

# Determinants of pro-environmental attitudes and behaviours in the digital era: The case of workers in high-emitting industries in Germany

*Lubna Rashid, Jordana Composto, and Elke Weber*

**Abstract:** Addressing the interconnected challenges of digital futures and environmental pressures demands a deep understanding of human decision-making and the factors that influence sustainable behavioural change and adaptation. This study examines the drivers of pro-environmental attitudes (PEAs) and behaviours (PEBs) among workers in Germany in sectors with substantial environmental impacts, such as digital technology, mobility, and manufacturing. We focus on this worker population due to their critical role in shaping workplace values, visions, and actions and the importance of establishing inclusive and thoughtful workplace environments and structures that enhance their engagement and wellbeing, given the tensions and expectations associated with their line of work. Analyzing survey responses from 297 workers using linear regression modelling, we find varying and nuanced impacts of personal convictions, experiences, wellbeing, entrepreneurialism, and perceptions of social norms and organizational support on PEAs and various PEBs. Our results highlight the importance of purpose, leadership, emotional resilience, and inclusion in fostering a shift towards environmentally conscious practices. This research aims to guide workers, managers, and policymakers in the design of workplaces that promote, rather than hinder, ecological sustainability.

**Keywords:** ecological sustainability, environmental psychology, emotional and normative decision-making, behavioural change, workplace transformation, technology industry, purpose

## *1. Introduction*

Amidst the rapid pace of technological advancements and the evolving nature of work, the urgency of safeguarding the environment has never

been greater, particularly in wealthy, industrialized nations with high levels of resource consumption and a large share of global greenhouse gas emissions. While top-down, system-level approaches to environmental protection, such as new policies, technologies, and business process designs, are critical, they must be complemented by individual-level, bottom-up transformations in behaviour. This is particularly pertinent with respect to individuals working in key industries that significantly contribute to climate change emissions yet are also responsible for producing the innovations and technologies that could help mitigate long-term environmental harm.

Workers are key drivers of change as initiators of intrapreneurship and shapers of endogenous values at the organizational level (Lamm et al., 2015). Furthermore, understanding workers' decision-making and behaviour helps design support structures, workplace cultures, and leadership approaches that foster inclusion, engagement, and wellbeing, especially in high-pressure, rapidly evolving environments with high expectations for performance and impact. Although awareness of environmental issues is growing and workers are frequently exposed to climate change narratives, this increased knowledge does not always translate into effective pro-environmental decision-making or prioritization of ecological goals in future-relevant industries (Grothmann et al., 2023; Lammers et al., 2022). Evidence shows that, even in the presence of sufficient environmental knowledge and belief in climate change, predictors of pro-environmental attitudes (PEAs) and pro-environmental behaviours (PEBs) may differ (Munro et al., 2023; Park & Lin, 2020; Rashid, 2022). This contributes to the well-documented attitude-behaviour gap wherein PEAs do not fully translate to PEBs (Fahy, 2005; Farjam et al., 2019; Kennedy et al., 2009). Additionally, the blurring of boundaries between work and home life due to the rise of remote and digital-based work designs necessitates an understanding of PEA and PEB determinants in and across the private and professional spheres.

Accordingly, this study utilizes a quantitative empirical design and an online survey of workers in Germany to identify factors that shape their PEAs and PEBS, inspired by a similar recent study in the US context (Composto et al., 2023). The present survey targets employees in industries that are critical to the current global sustainability transition, namely, digital technology, transportation and mobility, extraction, and manufacturing, as well as engineering and environmental services. Understanding the unique contextual factors that impact PEAs and PEBS in this particular setting is crucial given the situational nature of decision-making predictors. This

research also distinguishes between various types of PEBs – such as personal habits and engagement with others on environmental issues – both at home and in the workplace. Ultimately, we aim to specifically address the following research question: *What shapes the pro-environmental attitudes and behaviours of workers in climate-relevant industries in Germany?*

## 2. Research design and hypotheses

This study views worker decision-making processes and behavioural consequences from the perspective of Kahneman's (2003) expanded Dual Process Theory model and Weber and Lindemann's (2007) Functional Taxonomy of Decision Modes. Accordingly, human decision-making processes fall under two systems, one that is calculative, reflective, and effortful, requiring logical reasoning (System 2) and another that is intuitive, automatic, and effortless, highly driven by emotional experiences and social norms (System 1). This means decisions are made using a variety of mental processes, or "decision modes": on the one hand, rationally and deliberately ("with the head"); on the other hand, instinctively and emotions-driven ("with the gut") or by following rules ("by the book") (Kahneman, 2013; Weber & Lindemann, 2007). Emotions- and rule-driven decision-making is less cognitively taxing and happens automatically and in parallel to rational deliberation. When encouraged wisely, these two modes can encourage pro-environmental decisions (Reeck et al., 2022) and potentially promote positive spillover across decision contexts (Truelove et al., 2014).

With respect to environmental decisions, an understanding of personal convictions and their interplay with experiences, states, traits, and perceptions that impact emotion-based and norm-guided decision-making is central to deciphering behavioural outcomes (see Figure 1). Convictions encompass an array of ideological, political, and spiritual beliefs, as well as one's sense of the purpose of work and life and moral standing. Beliefs serve as foundational pillars in shaping an individual's self-concept, aspirations, and corresponding role in society (Blaine et al., 1998; Chen & Urminsky, 2019), including their position on environmental issues and consequent attitudes and behaviours (Maheshwari et al., 2024). Spiritual beliefs and moral standards may shape environmental values as part of larger philosophical views and existential significance. Political beliefs also reflect an individual's ideological orientation with respect to personal freedom and collective responsibility, extending to environmental issues and influencing

the degree to which environmental behavioural adaptation is seen as a burden versus an obligation. Having a sense of purpose may motivate an individual to behave in ways that fulfil that purpose. As such, convictions such as spiritual beliefs, political activity and party identification, sense of purpose, and moral engagement in environmental topics are expected to directly impact PEAs and PEBs.

*Hypothesis 1: Personal convictions predict pro-environmental attitudes and behaviours.*

Nevertheless, acting on those convictions involves complex decision-making pathways in which emotions and social norms play a significant role. Therefore, even when an individual holds strong beliefs and values related to environmental protection, their emotional state can significantly impact their ability to act. Emotional wellbeing and personal experiences, particularly those involving extreme events, can influence the relationship between personal convictions and attitudes and actions. Additionally, certain traits may enhance emotional resilience in risky situations and further impact this relationship. In the environmental context, personal experiences with environmental calamities, such as extreme weather events, may strengthen emotions-driven decision-making via affective and associative learning pathways (Dai et al., 2015; Weber, 2010). Such experiences may also invoke empathy and subsequent pro-social behaviours (Singer & Lamm, 2009). Furthermore, heightened psychological wellbeing may enhance the resilience and self-efficacy needed to engage in new behaviours and cope with environmental stressors (Rashid, 2022), while poor mental health may undermine an individual's capacity to prioritize environmental concerns and reduce engagement with ethical behaviour (Kouchaki & Desai, 2015). Additionally, individuals with a strong entrepreneurial spirit may be more likely to demonstrate increased emotional resilience and enhanced ability to take risks, innovate, and instigate changes in attitude and behaviour against a backdrop of ambiguity and uncertainty (Conz et al., 2023). Therefore, emotional decision-making facilitators such as experience with extreme weather events (climate change experience), psychological wellbeing, and an entrepreneurial spirit are expected to activate System 1 of decision-making and thereby influence the conviction-PEA and conviction-PEB relationship.

