensive coverage aligns with the emergence of climate scepticism in both public and academic discussions (Gelbspan 1997; McCright/Dunlap 2000), thus making it ideal for our study.

5.1 ANALYTIC APPROACH

We use multilevel mixed-effects linear regression to analyse this data, simultaneously evaluating national and individual-level predictors while accounting for clustering (non-independence) between observations (Snijders/Bosker 2012). Because clustering occurs across both nations and time, we estimate a three-level model whereby individuals (L1) are clustered within country-years (L2), which are, in turn, clustered within nations (L3). Year dummies control for independent time effects and random intercepts are included at each level, thus allowing us to estimate the effects of liberal world society across time. Models with cross-level interactions include random slopes to control for cross-country differences (Heisig/Schaeffer 2018). Sampling weights account for selection probability, and robust standard errors account for potential heteroskedasticity.

⁵ The survey's first iteration (1993) does not have this measure.

Appendices II and III present the correlation matrix and descriptive statistics for all variables.

5.2 DEPENDENT VARIABLE

To measure individual climate scepticism, we use one question from the ISSP measuring agreement with the statement: "Many of the claims about environmental threats are exaggerated", with responses ranging from 1 (strongly agree) to 5 (strongly disagree). Although this question does not refer to climate change specifically, it remains the best proxy for individual climate scepticism currently available for comparative cross-national, longitudinal analysis.⁶ By emphasising exaggeration, it also uniquely captures a crucial component of climate scepticism: disbelief in purported scientific findings. For ease of interpretation and consistency with our theoretical motivations, original responses are reverse coded, wherein higher values of the dependent variable indicate greater climate scepticism. Although this measure is technically ordinal, we relax our assumption of equally spaced categories, given that regression results are highly insensitive to spacing issues (Pasta 2009).

5.3 INDEPENDENT VARIABLE

Our main variable of interest is embeddedness in global liberal culture or liberal world society. In world society research, INGOs have long been regarded as the conventional carriers of the global liberal script. We argue that the singular focus on INGOs offers limited insight into the effects of global liberal culture on climate scepticism. World liberal influences are often highly diffuse and can penetrate through different channels, such as universities, the exchange of students, global

⁶ The 2020 ISSP environment module introduced a question more explicitly asking respondents their opinion about climate change and its potential causes, but the lack of data over the long-term period we focus on makes it impossible for us to evaluate this question.

management standards, the media, and many other vectors (Schofer/Hironaka 2005). Thus, we suggest an expanded understanding and operationalisation of “embeddedness” than the current literature offers (e.g. Zhou 2014).

We, therefore, use a composite measure comprised of five indicators from a variety of sources, which together capture nations’ broader integration into liberal world society to construct our primary independent variable, **Global Liberal Embeddedness**. First, universities play a crucial role in shaping a liberal world society and cultivating its citizens – as evident in their teaching content, organisation of knowledge, and broader functions (Frank/Meyer 2020). To capture the global liberal embeddedness of universities and, thus, their contribution to the dissemination of global liberal templates, we utilise a university density indicator, calculated by dividing the sum of top universities recognised by QS World University Rankings in each country by its university-aged population. Second, because international organisations and treaty bodies provide the linkages through which liberal global norms diffuse (Boli/Thomas 1999; Meyer et al. 1997), we include the following three indicators: the total number of INGO memberships, IGO memberships, and UN international human rights treaties⁷ to which nations are a party. Finally, as a supranational institution which monitors and enforces universal standards of professional behaviour, the International Organization for Standardization (ISO) further establishes and disseminates liberal culture and its principles among individuals residing in participating nations (Peña 2011). We, therefore, include total valid ISO-9001 certificates (quality management)⁸

7 We include those 18 identified by the UN High Commissioner. See <https://indicators.ohchr.org> for treaties.

8 ISO-9001 delineates the requirements to reach ISO standards and is one of the most widely used management tools today. Although we considered other standards, only ISO-9001 has sufficient data.

as an indicator of state adherence to global standardisation protocols.

We use factor analysis to construct this index. Our objective was to reduce the number of observed variables to a smaller set of unobserved factors that align with our theoretical framework. All variables positively contribute to the factor, and its corresponding Eigenvalue is above 1 for all years analysed (2.23 for 2000; 2.14 for 2010; 2.34 for 2020). The uniqueness values are 0.75 for 2000, 0.77 for 2010, and 0.76 for 2020. The factor loadings (see Appendix IV) effectively distinguish this factor from other alternatives; thus, no rotation was required. Based on these findings, we calculated three year-specific factors using maximum likelihood, which identifies the set of model parameters that maximise the probability of observing the data. This composite factor, therefore, provides a strong measure of global liberal embeddedness.

5.4 NATIONAL-LEVEL CONTROLS

We include several country-level controls associated with climate scepticism. Following Jennifer E. Givens and Andrew K. Jorgenson (2013), we use **Exports** of goods and services (% of GDP) to control for global economic integration. Considering the positive relationship between economic downturns and populist sentiments, including climate change denial (Lübke 2022), as well as the tendency for economic productivity to increase emissions and pollution (Jorgenson 2009), exports could increase or decrease climate scepticism. Next, Like Min Zhou (2014), we use the Environmental Protection Index (EPI) from the Yale Center for Environmental Law and Policy to control for **Environmental Condition**. As a proxy for environmental risk, this measure accounts for the tendency for people in nations with greater environmental problems to exhibit higher environmental

concern (Givens/Jorgenson 2011).⁹ **GDP per capita** (logged for skewness) additionally controls for the tendency for people in wealthier, advanced industrialised nations to support post-materialist attitudes, such as environmental protection (Inglehart 1990; Mostafa 2011). Finally, we reverse-code Freedom House's **Regime Score** (ranging from 1 [authoritarian] to 7 [democracy]) (Coppedge et al. 2021) to assess the link between regime type and climate scepticism.