*Hypothesis 2: Emotional decision-making impacts the relationship between personal convictions and pro-environmental attitudes and behaviours.*

Furthermore, a person's perception of their social milieu highly influences their own environmental attitudes and behaviours (Caggiano et al., 2023; Constantino et al., 2022). Social norms dictate which attitudes and behaviours are more appropriate and acceptable within a particular context, and individuals frequently and unknowingly engage in behavioural mimicry, unconsciously adopting the actions of those around them. When individuals observe that their colleagues or peers are engaging in specific PEBs, they are more likely to perceive these behaviours as socially desirable, creating social pressure to conform to the behaviours to avoid disapproval and maintain social harmony (Chung & Rimal, 2016). This may reinforce and normalize the adoption of PEBs within a social group, producing a cascading effect where more individuals are motivated to align their own actions with perceived social norms. Similarly, when employees perceive their organization as authentically contributing to environmental sustainability, they may be more likely to internalize these values as a form of normative alignment and organizational identification (Servaes et al., 2022). Furthermore, organizational guidance and inspiration through committed leadership and the recognition of environmentally responsible behaviours may motivate employees to take ownership of their role in environmental stewardship. Hence, the observed social norms of peers (friends and family/colleagues) and perceived organizational purpose are expected to activate System 1 of decision-making and thereby influence the conviction-PEA and conviction-PEB relationship.

*Hypothesis 3: Normative decision-making impacts the relationship between personal convictions and pro-environmental attitudes and behaviours.*

While our study measures PEA using a single index, we measure PEBs using three indices: PEB-Personal Habits is concerned with daily activities, such as eating habits and mobility choices, that primarily concern the individual; PEB-Engagement at Home relates to the individual's engagement and exchange with others in their private lives; PEB-Engagement at Work concerns the individual's engagement and exchange with others in their professional setting. All variables are detailed in Appendix 1.

What shapes pro-environmental attitudes and behaviours of workers in climate-relevant industries in Germany?

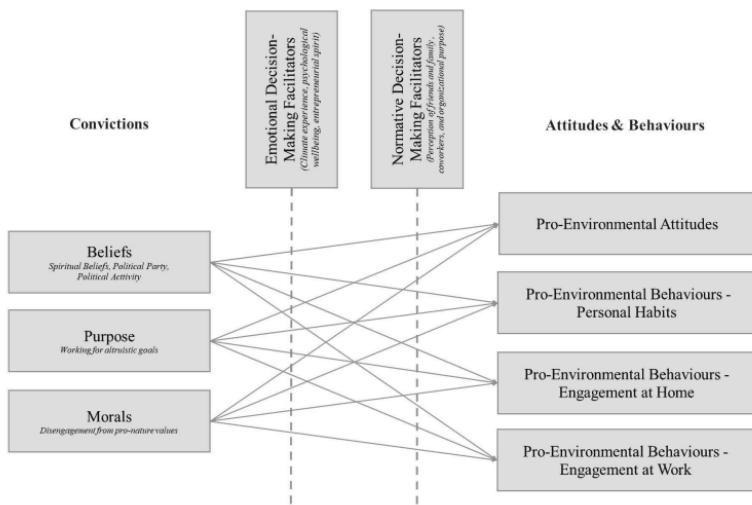


Figure 1: Research question and conceptual model.

### 3. Methods

A total of 297 workers in Germany participated in this study. Data collection took place in January 2024 using an approximately 20-minute survey. Although most survey items were based on existing validated measures, some measures were created for the purpose of this study (see Appendix 1). The survey was made available in both the English and German languages, and both versions were tested by several individuals for length, language, and understanding by native English and German speakers prior to formal data collection. The survey was programmed using Qualtrics software. Participants were recruited via the online panel provider Prolific, ensuring diversity across industries that are critical to the global (and local) climate transition. This includes technology (e.g. software development and hardware), transportation and mobility (e.g. automotive, aviation, and logistics), extraction and manufacturing (e.g. construction and energy), engineering (e.g. electrical installations), and environmental services. Participants' demographic information, including age, gender, ethnicity, educational level, and job role were collected to ensure sample representativeness and use as control variables. The survey and recruitment materials were reviewed and approved

by the ethics review boards of both Princeton University and the Technische Universität Berlin.

Pearson correlation tests were performed to delineate the relationships between all tested variables except the control variables (see Appendix 2). Analysis of variance (independent sample t-test) was performed to test whether PEAs and PEBs significantly differ between workers operating in different industries and work modes, and linear regression modelling was then employed using SPSS software to test the conceptual model.

#### 4. Results

The sample is predominantly male (78.1%), the average age is 32 years (*Standard Deviation* = 8.5), 34 respondents (11.4%) identify as black, indigenous or people of colour (BIPOC), and 203 respondents are university-educated (68.4%). Among the participants, 232 reported working either completely remotely or in a hybrid format (78.1%). Industries represented include technology (55.6% of the sample), transportation, logistics, and mobility (24.2%), extractive industries such as energy, utilities, construction, manufacturing, and agriculture (16.8%), engineering, carpentry, and electrical installations (14.8%), and chemicals, plastics, and environmental services (5.4%).

The results of the ANOVA tests identify some differences between workers in the technology industry compared to other workers, as well as between workers who at least sometimes work from the office versus those who work completely remotely. Comparing the technology industry to non-technology industries reveals no significant differences in PEA and PEBs between workers except with respect to PEB-Personal Habits. In this respect, workers in the technology industry appear to demonstrate significantly higher PEB-Personal Habits compared to those who do not work in technology (*one-sided p*=0.016). Comparing remote workers to others, we find that remote workers have significantly less PEB-Engagement at Work (*one-sided p*=0.030), although no significant differences are observed regarding the remaining dependent variables.

Regression modelling was performed on the entire sample. No multicollinearity is detected in the regression models, and the Cronbach alpha measures of scale validity ranged between 0.6 and 0.9 for all variables. The linear regression modelling results indicate clear differences between predictors of PEA and various types of PEB; these are detailed in Tables 1–4. Significant predictors of higher PEA include older age, BIPOC identification, affiliation

with left-leaning political parties, a strong sense of purpose, and higher moral engagement with environmental issues. Positive perception of environmental behaviour among friends, family members, and coworkers has a moderating effect on political activity, whereas being less politically active significantly predicts PEA only in the presence of the positive perception of those norms. A negative perception of organizational authenticity, a dimension of organizational purpose, appears to significantly predict PEA.

The results look quite different with respect to predicting PEB-Personal Habits. Greater PEB-Personal Habits are significantly predicted by not working in a leadership position. All independent variables exhibit significance, with spirituality showing a negative association with personal habits and political activity exhibiting a positive association, contrary to PEA results. Notably, the negative perception of organizational authenticity is a significant predictor, similarly to the PEA case. Climate change experience, which does not significantly predict PEA, has a significant moderator effect on both political activity and beliefs while perceptions of the behaviour of friends and family moderates the relationship between spiritual as well as political beliefs and PEB-Personal Habits.

Whereas having no leadership role at work significantly relates to PEB-Personal Habits, the opposite is true for PEB-Engagement at Home. Meanwhile, demographic variables generally seem to have no significant predictive power in the context of PEB-Engagement at Work. Higher education levels positively relate to both PEB-Engagement at Home and PEB-Engagement at Work, while identifying with the female gender only predicts PEB-Engagement at Home. Both at home and at work, purpose is the only significant predictor from the tested independent variables across all models. All other variables related to conviction appear insignificant in predicting PEB.

Zooming in on the moderator variables, greater PEB-Engagement at Home and PEB-Engagement at Work are both significantly predicted by experience with extreme weather events, psychological health, and an entrepreneurial spirit. There is no significant moderation effect on the independent variables in the case of PEB-Engagement at Work. The positive impact of belonging to a left-leaning political party on PEB-Engagement at Home is only apparent when accounting for entrepreneurial spirit or psychological health, although these effects are not seen in the workplace. The positive perception of organizational inspiration, which is also a dimension of organizational purpose, predicts PEB-Engagement at Work. Neither norm perception variable significantly predicts work or home PEB.

Table 1: Linear regression models predicting Pro-Environmental Attitudes

Variable	Linear Regression Models Predicting PEAs							
	Model 1 Demographics		Model 2 Demographics, — Convictions		Model 3 Demographics, — Convictions, Emotional De- cision-Making		Model 4 Demographics, — Convictions, Emotional De- cision-Making	
B	SE B	B	SE B	B	SE B	B	SE B	B
<i>Control Variables</i>								
Age	<b>0.012**</b>	0.004	<b>0.009*</b>	0.004	<b>0.010*</b>	0.004	<b>0.009*</b>	0.004
Education	0.081	0.078	-0.003	0.075	-0.007	0.075	0.004	0.076
Gender	0.059	0.089	0.132	0.091	0.144	0.091	0.135	0.092
Ethnic Minority	<b>0.418***</b>	0.114	<b>0.304**</b>	0.111	<b>0.301**</b>	0.111	<b>0.296**</b>	0.111
Leadership Role	-0.068	0.076	-0.057	0.073	-0.082	0.073	-0.047	0.074
Tech Industry	0.087	0.076	-0.017	0.074	-0.013	0.073	-0.009	0.074
Remote Work	-0.141	0.097	-0.049	0.095	-0.045	0.095	-0.059	0.096
<i>Independent Variables</i>								
Spirituality	-0.113	0.077	-0.115	0.076	-0.114	0.077	-0.113	0.077
Political Beliefs	<b>0.082**</b>	0.026	<b>0.076*</b>	0.026	<b>0.081**</b>	0.026	<b>0.082**</b>	0.026
Political Activity	-0.125	0.079	-0.146	0.08	-0.124	0.079	-0.125	0.079
Purpose	<b>0.368***</b>	0.049	<b>0.348***</b>	0.05	<b>0.386***</b>	0.054	<b>0.381***</b>	0.057
Moral Disengagement	<b>-0.099*</b>	0.031	<b>-0.109**</b>	*	<b>-0.104**</b>	*	<b>-0.103**</b>	*
							<b>-0.101**</b>	0.032
							*	0.028
							*	0.031
							*	0.029

## Linear Regression Models Predicting PEAs

Variable	Model 1						Model 2						Model 3						Model 4						Model 5						Model 6						Model 7						Model 8					
	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B												
<i>Moderator Variables</i>																																																
Climate Change Experience																																																
Psychological Wellbeing																																																
Entrepreneurial Spirit																																																
Friends & Family Perception																																																
Coworker Perception																																																
Organizational Contribution																																																
Organizational Authenticity																																																
Organizational Guidance																																																
Organizational Inspiration																																																
<i>Adjusted R<sup>2</sup></i>	0.049		0.324		0.326																																											

\*p &lt;=.05; \*\*p &lt;=.01; \*\*\*p &lt;=.001

Table 2: Linear regression models predicting Pro-Environmental Behaviours – Personal Habits

Linear Regression Models Predicting PEB - Personal Habits										
Variable	Model 1					Model 2				
	Demographics	—	Demographics	—	Convictions	—	Demographics	—	Emotional Decision-Making	—
Age	-0.004	0.007	-0.009	0.007	-0.007	0.007	-0.008	0.007	-0.009	0.007
Education	0.178	0.126	0.041	0.124	0.031	0.123	0.030	0.125	0.034	0.125
Gender	-0.260	0.143	-0.213	0.150	-0.184	0.149	-0.219	0.151	-0.222	0.152
Race	0.078	0.183	-0.058	0.182	-0.065	0.180	-0.045	0.183	-0.055	0.183
Leadership Role	-0.258*	0.122	-0.314**	0.119	-0.369**	0.120	-0.350**	0.121	-0.324**	0.122
Tech Industry	0.233	0.122	0.030	0.121	0.038	0.120	0.019	0.122	0.025	0.122
Remote Work	-0.043	0.156	-0.066	0.157	-0.057	0.155	-0.051	0.158	-0.067	0.157
Control Variables										
Age	-0.004	0.007	-0.009	0.007	-0.007	0.007	-0.008	0.007	-0.009	0.007
Education	0.178	0.126	0.041	0.124	0.031	0.123	0.030	0.125	0.034	0.125
Gender	-0.260	0.143	-0.213	0.150	-0.184	0.149	-0.219	0.151	-0.222	0.152
Race	0.078	0.183	-0.058	0.182	-0.065	0.180	-0.045	0.183	-0.055	0.183
Leadership Role	-0.258*	0.122	-0.314**	0.119	-0.369**	0.120	-0.350**	0.121	-0.324**	0.122
Tech Industry	0.233	0.122	0.030	0.121	0.038	0.120	0.019	0.122	0.025	0.122
Remote Work	-0.043	0.156	-0.066	0.157	-0.057	0.155	-0.051	0.158	-0.067	0.157
Independent Variables										
Spirituality	-0.258*	0.126	-0.261*	0.125	-0.256*	0.125	-0.258*	0.126	-0.256*	0.126
Political Beliefs	0.093*	0.043	0.079	0.043	0.094*	0.043	0.094*	0.044	0.077	0.044
Political Activity	0.285*	0.130	0.237	0.130	0.283*	0.130	0.284*	0.130	0.275*	0.129
Purpose	0.420***	0.080	0.375**	0.081	0.390***	0.089	0.398***	0.094	0.385***	0.087
Disengagement	-0.129*	0.052	-0.150*	0.052	-0.121*	0.052	-0.125*	0.052	-0.121*	0.051
Moderator Variables										
Demographics	-0.010	0.007	-0.029	0.012	-0.015	0.012	-0.010	0.007	-0.010	0.007
Convictions	-0.029	0.012	-0.155	0.015	-0.049	0.013	-0.029	0.012	-0.029	0.012
Emotional Decision-Making	-0.155	0.015	-0.183	0.018	-0.037	0.018	-0.155	0.015	-0.155	0.015
Facilitator #1 (Climate Experience)	-0.183	0.018	-0.183	0.018	-0.037	0.018	-0.183	0.018	-0.183	0.018
Facilitator #2 (Psychological Wellbeing)	-0.340**	0.120	-0.312**	0.119	-0.324**	0.122	-0.328**	0.119	-0.312**	0.122
Friends & Family (Perception)	-0.123	0.018	-0.123	0.018	-0.009	0.012	-0.123	0.018	-0.123	0.018
Colleagues (Perception)	0.159	0.046	0.159	0.046	0.159	0.046	0.159	0.046	0.159	0.046