5.5 INDIVIDUAL-LEVEL CONTROLS

Individually, we control for **Age** (in years), **Right-wing** political affiliation (Right = 1, Else = 0), and **Religion** (None (ref) = 1, Catholic = 2, Jewish = 3, Muslim = 4, Protestant = 5, Buddhist = 6, Orthodox = 7, Other = 8) to account for climate scepticism among older, conservative, and religious – particularly Christian – populations. Although we considered religiosity, we decided against it because it reduces the sample size. Nevertheless, effects substantively hold. **Unemployed** (Unemployed = 1, Employed = 0) controls for climate scepticism among economically unstable individuals. **Education** and being **Female** (Male (ref) = 0, Female = 1) control for the tendency for men and less educated individuals to exhibit climate scepticism (Clements 2012). We considered including individual class (Xiao/Dunlap 2007); however, this measure is only available in 2000 and is therefore excluded. We included **Age-Squared** for possible non-linearity.

5.6 INTERACTIONS

To account for cultural dissonance, we introduce two interaction terms, **Global Liberal Embeddedness * Regime Score** and **Global Liberal Embeddedness * Right-wing**, which evaluate the effect of liberal world society across different ideological

contexts at the country and individual levels, respectively. Together, these interactions test the capacity of liberal world society to withstand the contradictory effects of anti-liberal forces.

6 RESULTS

Table 1 presents the additive (Model 1) and interaction (Models 2 and 3) effects of our main predictor and controls on beliefs. The first row for each variable represents the regression coefficient; the second is the standard error.

6.1 MAIN EFFECTS

In Model 1, we find a positive and significant effect ($p < .05$) of liberal world society. People in places highly embedded in global liberal culture are less likely to endorse climate scepticism, thus supporting H1. Owing to the abstract nature of the embeddedness factor, a numerical interpretation of the coefficient is not particularly insightful. We, therefore, graph the predicted margins for embeddedness in Figure 4, with all other variables held at their means, to better contextualise these results. As depicted by the downward sloping line, as liberal embeddedness increases, individuals become less sceptical of climate change (an average score of 2.87 out of 5 for people in the least embedded nations vs 2.54 for most embedded). Although this effect is relatively small, world society integration accounts for nearly 10 per cent of the within-country variation in the model (as seen from the reduction of country-year error terms).

Not surprisingly, the coefficient for democracy yields similar positive results. Insignificant coefficients for environmental condition, exports, and GDP imply that when liberal cultural forces are accounted for, postmaterialist, global economic, and ecological risk arguments are insufficient for explaining climate scepticism. The insignificant effect of unemployment further supports this

⁹ Although the World Risk Index offers a more direct measure of climate-specific risk, data are unavailable for 2000, so we prioritize the EPI.

Table 1. Longitudinal multilevel analysis of cross-national climate scepticism

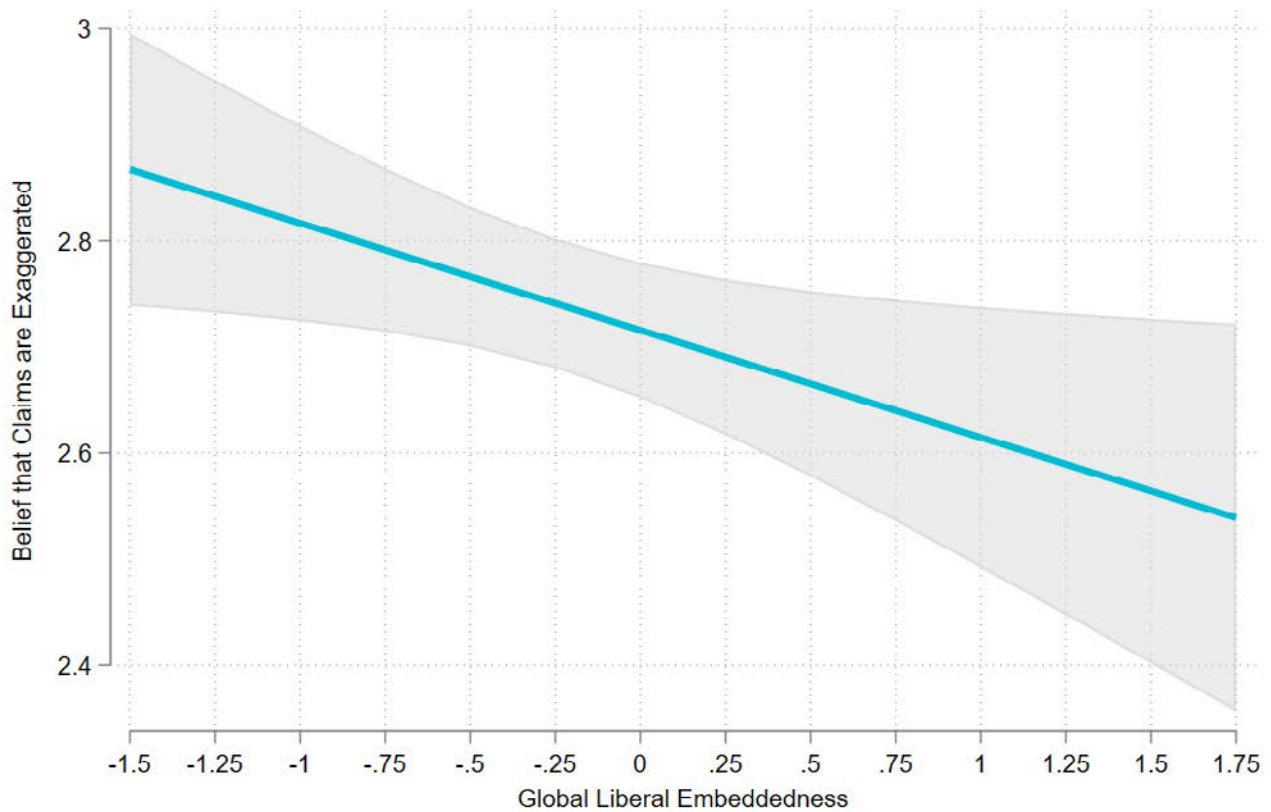
	Model 1	Model 2	Model 3
Global Liberal Embeddedness	-0.101*	-0.371**	-0.124**
	(0.045)	(0.120)	(0.044)
National-Level Controls			
Environmental Condition	-0.003	-0.004	-0.003
	(0.004)	(0.004)	(0.004)
Exports	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)
GDP per Capita (ln)	0.048	0.050	0.048
	(0.090)	(0.087)	(0.089)
Regime Score	-0.086***	-0.055	-0.082**
	(0.025)	(0.033)	(0.026)
Individual-Level Controls			
Right-wing	0.318***	0.318***	0.298***
	(0.045)	(0.045)	(0.043)
Unemployed	0.020	0.020	0.019
	(0.011)	(0.011)	(0.011)
Age	-0.005**	-0.005**	-0.005**
	(0.002)	(0.002)	(0.002)
Age-Squared	0.001***	0.001***	0.001***
	(0.001)	(0.001)	(0.001)
Female	-0.215***	-0.215***	-0.214***
	(0.021)	(0.021)	(0.022)
Education	-0.176***	-0.176***	-0.176***
	(0.020)	(0.020)	(0.020)
Religion (ref = none)			
Catholic	0.090**	0.090**	0.085**
	(0.031)	(0.031)	(0.031)

	Model 1	Model 2	Model 3
Jewish	-0.117 (0.126)	-0.117 (0.125)	-0.119 (0.123)
Muslim	0.132* (0.057)	0.132* (0.057)	0.138* (0.056)
Protestant	0.085* (0.033)	0.085* (0.033)	0.084* (0.033)
Buddhist	-0.079 (0.062)	-0.081 (0.062)	-0.075 (0.061)
Orthodox	0.061 (0.055)	0.062 (0.055)	0.062 (0.055)
Other	0.075 (0.040)	0.076 (0.040)	0.076 (0.040)
Interactions			
Global Liberal Embeddedness * Regime Score	-	0.043* (0.021)	-
Global Liberal Embeddedness * Right-wing	-	-	0.089* (0.042)
Constant	3.305*** (0.811)	3.099*** (0.720)	3.278*** (0.792)
Year Dummies	Yes	Yes	Yes
Observations	65'333	65'333	65'333
Countries	37	37	37
Country-years	67	67	67
Sd (Country-year)	0.017	0.018	0.018
Sd (Country)	0.033	0.029	0.032
Sd (Residual)	1.198	1.198	1.190
Sd (Right-wing)	-	-	0.041

Notes:

*** p<0.001, ** p<0.01, * p<0.05.

Figure 4. Predicted probabilities for global liberal embeddedness



claim. Results for remaining demographics corroborate previous findings whereby people who are conservative, male, older, and Christian are more likely to be climate sceptics. Together, these results illustrate the capacity of world society to temper anti-liberal, populist climate sceptic positions.

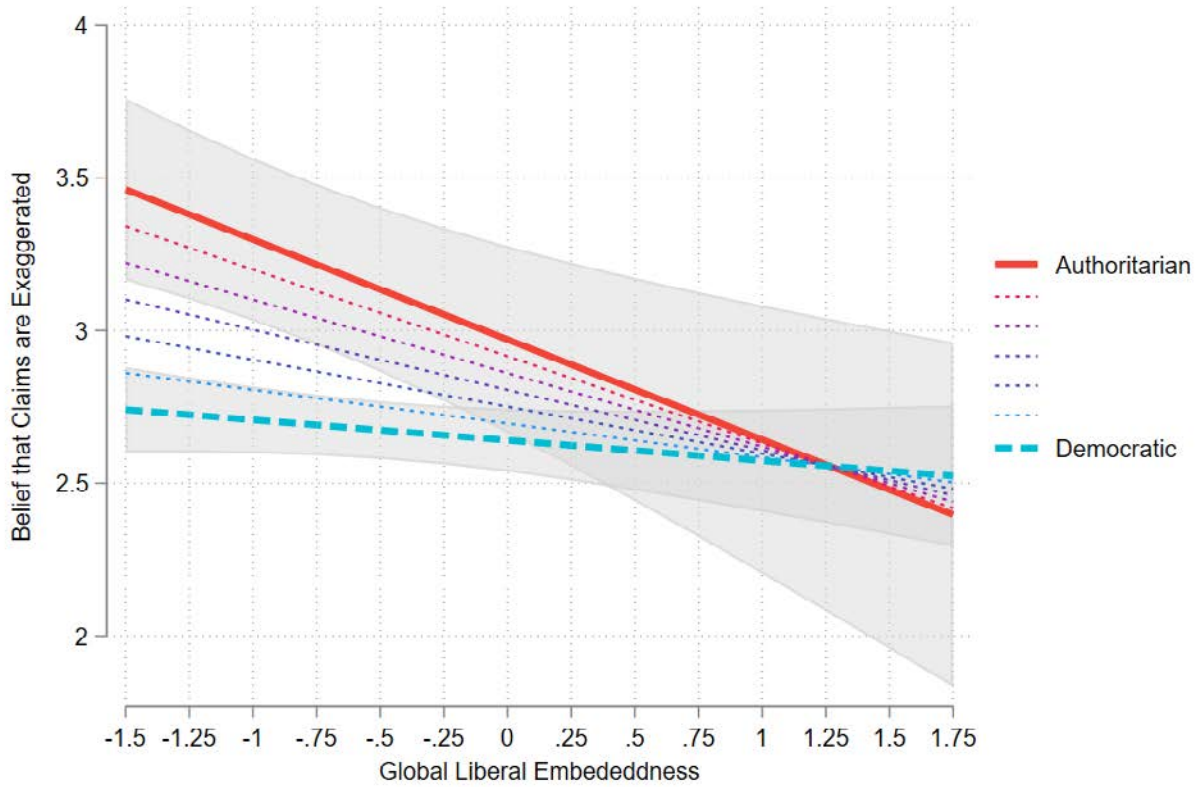
6.2 INTERACTION EFFECTS

Building on Model 1, Models 2 and 3 explore the effects of cultural dissonance at the country (Model 2) and individual (Model 3) levels. Beginning with Model 2, the coefficient for Global Liberal Embeddedness * Regime Score is positive and significant, suggesting that the impact of liberal world society on scepticism does vary by regime type. Figure 5 visualises these results. The thick, solid line indicates authoritarian regimes, and the thick dashed line indicates democracies. The dotted

lines between them represent regime scores between these two extremes.