Linear Regression Models Predicting PEB - Personal Habits

Variable	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8	
	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B
Climate Change Experience			<b>0.147*</b>	0.060										<b>0.137*</b>	0.060	
Psychological Wellbeing					0.065	0.085			0.042	0.096					0.133	0.105
Entrepreneurial Spirit															-0.090	0.118
Friends & Family Perception											<b>0.274*</b>	0.117		<b>0.309**</b>	0.117	
Coworker Perception									-0.157	0.111				-0.199	0.115	
Organizational Contribution											0.091	0.078		0.111	0.077	
Organizational Authenticity											<b>-0.247*</b>	0.111		<b>-0.263*</b>	0.111	
Organizational Guidance											0.062	0.105		0.060	0.105	
Organizational Inspiration											0.074	0.088		0.061	0.088	
<i>Adjusted R<sup>2</sup></i>	0.033	0.216		0.233		0.214		0.213		0.229		0.221		0.250		

\*p &lt;=.05; \*\*p &lt;=.01; \*\*\*p &lt;=.001

Table 3: Linear regression models predicting Pro-Environmental Behaviour – Engagement at Home

Variable	Linear Regression Models Predicting PEB-Engagement at Home																
	Model 1 Demographics – Convictions		Model 2 Demographics, – Convictions,		Model 3 Demographics, – Emotional De- cision-Making		Model 4 Demographics, – Emotional De- cision-Making		Model 5 Demographics, – Emotional De- cision-Making		Model 6 Demographics, – Emotional De- cision-Making		Model 7 Demographics, – Emotional De- cision-Making		Model 8 All		
B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B		
<i>Control Variables</i>																	
Age	-0.006	0.010	-0.014	0.010	-0.011	0.009	-0.013	0.010	-0.013	0.010	-0.015	0.010	-0.013	0.010	-0.010	0.009	
Education	<b>0.435*</b>	0.184	0.138	0.174	0.112	0.166	0.093	0.174	0.075	0.173	0.137	0.177	0.087	0.176	0.032	0.171	
Gender	-0.300	0.208	-0.213	0.211	-0.136	0.202	-0.237	0.209	-0.295	0.210	-0.225	0.213	-0.264	0.212	-0.228	0.206	
Ethnic Minority	<b>0.606*</b>	0.267	0.082	0.256	0.062	0.244	0.134	0.254	0.108	0.252	0.034	0.258	0.134	0.257	0.102	0.248	
Leadership Role	<b>0.591**</b>	*	0.177	<b>0.377**</b>	0.167	0.231	0.162	0.312	0.168	0.289	0.168	<b>0.375*</b>	0.168	<b>0.419*</b>	0.169	0.199	0.166
Tech Industry	0.159	0.178	-0.095	0.17	-0.076	0.162	-0.142	0.170	-0.143	0.168	-0.096	0.171	-0.188	0.175	-0.179	0.167	
Remote Work	-0.273	0.228	-0.022	0.22	0.004	0.209	0.039	0.219	-0.026	0.216	-0.022	0.220	0.047	0.224	0.066	0.216	
<i>Independent Variables</i>																	
Spirituality	0.226	0.177	0.217	0.169	0.232	0.175	0.220	0.174	0.235	0.178	0.157	0.179	0.183	0.171			
Political Beliefs	0.116	0.061	0.079	0.059	<b>0.121*</b>	0.060	<b>0.124*</b>	0.060	0.104	0.062	<b>0.131*</b>	0.062	0.094	0.060			
Political Activity	0.341	0.183	0.215	0.176	0.335	0.181	0.339	0.180	0.327	0.183	0.35	0.184	0.208	0.177			
Purpose	<b>0.972***</b>	0.112	<b>0.853***</b>	0.110	<b>0.851***</b>	0.123	<b>0.777***</b>	0.130	<b>0.904***</b>	0.123	<b>0.857***</b>	0.124	<b>0.567***</b>	0.139			
Moral Disengagement	0.005	0.072	-0.052	0.070	0.035	0.073	0.035	0.072	0.005	0.073	-0.008	0.073	-0.023	0.071			

Linear Regression Models Predicting PEB-Engagement at Home

Variable	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6			Model 7			Model 8			
	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	
<i>Moderator Variables</i>																									
Climate Change Experience																									
	0.393***	0.081																							
Psychological Wellbeing																									
	0.268*	0.118																							
Entrepreneurial Spirit																									
	0.376**	0.132																							
Friends & Family Perception																									
	0.199	0.166																							
Coworker Perception																									
	0.032	0.157																							
Organizational Contribution																									
	0.061	0.109																							
Organizational Authenticity																									
	-0.119	0.155																							
Organizational Guidance																									
	0.101	0.148																							
Organizational Inspiration																									
	0.138	0.124																							
<i>Adjusted R<sup>2</sup></i>		0.068		0.339		0.400		0.351		0.359		0.339		0.343		0.343		0.343		0.410					

\*p <=.05; \*\*p <=.01; \*\*\*p <=.001

Table 4: Linear regression models predicting Pro-Environmental Behaviour – Engagement at Work

## Linear Regression Models Predicting PEB-Engagement at Work

Variable	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8	
	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B
Climate Change Experience			<b>0.431**</b>	0.084			<b>0.338**</b>	0.122							<b>0.395**</b>	0.082
Psychological Wellbeing															0.176	0.143
Entrepreneurial Spirit							<b>0.375**</b>	0.137							0.162	0.161
Friends & Family Perception									0.179	0.171					0.169	0.159
Coworker Perception									0.305	0.162					0.184	0.156
Organizational Contribution											0.152	0.111			0.187	0.105
Organizational Authenticity											-0.286	0.158			-0.249	0.150
Organizational Guidance											0.182	0.150			0.102	0.142
Organizational Inspiration											<b>0.253*</b>	0.126			0.177	0.119
<i>Adjusted R<sup>2</sup></i>	0.068		0.334		0.402		0.353		0.352		0.351		0.371		0.451	

\*p <=.05; \*\*p <=.01; \*\*\*p <=.001

## 5. Discussion

This study distinguishes the demographic, individual, and social predictors of PEAs and PEBs in a sample of workers in traditionally high-emitting, climate-key industries in Germany, most of whom work in the technology sector. The study's findings reveal interesting patterns regarding convictions and their relationship with environmental attitudes and behaviours while providing evidence for the vital role of emotions and social norms in environmental decision-making.