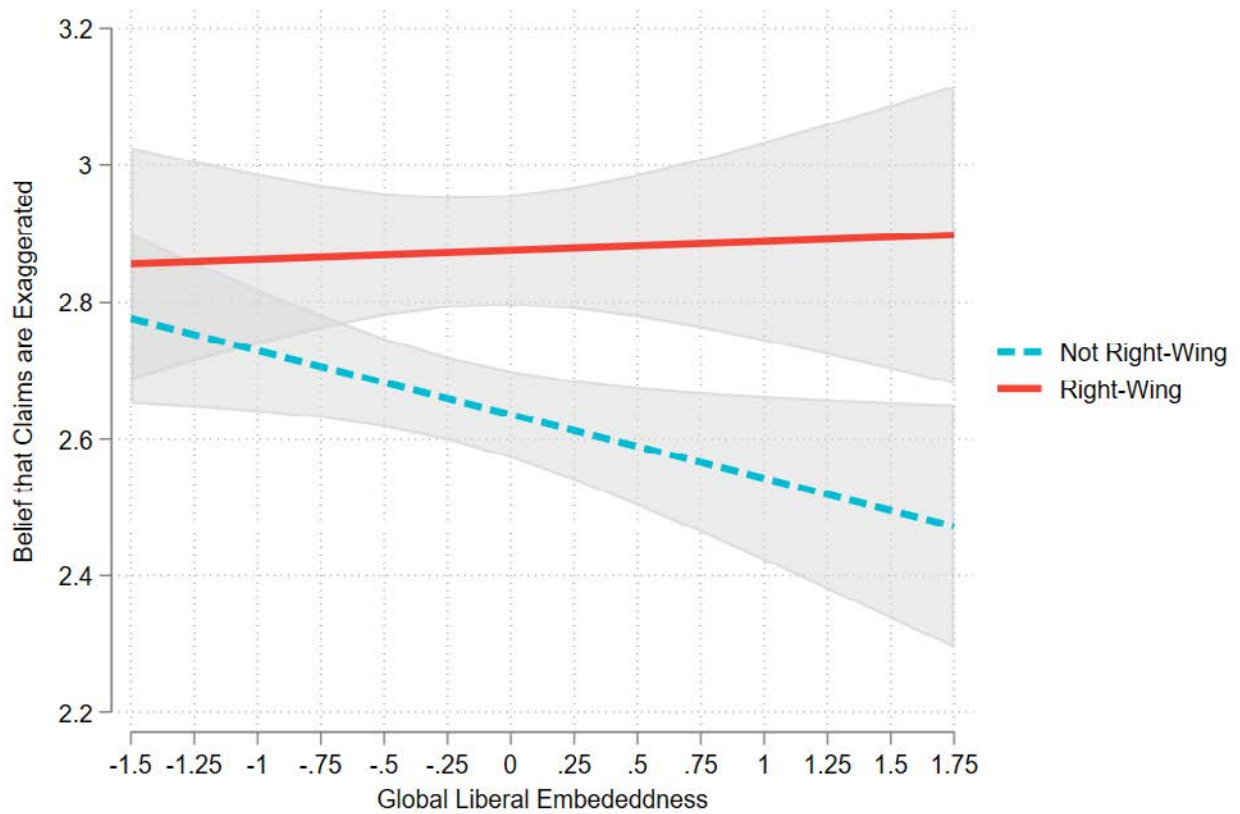
Compared to the slope of the authoritarian line, which steeply declines, the slope of the democracy line is much more level. In authoritarian regimes, as embeddedness increases, average climate scepticism significantly decreases ($p < .05$) from a score of 3.46 to 2.40 (a 1.06-unit change). These results, therefore, support H2a. In contrast, in democracies, average climate scepticism only shrinks from 2.74 to 2.52 as embeddedness increases – a much smaller difference (.22 units), which fails to reach significance ($p < .05$), as indicated by the plotted confidence intervals. We, therefore, also find support for H2b, whereby increased liberal embeddedness has a negligible impact on scepticism within democracies. Thus, world society is capable of, and particularly effective at, reducing climate scepticism amidst cultural dissonance at the national level, but has no

Figure 5. Predicted probabilities of climate scepticism by democracy level



Note: 95% confidence intervals plotted for authoritarian and democratic regimes.

Figure 6. Predicted probabilities of climate scepticism by ideology



Note: 95% confidence intervals plotted.

additional impact in places where liberal norms are already strongly institutionalised by national governments.

It is also worth noting that differences in democratic and authoritarian regimes are insignificant where embeddedness is above the observed international average in our data (0 or more; $p < .05$), as denoted by the overlapping confidence intervals. When global liberal forces are sufficiently strong, regime type matters rather little. However, when global liberal influences are absent, democracy becomes crucial for buffering scepticism. For instance, when embeddedness is lowest, the predicted level of scepticism in authoritarian regimes is 3.46 compared to 2.74 in democracies – a .72-unit difference. When embeddedness is highest, this difference becomes negligible, with an average scepticism of 2.40 in authoritarian regimes vs 2.52 in democracies (a .12-unit difference). Thus, when liberal world society linkages are pervasive, national-level cultural forces – whether liberal or illiberal – are irrelevant; the power of liberal global culture prevails even *regardless* of cultural dissonance. Yet without world society's overarching liberal influence, the political context is paramount.

Model 3 tests the interplay between Global Liberal Embeddedness and individual political leaning. Living in more liberally embedded countries renders individual ideology more consequential for climate scepticism. Specifically, the interaction between right-wing ideology and Global Liberal Embeddedness is positive and significant at $p < .05$, thus supporting H3a.

However, predicted effects suggest the relationship with embeddedness plays out differently for individual political leaning than for regime type. Figure 6 visualises these effects, plotting the association between embeddedness and scepticism among right-wing (solid line) vs left-wing and

moderate¹⁰ (dashed line) respondents. Compared to the slope of the solid line, which is relatively flat, the slope of the dashed line is steeper and negative. Consider the solid line for right-wing individuals, which inclines from 2.86 to 2.89 across the range of values for embeddedness – a paltry and statistically insignificant change ($p < .05$). Thus, world society has no significant impact on right-wing individuals who remain staunchly sceptical, lending support for H3a. On the other hand, the trend for the dashed line for non-right-wing individuals significantly decreases ($p < .05$) from 2.78 to 2.47, thus providing support for H3b, which anticipates that embeddedness in liberal world society will be particularly influential among non-right-wing respondents.

These claims are further reinforced by differences *between* right-wing and non-right-wing respondents, which become significant once embeddedness exceeds -1. Although, on average, right-wing respondents are more likely to be sceptical than non-right-wing respondents, when liberal world society is relatively absent, differences by political affiliation are insignificant. Yet as embeddedness increases, consensus disappears as beliefs polarise. For instance, when embeddedness equals -1.5, the difference between right-wing and non-right-wing respondents' average climate scepticism is 0.081. Yet when embeddedness is highest, the magnitude of this difference nearly triples to 0.426. Tests of second difference confirm that this increased polarisation (a net increase of 0.345) is significant ($p < .001$), in line with H3c.

In sum, when the liberal pressures of world society become tangible enough to generate cultural dissonance, polarisation occurs, and differences emerge. Unlike non-right-wing respondents who are more amenable to global liberal narratives,

¹⁰ Individual political leanings, left-wing and moderate, are combined for the final presentation for ease of interpretation; however, results are consistent whether or not left-wing and moderates are pooled.

individuals who firmly identify with right-wing ideologies are impenetrable to their pressure.

6.3 ROBUSTNESS CHECKS

We perform a series of robustness checks to ensure the validity of our findings. First, although we exploit most available ISSP data, missingness on ideology (i.e. right-wing)¹¹ and employment status¹² may bias our findings. However, coefficients for our main predictors generated using multiple imputations on these missing values, allowing us to use the full sample (38 countries; 72 country-years; 96'480 individuals), are consistent with the main models, suggesting no systematic bias (see Appendix V). Unemployment does become positive and significant at $p < .05$ in imputed models, supporting the notion that global economic downturns, manifesting through individual unemployment outcomes, may be relevant for understanding the rise of populist attitudes. We also substitute V-Dem's polyarchy for freedom house in all models. Results remain consistent with Table 2, indicating robustness to regime measure (see Appendix VI).

Next, we test several additional predictors to ensure proper model specification and verify that our findings are not driven by omitted variable bias.¹³ At the country level, neither foreign direct investment (FDI) nor trade as a percentage of GDP (Prakash/Hart 2000) reaches significance when substituted for exports, suggesting robustness to different indicators of global economic integration. Analyses including additional predictors of climate scepticism, including national unemployment (Lübke 2022), political polarisation (Dunlap et al. 2016; Smith/Mayer 2019), internet use (Anderson 2017), and right-wing heads of state

(Lockwood 2018) also substantively hold. Positive and significant effects of internet use corroborate existing work, identifying the link between misinformation via internet access and vaccine scepticism (Lunz Trujillo/Motta 2021) – another manifestation of populist attitudes – and motivate further research exploring this relationship. No other predictors reach significance.

Individually, we consider trust in the government and others, which is unfortunately only available for a reduced sample (in 2010 and 2020, for 36 countries and 46 country-years). Results substantively hold for all models and corroborate existing work identifying trust as a key component of populist attitudes, including climate scepticism (Zhou 2014). A control for environmentalism additionally ensures that the link between world society and reduced climate scepticism is not explained away by pro-environmental attitudes. Despite being positive and significant, this measure has no substantive impact on results, suggesting no issues of endogeneity. Finally, models substituting all country-level predictors with two- and five-year lags substantively hold with all major predictors, maintaining significance at $p < .05$, except one (Embeddedness * Regime, significant at $p < .10$), suggesting proper time-ordering.¹⁴

7 DISCUSSION

Like many other topics, the environment and climate change have become, as our results suggest, an ideological battleground of global proportions. The sway of the liberal global order, though still influential, has begun to wane as illiberal and populist alternatives gain traction. Using data from 65'333 individuals across 37 countries and 67 country-years between 2000 and 2020, we find that although liberal forces, global in scope, remain crucial for attenuating climate scepticism,

11 Missing for: Canada 2000, Chile 2000, Israel 2000, Israel 2010, Japan 2010.

12 Missing for: Japan 2010.

13 Results available upon request.

14 Results available upon request.

they are not always impervious to countervailing anti-liberal forces. In general, as embeddedness within liberal world society increases, climate scepticism decreases. When cultural dissonance between liberal and anti-liberal forces occurs, however, world society tempers climate scepticism at the *national* level (i.e. within authoritarian regimes) but not at the *individual* level (i.e. among right-wing respondents). The implications of these findings are several.

7.1 LIBERAL WORLD SOCIETY AS A BUFFER AGAINST ILLIBERALISM

First, exposure to liberal cultural norms and the actors and institutions which promote them not only, as previous research suggests, facilitate the spread of pro-environmentalist attitudes, they also *attenuate* anti-environmental attitudes, such as climate scepticism, even during a post-liberal turn. These findings provide important implications for world society theory, which has thus far focused on individuals' internalisation of liberal norms (Kim 2020a; Pierotti 2013; Zhou 2013) rather than their resistance to illiberal alternatives. Our research initiates this conversation, beginning with climate scepticism.