Workers identifying with left-leaning political parties and exhibiting higher moral engagement with environmental issues demonstrated stronger environmental attitudes, which aligns with the observations of previous studies (Currie & Choma, 2018). However, these convictions did not necessarily translate into PEBs, potentially attributable to a reluctance to discuss these topics at work, perhaps due to pluralistic ignorance (Geiger & Swim, 2016; Sparkman et al., 2022), where individuals underestimate the extent to which others share their views. A related finding is that having spiritual or religious beliefs relates negatively to environmental habits, contradicting findings in other contexts such as China (Li et al., 2023) and Malaysia (Abdullah & Keshminder, 2020). This might be due to a preference for adhering to familiar, norm-conforming habits rather than adopting changes that might challenge (conservative) values.

Notably, having a higher sense of purpose, which involves embracing pro-social, community-oriented, and altruistic values, emerged as a significant predictor for all dependent variables. This suggests that – irrespective of political and spiritual beliefs – an intrinsic altruistic drive and passion for making a positive impact on the world may be a most critical determinant of sustainable behaviours with regards to personal convictions. This underscores the importance of fostering a sense of purpose and altruism to promote pro-environmental actions across the entire spectrum of ideological perspectives and might also suggest that having a sense of purpose does not necessarily intertwine with religious or spiritual beliefs, as previously expected (Oishi & Diener, 2013). Given the young sample in this study (average age = 32), this potentially provides evidence for the contextual and generational views of purpose and spirituality; however, further research is needed in this regard.

The study found that personal experience with climate change was a strong predictor of the PEBs examined. This suggests that direct exposure to the impacts of climate change may play a crucial role in motivating

individuals to adopt more sustainable behaviours, confirming findings from previous research (Broomell et al., 2015; Constantino et al., 2022). This implies that simulating future impacts of environmental issues in a personal and tangible manner, such as through engaging storytelling about a beloved city's future under climate change (e.g. Staud & Reimer, 2021) – could bolster PEBs by activating emotions-driven decision-making processes. Also in-line with our expectations, higher levels of psychological wellbeing and entrepreneurial spirit were found to promote engagement with others on environmental topics, both at home and in the workplace, indicating that emotional resilience and an innovative mindset might be essential for fostering proactive environmental collaboration.

Interestingly, the relationship between political ideology and environmental engagement at home was moderated by psychological wellbeing and entrepreneurial spirit. This finding suggests that these personal attributes may influence how political beliefs translate into action in the domestic sphere. It is possible that those individuals are better equipped to navigate potential ideological differences and identify creative and collaborative solutions to environmental challenges within their households. Further research could help clarify the specific mechanisms underlying these relationships and their implications.

The study's findings also provide intriguing insights into the role of the perception of social norms in shaping PEAs and PEBs. Perception of friends and family as well as colleagues' environmental behaviour significantly relates to an individual's PEA. Also, the perception of the behaviour of friends and family members was found to moderate the relationship between spiritual and political beliefs and PEB-Personal Habits. This suggests that individuals may prioritize the perceived expectations of their close social circles over their personal convictions when adopting particular lifestyle practices. Surprisingly, the perception of the behaviour of friends, family, and colleagues did not significantly relate to PEB engagement neither at home nor at work. This finding indicates that social norms might not always play a significant role in motivating environmental action, warranting context-specific behavioural norm interventions (Constantino et al., 2021).

Unexpectedly, negative perceptions of organizational authenticity were associated with higher PEAs and PEB-Habits. This could imply that individuals attempt to compensate for their organization's perceived shortcomings in their private lives without feeling secure enough to engage with others on these matters. The findings also signal the ambiguous contribu-

tion of organizational authenticity to PEB (Lopes et al., 2023). On the other hand, an inspiring work environment embodying a higher cause seems to motivate workers to engage with environmental initiatives in the workplace, perhaps due to the expectation of being rewarded for such actions. However, this positive perception of organizational inspiration did not relate to PEA, PEB-Personal Habits, or PEB-Engagement at Home, suggesting the distinct role of organizational culture in shaping environmentally focused behaviour within professional settings (Robertson & Barling, 2013).

Our results also indicate that being a BIPOC individual significantly predicts PEA when accounting for all variables in the study (Models 1–8 in Table 1), while the impact of being a BIPOC on PEB at home and at work is less prominent. This may suggest that BIPOC individuals feel hesitant to express or act upon their pro-environmental views. Explanations could be feelings of exclusion or “invisibility” in the workplace (see Buchanan & Settles, 2019), potentially fuelled by the rise in cases of racism and Islamophobia in Germany particularly since October 2023 (Deutsche Welle, 2024a, 2024b). This provides evidence for the importance of creating safe spaces and authentic inclusion and empowerment of workers across ethnic backgrounds to truly enhance sustainability. However, further research is needed to explain this finding. Additionally, older age was associated with stronger PEAs, but given the relatively young average sample age, this finding should be interpreted with caution.

Higher education levels were linked to increased PEB both at home and at work but not necessarily with stronger PEA or PEB-Personal Habits. This could be attributable to the confidence that higher education provides, empowering individuals to motivate others to adopt environmentally friendly practices. Furthermore, those in professional leadership positions were found to engage with others both at home and work, but having a leadership position was negatively associated with practising personal environmental habits. This may suggest a tendency towards intellectual virtue signalling (Levy, 2023), particularly among leaders and also those with a higher education level, but further research is needed to explain this finding. It may also be that leaders perceive engagement with sustainability and environmental issues to be a popular trend or a social expectation, prompting them to advocate for it without necessarily internalizing the importance of practising sustainable behaviours in their own lives.

Finally, we find that working in the technology sector might be linked to more environmentally friendly personal habits than employment in non-tech industries. This could be due to the workplace location flexibility that

tech jobs often offer. Working from home, which may be more common in such fields, can reduce the need for daily commuting or enable workers to have more control over their dietary choices. It may also be due to selection bias regarding the type of workers that join the tech industry. This possibility needs further explanation, appearing to conflict with recent research suggesting that technology company leaders in Germany might be less environmentally inclined than their counterparts in other industries (Lammers et al., 2022). Meanwhile, our results also show that working solely remotely appears to have a significant and negative impact on PEB with respect to workplace engagement. This could be due to the reduced workplace embeddedness and sense of organizational belonging experienced by online workers, which diminishes the motivation or ability to engage in shaping organizational values or investing in workplace awareness activities and community initiatives.

## 6. Conclusion

Purpose, understood as striving to make the world a better place through one's work, is the unifying predictor of PEAs and PEBs across home and work domains. Workers increasingly seek mission-driven organizations; combined with the rapid digital transition across all work domains, this will inevitably impact technology-based work. Our study offers novel insights into the environmentally impactful attitudes and behaviours of workers in Germany mainly operating in the technology sector. Addressing climate change undoubtedly requires that organizations make immense and fast changes. Workers are a crucial part of achieving that change and operationalizing new plans, products, and services. The unifying role of purpose suggests that organizations should adopt an environmental mission and that workers are, already, finding outlets for PEB at work and at home, with tech workers appearing more willing or able than others to embrace pro-environmental habits.