Although climate scepticism can, in many ways, be seen as a rejection of broader environmental norms, it is not simply an inverse of environmentalism (Tranter/Booth 2015). Indeed, not all who lack strong concern for the environment fundamentally reject the veracity of climate change or the scientific findings upon which such claims rest. The ISSP data support this assertion: pro-environmentalism and climate scepticism are only weakly correlated ($r=-0.119$), though this correlation is growing over time ($r=-0.083$ in 2000 vs $r=0.189$ in 2020). World society scholars must therefore continue to evaluate and theorise about the impact of liberal world society on support for illiberal norms as a distinct phenomenon.

Future research may wish, for instance, to further disentangle the mechanisms through which liberal world society shields individuals from subscribing to anti-liberal narratives, such as climate scepticism. How are norm entrepreneurs reframing conventional environmental and climate narratives to counteract new illiberal challenges? INGOs operating in these spaces often rely on their own expertise and information dissemination to problematise and publicise norms (Keck/Sikkink 1999). Is this still the case in a "post-truth" era (Vernon 2017) where science, facts, and information no longer reign supreme? What strategies do INGOs and other liberal actors use to discredit or create resilience against misinformation?

Scholars interested in answering these questions may wish to build on our work by exploring *how* the world environmental regime and its numerous components (e.g. environmental INGOs, IGOs, environmental ministries, treaty bodies) combat climate scepticism while identifying which strategies are more (or less) successful. Although not possible in the current study due to the lack of membership in nascent illiberal organisations among ISSP-sampled countries (Bromley et al. 2019),¹⁵ it would also be fruitful to compare the efficacy of liberal vs illiberal global cultural influences on environmental and climate scepticism. This line of inquiry can also be easily extended to a variety of illiberal norms against which liberal actors stand.

7.2 CULTURAL DISSONANCE: WHEN LIBERAL AND ILLIBERAL FORCES CLASH

The second major implication of this study is the insight it sheds upon how and why liberal forces (fail to) prevail when placed under duress. Recent

15 These illiberal organisations include the Shanghai Cooperation Organization (SCO), the Commonwealth of Independent States (CIS), the Organization of Islamic Cooperation (OIC), and the Alianza Bolivariana para los Pueblos de Nuestra América (ALBA). Only Russia and Turkey in our sample are members, thus making statistical incorporation of such a measure impossible.

scholarship recognises the mounting tensions between liberal and illiberal forces (Glasius et al. 2020; Schofer et al. 2022). We advance this important line of work one step further by exploring the outcome of such tensions, specifically where liberal world society is most contested and, thus, most vulnerable. In doing so, we expand existing knowledge about the conditions under which liberal norms are more or less resilient and find that although world society can overcome cultural dissonance at the national level, it is less capable of doing so individually. In addition to confirming the increased salience of illiberal forces (Lerch et al. 2021; Velasco 2020), these findings provide novel and important insights about the strengths and limitations of liberal world society and suggest that world society is better at counteracting macro as opposed to micro-level illiberal currents. Although we cannot be certain why this is the case, we can begin to speculate.

At the national level, the cultural dissonance fostered by world society challenges the fundamental principles upon which authoritarian societies operate. When such values are brought into question by strong liberal influences, the illiberal foundation upon which climate scepticism relies begins to crumble, thus undermining the legitimacy of such narratives altogether. It seems, therefore, that when cultural dissonance constrains the menu of legitimate climate change positions individuals can adopt without attracting public scorn, climate scepticism becomes a less appealing and, subsequently, less commonplace choice. Thus, the liberal world society may be most effective at undermining illiberal currents when it focuses on transforming collective social norms, which, as Durkheim tells us, are highly coercive of the individual. It is so effective, in fact, that when liberal embeddedness is sufficiently high, predicted differences in attitudes by regime type disappear. This conjecture corroborates foundational findings within world society research documenting the capacity for global liberal pressures

to prevail over domestic attributes (Frank et al. 2000; Ramirez et al. 1997). Practically speaking, those working to correct false narratives about climate change may therefore wish to focus their efforts within authoritarian regimes, where returns are likely to be high.

At the individual level, however, the tensions emanating from cultural dissonance are *cognitive* rather than *collective*. It is perhaps precisely this lack of overarching social pressure that enables climate scepticism to persist. As prior research shows, individuals are not easily persuaded away from their preexisting worldviews (Nyhan/Reifler 2010; Taber/Lodge 2006). Thus, when world society challenges deeply engrained *personal* beliefs about themselves and their identity in relation to how the world operates, rather than breaking down *collective* barriers, it is less likely to yield success. Consistent with our findings, existing studies suggest that individuals see their political identity as an intrinsic part of who they are (rather than simply what they think), with such identities exhibiting remarkable stability (Sears/Funk 1999) and, in some cases, overriding in salience several immutable, seemingly more fundamental identifiers, including race, gender, and religious affiliation (Westwood et al. 2018). Perhaps these internalised narratives about the self make right-wing respondents so impervious to liberal pressures (and, in the same way, non-right-wing respondents so amenable).

Ironically, world society also appears to be less successful at the individual level precisely *because* of its success in promoting other liberal norms – namely, individualism. Consistent with other studies of illiberal backlash (Cole 2023; Cole et al. 2023; Lerch et al. 2016; Lerch et al. 2022), it appears that the diffusion of individual hyper-empowerment through liberal world society can unintentionally backfire, fostering individual mistrust towards the very liberal order which empowered them. This backfiring leads to

a polarisation of beliefs. When liberal embeddedness is highest, so too is polarisation; ideological distinctions become more pronounced where empowerment and individualisation are prioritised. Our findings support this notion and add to existing literature documenting rising polarisation within world society (Hadler/Symons 2018; Velasco 2020). They additionally uncover the underlying tensions rife within the broader liberal script (Börzel/Zürn 2020) and suggest, like prior norm diffusion research (Acharya 2004), that individuals take no issue in “cherry-picking” which norms they like and disregarding the rest. Thus, perhaps in some ways, liberal world society sows the seeds of its own destruction.