Furthermore, cultivating a work environment that supports emotional resilience, personal growth, and work-life balance can positively influence both employee wellbeing and environmental sustainability, while empowering underrepresented minorities to share their voice may foster inclusive change. Leaders should not only actively foster a purposeful, wellbeing-promoting, and inclusive workplace but be open to learning from team members about environmental habits. In uncertain, increasingly digital fu-

tures, the importance of these initiatives is amplified as technology reshapes the nature of work and introduces new challenges. Embracing digital tools and practices while maintaining a focus on purpose, wellbeing, and inclusivity will be crucial to thriving in this evolving landscape, ensuring that workers remain resilient and adaptive in the face of uncertainty while being part of the solution rather than the problem with respect to environmental sustainability.

Our study features some noteworthy limitations. First, because data collection was based on self-reported survey responses, subjectivity in responses and social desirability bias may be inevitable. Second, the data and analyses are correlational and cannot provide evidence about causal relationships between measured variables. Furthermore, the analyses are based on a relatively small sample of workers who were all recruited using a single platform. This may have consequences for the representativeness of the sample and, therefore, the generalizability of our results.

## References

Abdullah, M. S., & Keshminder, J. S. (2020). Religion and pro-environmental behaviour: A comparative analysis towards environmental protection. *International Journal of Environment and Sustainable Development*, 19(2), 174–194.

Blaine, B. E., Trivedi, P., & Eshleman, A. (1998). Religious belief and the self-concept: Evaluating the implications for psychological adjustment. *Personality and Social Psychology Bulletin*, 24(10), 1040–1052. <https://doi.org/10.1177/01461672982410002>

Broomell, S. B., Budescu, D. V., & Por, H.-H. (2015). Personal experience with climate change predicts intentions to act. *Global Environmental Change*, 32, 67–73. <https://doi.org/10.1016/j.gloenvcha.2015.03.001>

Buchanan, N. T., & Settles, I. H. (2019). Managing (in)visibility and hypervisibility in the workplace. *Journal of Vocational Behavior*, 113, 1–5. <https://doi.org/10.1016/j.jvb.2018.11.001>

Caggiano, H., Constantino, S. M., Lees, J., Majumdar, R., & Weber, E. U. (2023). Community-engaged research is best positioned to catalyze systemic change. *The Behavioral and Brain Sciences*, 46, e152. <https://doi.org/10.1017/S0140525X23001024>

Chen, S. Y., & Urminsky, O. (2019). The role of causal beliefs in political identity and voting. *Cognition*, 188, 27–38. <https://doi.org/10.1016/j.cognition.2019.01.003>

Chung, A., & Rimal, R. (2016). Social norms: A review. *Review of Communication Research*, 4, 1–28. <https://doi.org/10.12840/issn.2255-4165.2016.04.01.008>

Composto, J. W., Constantino, S. M., & Weber, E. U. (2023). Predictors and consequences of pro-environmental behavior at work. *Current Research in Ecological and Social Psychology*, 4, 100107. <https://doi.org/10.1016/j.cresp.2023.100107>

Constantino, S. M., Pianta, S., Rinscheid, A., Frey, R., & Weber, E. U. (2021). The source is the message: The impact of institutional signals on climate change-related norm perceptions and behaviors. *Climatic Change*, 166(3–4), 35. <https://doi.org/10.1007/s10584-021-03095-z>

Constantino, S. M., Sparkman, G., Kraft-Todd, G. T., Bicchieri, C., Centola, D., Shell-Duncan, B., Vogt, S., & Weber, E. U. (2022). Scaling up change: A critical review and practical guide to harnessing social norms for climate action. *Psychological Science in the Public Interest*, 23(2), 50–97. <https://doi.org/10.1177/15291006221105279>

Conz, E., Magnani, G., Zucchella, A., & De Massis, A. (2023). Responding to unexpected crises: The roles of slack resources and entrepreneurial attitude to build resilience. *Small Business Economics*, 61(3), 957–981. <https://doi.org/10.1007/s11187-022-00718-2>

Currie, S., & Choma, B. (2018). Sociopolitical ideology and the morality of green behaviour. *Environmental Politics*, 27(2), 247–266. <https://doi.org/10.1080/09644016.2017.1413727>

Dai, J., Kesternich, M., Löschel, A., & Ziegler, A. (2015). Extreme weather experiences and climate change beliefs in China: An econometric analysis. *Ecological Economics*, 116, 310–321. <https://doi.org/10.1016/j.ecolecon.2015.05.001>

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New Well-being Measures: Short Scales to Assess Flourishing and Positive and Negative Feelings. *Social Indicators Research*, 97(2), 143–156. <https://doi.org/10.1007/s11205-009-9493-y>

Deutsche Welle. (2024a, January 12). *Muslims in Germany: Life post-Hamas-attack “like after 9/11.”* Deutsche Welle. <https://www.dw.com/en/muslims-in-germany-life-post-hamas-attack-like-after-9-11/a-67959092>

Deutsche Welle. (2024b, June 25). *Germany: Annual discrimination report logs 22% rise in cases.* Deutsche Welle. <https://www.dw.com/en/germany-annual-discrimination-report-logs-22-rise-in-cases/a-69463601>

Fahy, F. (2005). The right to refuse: Public attitudes and behaviour towards waste in the west of Ireland. *Local Environment*, 10(6), 551–569. <https://doi.org/10.1080/13549830500321618>

Farjam, M., Nikolaychuk, O., & Bravo, G. (2019). Experimental evidence of an environmental attitude-behavior gap in high-cost situations. *Ecological Economics*, 166, 106434. <https://doi.org/10.1016/j.ecolecon.2019.106434>

Geiger, N., & Swim, J. K. (2016). Climate of silence: Pluralistic ignorance as a barrier to climate change discussion. *Journal of Environmental Psychology*, 47, 79–90. <https://doi.org/10.1016/j.jenvp.2016.05.002>

Grothmann, T., Frick, V., Harnisch, R., Münsch, M., Kettner, S. E., & Thorun, C. (2023). *Umweltbewusstsein in Deutschland 2022.* Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz (BMUV). <https://www.umweltbundesamt.de/publikationen/umweltbewusstsein-in-deutschland-2022>

Jasinenko, A., & Steuber, J. (2023). Perceived organizational purpose: Systematic literature review, construct definition, measurement and potential employee outcomes. *Journal of Management Studies*, 60(6), 1415–1447. <https://doi.org/10.1111/joms.12852>

Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist*, 58(9), 697–720. <https://doi.org/10.1037/0003-066X.58.9.697>

Kahneman, D. (2013). *Thinking, fast and slow* (Reprint edition). Farrar, Straus and Giroux.

Kennedy, E., Beckley, T., Mcfarlane, B., & Nadeau, S. (2009). Why we don't "walk the talk": Understanding the environmental values/behaviour gap in Canada. *Human Ecology Review*, 16(2), 151–160.

Kouchaki, M., & Desai, S. D. (2015). Anxious, threatened, and also unethical: How anxiety makes individuals feel threatened and commit unethical acts. *Journal of Applied Psychology*, 100(2), 360–375. <https://doi.org/10.1037/a0037796>

Lamm, E., Tosti-Kharas, J., & King, C. E. (2015). Empowering employee sustainability: Perceived organizational support toward the environment. *Journal of Business Ethics*, 128(1), 207–220. <https://doi.org/10.1007/s10551-014-2093-z>

Lammers, T., Rashid, L., Kratzer, J., & Voinov, A. (2022). An analysis of the sustainability goals of digital technology start-ups in Berlin. *Technological Forecasting and Social Change*, 185, 122096. <https://doi.org/10.1016/j.techfore.2022.122096>

Levy, N. (2023). Intellectual virtue signaling. *American Philosophical Quarterly*, 60(3), 309–322.

Li, J., Zhai, S., & Li, X. (2023). Religion and enterprise pollution behavior: Evidence from China. *Journal of Cleaner Production*, 384, 135454. <https://doi.org/10.1016/j.jclepro.2022.135454>

Lopes, J. M., Gomes, S., & Trancoso, T. (2023). The dark side of green marketing: How greenwashing affects circular consumption? *Sustainability*, 15(15), Art. 15. <https://doi.org/10.3390/su15151649>

Maheshwari, A., Bhagwat, S., & Karpate, Y. (2024). How can faith-based approaches protect biodiversity? *Journal for Nature Conservation*, 126578. <https://doi.org/10.1016/j.jnc.2024.126578>

Meynhardt, T., Steuber, J., & Feser, M. (2023). The Leipzig Leadership Model: Measuring leadership orientations. *Current Psychology*. <https://doi.org/10.1007/s12144-023-04873-x>

Munro, P., Kapitan, S., & Wooliscroft, B. (2023). The sustainable attitude-behavior gap dynamic when shopping at the supermarket: A systematic literature review and framework for future research. *Journal of Cleaner Production*, 426, 138740. <https://doi.org/10.1016/j.jclepro.2023.138740>

Oishi, S., & Diener, E. (2013). Residents of poor nations have a greater sense of meaning in life than residents of wealthy nations. *Psychological Science*, 25(2). <https://doi.org/10.1177/0956797613507286>

Park, H. J., & Lin, L. M. (2020). Exploring attitude-behavior gap in sustainable consumption: Comparison of recycled and upcycled fashion products. *Journal of Business Research*, 117, 623–628. <https://doi.org/10.1016/j.jbusres.2018.08.025>

Qin, X., Shepherd, D. A., Lin, D., Xie, S., Liang, X., & Lin, S. (2020). The dark side of entrepreneurs' creativity: Investigating how and when entrepreneurs' creativity increases the favorability of potential opportunities that harm nature. *Entrepreneurship Theory & Practice*. <https://doi.org/10.1177/1042258720915582>

Rashid, L. (2022). Bursting the bubble: Why sustainability initiatives often lack adequate intention to action translation. *Small Business Economics*, 1–9. <https://doi.org/10.1007/s11187-022-00599-5>

Reeck, C., Gamma, K., & Weber, E. U. (2022). How we decide shapes what we choose: Decision modes track consumer decisions that help decarbonize electricity generation. *Theory and Decision*, 92(3), 731–758. <https://doi.org/10.1007/s11238-022-0987-4-z>

Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. *JOURNAL OF ORGANIZATIONAL BEHAVIOR*, 34(2), 176–194. <https://doi.org/10.1002/job.1820>

Servaes, M., Nguyen Thi Thu, H., Kluijtmans, T., & Crucke, S. (2022). Don't talk the talk, but walk the walk: The role of authentic CSR in fostering beneficial employee outcomes. *Management Decision*, 61(3), 569–588. <https://doi.org/10.1108/MD-11-2021-1515>

Singer, T., & Lamm, C. (2009). The social neuroscience of empathy. *Annals of the New York Academy of Sciences*, 1156(1), 81–96. <https://doi.org/10.1111/j.1749-6632.2009.04418.x>

Sparkman, G., Geiger, N., & Weber, E. U. (2022). Americans experience a false social reality by underestimating popular climate policy support by nearly half. *Nature Communications*, 13(1), 4779. <https://doi.org/10.1038/s41467-022-32412-y>

Staud, T., & Reimer, N. (2021). *Deutschland 2050: Wie der Klimawandel unser Leben verändern wird* (8. edition). KiWi-Paperback.

Truelove, H. B., Carrico, A. R., Weber, E. U., Raimi, K. T., & Vandenbergh, M. P. (2014). Positive and negative spillover of pro-environmental behavior: An integrative review and theoretical framework. *Global Environmental Change*, 29, 127–138. <https://doi.org/10.1016/j.gloenvcha.2014.09.004>

Weber, E. U. (2010). What shapes perceptions of climate change? *WIREs Climate Change*, 1(3), 332–342. <https://doi.org/10.1002/wcc.41>

Weber, E. U., & Lindemann, P. G. (2007). From intuition to analysis: Making decisions with our head, our heart, or by the book. In H. Plessner, C. Betsch, & T. Betsch (Eds.), *Intuition in judgment and decision making* (pp. 191–208). Lawrence Erlbaum.

## Appendix 1: Survey Items and Measures

Variable Type	Variable Name	Item	Response Type	Source
Scoping	Industry Branch	Which of the following best describes the industry that you, personally, work in (regardless of your job title)?	Multiple Choice	
Control	Age	How old are you in years?	Open Text	(Composto et al., 2023)
Control	Education	What is your highest obtained academic qualification?		
Control	Gender	What is your gender?		
Control	Ethnic Minority	Do you consider yourself a person of colour/BIPoC?		
Control	Leadership Role	Which of the following best describes your role at work?	Single Choice	
Independent	Spirituality	Which of the following best describes your religious and spiritual beliefs?		
Independent	Political Beliefs	Which political party do you most associate with?		
Independent	Political Activity	In the last 5 years, have you participated in any political action or protest?		
Independent	Purpose	I want my work to benefit society		
		I want my work to contribute to changing the world for the better		
		I focus what I do on the common good		
		I check whether my decisions are in line with social expectations		
		I forgot personal gain if it harms the common good	Likert Scale (1-6)	(Meynhart et al., 2023)
		I take the common good into account in conflicts		
		I am passionate about work that has social relevance		
		I am proud if I can make a contribution to society with my work		
Independent	Moral Disengagement	I motivate employees to see their work in a larger context than our organization		
		I think that organizations should be guided mainly by their social function		
		It is okay to sacrifice the natural environment for economic development		
		Polluting the natural environment is okay as long as you can restore it later	Likert Scale (1-7)	(Qin et al., 2020)