8 CONCLUDING REMARKS

This study shows how embeddedness in liberal world society can play *both* an “inhibiting” and “contributing” role in shaping individual climate scepticism. When liberal and illiberal forces clash, the level of cultural dissonance determines the direction of world society’s effects.

Still, despite its contributions, limitations remain. First, our study adopts an unsophisticated treatment of ideology. Like Wade M. Cole (2023), we acknowledge how (uncaptured) ideological variation across nations (i.e. someone considered “leftist” in one nation may be seen as “moderate” in another) may oversimplify our claims. Thus, although our study begins this conversation, a more nuanced investigation into how political parties and actors within different national settings engage with liberal and illiberal climate change narratives is warranted.

Along a similar vein, though illiberal, not all authoritarian regimes are anti-environment. Indeed, many see “authoritarian environmentalism” as a swifter, more desirable approach to combatting environmental issues and climate change than

those used in democracies because it places power in the hands of a few elites who can make decisive (and possibly unpopular) choices with ease (Eaton/Kostka 2014). However, environmental action by the state and climate change awareness among the populace are not interchangeable, as evidence from China illustrates (Gilley 2012). Nor does authoritarian environmentalism necessarily produce better climate outcomes or greater public awareness about climate change (Eaton/Kostka 2014; Gilley 2012). Thus, although authoritarianism may be linked to lower climate scepticism in some cases, authoritarian regimes ultimately uphold the illiberal institutions and cultural frameworks that help perpetuate anti-liberal narratives, including climate scepticism. Indeed, research suggests that illiberal nations are more likely to restrict funding to NGOs – the primary carriers of liberal values such as environmental and climate norms (Bromley et al. 2019). Preserving world society linkages such as these when they are under threat will, therefore, be crucial in the continued fight against climate scepticism and misinformation within illiberal spaces. We encourage others to explore climate scepticism within authoritarian spaces in greater depth, as some scholars have begun to do (Sonnenfeld/Taylor 2018).

Finally, we recognise the limitations of examining only one survey item to evaluate climate scepticism. However, to our knowledge, no comprehensive set of questions exploring climate scepticism and its many dimensions, internationally fielded, yet exist. Future studies can expand on our findings by analysing new survey items as they become available.

In sum, this study illustrates the complex and sometimes contradictory role liberal world society plays in preventing climate change scepticism. As cultural dissonance becomes more common – as it is likely to do if the current uptick in illiberalism continues – future scholarship must continue to explore how cultural tensions between liberal

and illiberal forces shape the diffusion of and resistance to anti-liberal norms across different issue areas, within other spaces, and at varying levels of analysis.

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APPENDIX I: ANALYSED COUNTRY-YEARS

Argentina2010, Australia2010, Austria2000, Austria2010, Austria2020, Belgium2010, Bulgaria2000, Bulgaria2010, Canada2010, Chile2010, Croatia2010, Czech Republic2000, Czech Republic2010, Denmark2000, Denmark2010, Denmark2020, Finland2000, Finland2010, Finland2020, France2010, Germany2000, Germany2010, Germany2020, Hungary2020, Iceland2010, Iceland2020, Ireland2000, Japan2000, Japan2020, Latvia2010, Lithuania2010, Mexico2000, Mexico2010, Netherlands2000, Netherlands2010, New Zealand2000, New Zealand2010, New Zealand2020, Norway2000, Norway2010, Philippines2000, Philippines2010, Philippines2020, Portugal2000, Portugal2010, Russia2000, Russia2010, Russia2020, Slovakia2010, Slovenia2000, Slovenia2010, Slovenia2020, South Africa2010, South Korea2010, Spain2000, Spain2010, Sweden2000, Sweden2010, Switzerland2000, Switzerland2010, Switzerland2020, Thailand2020, Turkey2010, United Kingdom2000, United Kingdom2010, United States2000, United States2010

APPENDIX II: CORRELATION MATRIX, ALL INDEPENDENT VARIABLES

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1																	
2	0.045	1																
3	0.071	0.364	1															
4	-0.725	-0.122	-0.048	1														
5	0.207	-0.414	-0.175	-0.393	1													
6	0.050	0.126	-0.033	-0.067	-0.227	1												
7	0.118	-0.008	-0.068	-0.233	0.052	0.141	1											
8	-0.203	-0.175	0.233	0.192	-0.010	0.075	0.135	1										
9	0.274	0.214	-0.247	-0.229	-0.041	0.067	-0.165	-0.958	1									
10	0.029	-0.380	-0.174	-0.096	0.295	-0.386	-0.083	-0.371	0.241	1								
11	0.034	-0.486	-0.245	-0.354	0.216	-0.178	0.254	-0.067	0.004	0.456	1							
12	0.077	-0.135	-0.075	-0.048	0.123	0.515	0.363	0.014	0.007	-0.149	0.025	1						
13	-0.113	0.036	0.012	-0.021	0.125	-0.124	0.247	0.16	-0.166	0.066	-0.041	0.120	1					
14	0.192	0.149	0.136	-0.111	-0.085	0.359	0.035	0.267	-0.146	-0.387	-0.338	0.404	-0.107	1				
15	0.081	-0.013	0.011	-0.087	-0.023	0.412	0.153	-0.06	0.042	-0.105	0.084	0.685	-0.166	0.2	1			
16	-0.137	0.064	-0.153	0.059	0.171	-0.173	0.083	0.106	-0.077	-0.022	0.038	-0.086	-0.031	-0.026	-0.153	1		
17	0.574	0.219	0.294	-0.496	0.219	0.347	0.071	0.057	0.001	-0.274	-0.234	0.406	0.085	0.464	0.316	-0.061	1	
18	0.148	-0.012	0.094	-0.129	0.022	0.289	0.242	0.144	-0.182	-0.257	0.088	0.684	-0.236	0.326	0.744	0.035	0.417	1

Variables: (1) Global liberal embeddedness, (2) Environmental condition, (3) Exports (millions of current USD), (4) GDP per capita (logged), (5) Democracy, (6) Right-wing, (7) Unemployed, (8) Age, (9) Age-squared, (10) Female, (11) Education (12) Catholic, (13) Jewish, (14) Muslim, (15) Protestant (16) Buddhist, (17) Orthodox, (18) Other religion

APPENDIX III: DESCRIPTIVE STATISTICS

Variable	Mean	Std. Dev.	Min.	Max.
Country-level (N=37)				
Global liberal embeddedness	0.082	0.970	-1.523	1.773
Environmental Condition	61.613	10.722	34.548	82.5
Exports (millions of current USD)	40.884	17.60	10.463	94.389
GDP per capita (logged)	10.002	0.972	6.978	11.382
Regime Score	5.928	1.119	1	6.5
Individual-level (N=65'333)				
Climate scepticism	2.728	1.153	1	5
Age	47.933	17.105	15	99
Age-squared	2590.178	1706.601	225	9801
Female	0.527	0.499	0	1
Education	2.153	0.707	1	3
Unemployed	0.434	0.496	0	1
Right-wing	0.257	0.437	0	1
Religion				
Catholic	0.344	0.475	0	1
Jewish	0.002	0.042	0	1
Muslim	0.033	0.179	0	1
Protestant	0.217	0.412	0	1
Buddhist	0.023	0.15	0	1
Orthodox	0.062	0.242	0	1
Other	0.083	0.276	0	1
Interactions				
Cultural embeddedness * Regime Score	0.881	5.874	-9.061	11.526
Cultural embeddedness * Right-wing	0.061	0.470	-1.523	1.773

APPENDIX IV: FACTOR LOADINGS

	2020	2010	2000
total # of top universities in the country divided by university age population	0.5619	0.4329	0.5933
total # of IGOs to which country belongs	0.8222	0.8739	0.8279
total # of NGO to which country belongs	0.9437	0.9541	0.9446
total # of Human Rights treaties country signed	0.5281	0.1745	0.1519
total # of certificates of ISO quality management standards	0.4242	0.5066	0.5183

APPENDIX V: ANALYSIS USING MULTIPLE IMPUTATION

	Model 1	Model 2	Model 3
Global Liberal Embeddedness	-0.095*	-0.463**	-0.094*
	(0.037)	(0.156)	(0.037)
National-Level Controls			
Environmental Condition	-0.002*	-0.003	-0.006
	(0.003)	(0.004)	(0.004)
Exports	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)
GDP per Capita (ln)	0.033	0.038	-0.005
	(0.079)	(0.074)	(0.078)
Regime Score	-0.003	-0.033	-0.061***
	(0.021)	(0.031)	(0.018)
Individual-Level Controls			
Right-wing	0.306***	0.310***	0.263***
	(0.033)	(0.034)	(0.025)
Unemployed	0.051**	0.033**	0.033**
	(0.012)	(0.011)	(0.011)
Age	-0.003***	-0.003*	-0.003*
	(0.001)	(0.002)	(0.002)
Age-Squared	0.001***	0.001***	0.001***
	(0.001)	(0.001)	(0.001)

	Model 1	Model 2	Model 3
Female	-0.194***	-0.191***	-0.189***
	(0.020)	(0.020)	(0.019)
Education	-0.180***	-0.178***	-0.180***
	(0.020)	(0.020)	(0.019)
Religion (ref = none)			
Catholic	0.085***	0.086**	0.082**
	(0.028)	(0.028)	(0.003)
Jewish	-0.138	-0.141*	-0.144*
	(0.074)	(0.073)	(0.042)
Muslim	-0.129***	0.130***	0.135***
	(0.041)	(0.040)	(0.002)
Protestant	0.068*	0.067*	0.058*
	(0.028)	(0.029)	(0.034)
Buddhist	-0.063	-0.067	-0.057
	(0.037)	(0.038)	(0.113)
Orthodox	0.046	0.047	0.045
	(0.048)	(0.048)	(0.338)
Other	0.083**	0.084**	0.078*
	(0.032)	(0.032)	(0.013)
Interactions			
Global Liberal Embeddedness * Regime Score	-	0.059*	-
		(0.027)	
Global Liberal Embeddedness * Right-wing	-	-	0.067**
			(0.027)
Constant	3.310***	3.149***	3.703
	(0.749)	(0.625)	(0.001)
Year Dummies	Yes	Yes	Yes
Observations	96'480	96'480	96'480

	Model 1	Model 2	Model 3
Countries	38	38	38
Country-years	72	72	72
Sd (Country-year)	0.149	0.136	0.129
Sd (Country)	0.131	0.134	0.148
Sd (Residual)	1.093	1.092	1.090
Sd (Right-wing)	-	-	0.147

Notes:

*** p<0.001, ** p<0.01, * p<0.05.

The first number represents the regression coefficient; the second is the standard error.

APPENDIX VI: ALTERNATE REGIME SCORE MEASURE, POLYARCHY (V-DEM)

	Model 1	Model 2
Global Liberal Embeddedness	-0.096*	-0.547**
	(0.042)	(0.202)
Regime Score	-0.526**	-0.165
	(0.190)	(0.278)
Global Liberal Embeddedness * Regime Score	-	0.530*
	-	(0.246)
Observations	65'333	65'333
Countries	37	37
Country-years	67	67

Notes:

*** p<0.001, ** p<0.01, * p<0.05.

The first row represents the regression coefficient; the second is the standard error.

Results represent fully specified models. Tables reduced for simplicity.

Results for unrepresented models and covariates substantively hold.

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