Variable Type	Variable Name	Item	Response Type	Source
Moderator	Climate Change Experience	Considering that other people are destroying the natural environment, it's hardly a big deal to pollute it casually		
		People shouldn't be held accountable for doing things that harm the natural environment if an authority figure encouraged them to do so		
		People can't be blamed for doing things that are bad for the natural environment when all their friends are doing it too		
		Doing things that temporarily harm the natural environment is no big deal		
		The natural environment can be harmed because it can restore itself		
		Nature was holding back human survival and advancement		
		I have been experiencing extreme weather events more frequently over the past three years		
		At least one extreme weather event in the past three years has caused me or someone close to me physical harm (e.g. bodily injury)		
		At least one extreme weather event in the past three years has caused me or someone close to me material harm (e.g. property damage)		
		At least one extreme weather event in the past three years has caused me or someone close to me financial harm (e.g. job or income loss)		
Moderator	Psychological Well-being	At least one extreme weather event in the past three years has caused me or someone close to me mental harm (e.g. emotional or psychological hardship)		
		I lead a purposeful and meaningful life		
		My social relationships are supportive and rewarding		
		I am engaged and interested in my daily activities		
		I actively contribute to the happiness and well-being of others		
Moderator	Entrepreneurial Spirit	I am competent and capable in the activities that are important to me		
		I am a good person and live a good life		
		I am optimistic about my future		
		People respect me		
		I want to help new things get off the ground		
			Likert Scale (1-6)	(Meynhardt et al., 2023)

Variable Type	Variable Name	Item	Response Type	Source
Moderator	I take risks in order to try out new things			
	I am enthusiastic about new ideas			
	I solve problems creatively			
	I encourage people around me to try new things			
	I see change as positive			
	I am a fountain of ideas			
	I find it easy to let go of routines			
	I want to develop as a person			
	I look for challenges			
Moderator	Friends & Family Perception	<p>"Companies should prioritize equally, their workers, customers, suppliers, community, and the environment." Most of my friends would...</p> <p>"The private sector has caused environmental degradation." Most of my friends would...</p> <p>"Companies that do not adapt and address climate change now will become less successful over time." Most of my friends would...</p> <p>"Companies should prioritize equally, their workers, customers, suppliers, community, and the environment." Most of my friends would...</p> <p>"Policies and regulations are the best way to address climate change." Most of my friends would...</p> <p>"Innovation and technology are the best way to address climate change." Most of my friends would...</p> <p>"Individuals have a responsibility to protect the environment." Most of my friends would...</p> <p>"Companies should prioritize equally, their workers, customers, suppliers, community, and the environment." Most of my friends would...</p> <p>"The private sector has caused environmental degradation." Most of my coworkers would...</p> <p>"Companies that do not adapt and address climate change now will become less successful over time." Most of my coworkers would...</p>	Likert Scale (1-5)	(Composto, Constantino, and Weber 2023)
	Coworker Perception	<p>"Policies and regulations are the best way to address climate change." Most of my coworkers would...</p> <p>"Innovation and technology are the best way to address climate change." Most of my coworkers would...</p> <p>"Individuals have a responsibility to protect the environment." Most of my coworkers would...</p>	Likert Scale (1-6)	(Jasinenko & Steuber, 2023)
Moderator	Organizational Support	My organization aims to contribute to the common good	Likert Scale (1-6)	

Variable Type	Variable Name	Item	Response Type	Source
	<i>Perceived Contribution</i>	My organization seeks to create a positive change in the world		
		My organization aims to achieve something that goes beyond its own benefit		
	<i>Organizational Support-Perceived Authenticity</i>	My organization remains true to its core values even when conflicts occur		
		My organization is fully committed to its overarching goals		
		My organization credibly embodies its core values		
	<i>Organizational Support-Perceived Guidance</i>	My organization's overarching goals provide orientation in complex situations		
		My organization's higher goals guide decisions and actions		
	<i>Organizational Support-Perceived Inspiration</i>	My organization's overarching goals provide stable guidance in times of rapid change		
		My organization unites through inspiring higher goals		
		My organization conveys the idea of being part of something bigger		
		My organization inspires by providing a higher cause		
Dependent	Personal Environmental Attitudes (PEA)	"Companies should prioritize, equally, their workers, customers, suppliers, community, and the environment." I...		
		"The private sector has caused environmental degradation." I...		
		"Companies that do not adapt and address climate change now will become less successful over time." I...	Likert Scale (1-5)	(Composto, Constantino, and Weber 2023)
		"Policies and regulations are the best way to address climate change." I...		
		"Innovation and technology are the best way to address climate change." I...		
		"Individuals have a responsibility to protect the environment." I		
		I choose meatless meal options		
Dependent	Personal Pro-Environmental Habits (PEB-personal Habits)	I use public transport of a bicycle to get around even if it takes longer to get to my destination		
		I wear recycled or second-hand clothing	Likert Scale (1-7)	
Dependent	Home Pro-Environmental	I use reusable bags and packaging		
		I keep the air-conditioning and heating devices off even if it's uncomfortably hot or cold		
		I give my time to help my friends and family take the environment into account in their daily activities		
		I actively participate in environmental events organized in and/or by my community		

Variable Type	Variable Name	Item	Response Type	Source
	Engagement (PEB-Home)	I voluntarily carry out environmental actions and initiatives in my daily life activities I make suggestions to my friends and family about ways to protect the environment more effectively, even when it is not my responsibility		
		I give my time to help my colleagues take the environment into account in what they do at work		
		I actively participate in environmental events organized in and/or by my company		
Dependent	Work Pro-Environmental Engagement (PEB-Work)	I voluntarily carry out environmental actions and initiatives in my daily work activities I make suggestions to my colleagues about ways to protect the environment more effectively, even when it is not my direct responsibility		

Appendix 2: Pearson correlation coefficients between all tested variables. \* indicates two-tailed significance at the 0.05 level; \*\* indicates two-tailed significance at the 0.01 level.

	PIA	PIB - Personal Engagement at Home	PIB - Personal Engagement at Work	PIB - Spiritual Engagement at Work	PIB - Political Engagement at Work	PIB - Beliefs	Political Activity	Political Purpose	Moral Engagement	Climate Change	Psychological Wellbeing	Entrepreneurial Spirit	Friendship & Family	Coworker Perception	Organizational Contribution	Organizational Autonomy	Organizational Guidance	Organizational Inspiration
PIA	1	0.382**	0.361**	0.311**	0.417*	0.271**	-0.003	0.477**	-0.223**	0.236**	0.261**	0.545**	0.261**	0.124**	0.149**	0.134*	0.175**	
PIB - Personal Habits	0.382**	1	0.477**	0.391**	0.4030	0.233**	-0.197**	0.321**	-0.212**	0.202**	0.171**	0.154**	0.226**	0.128*	0.150**	0.040	0.059	0.105
PIB - Engagement at Home	0.461**	1	0.271**	0.281**	0.365*	0.155**	0.197**	0.570**	-0.030	0.402**	0.398**	0.433**	0.111**	0.277**	0.297**	0.344**	0.274**	0.306**
PIB - Engagement at Work	0.311**	0.391**	1	0.269**	0.094	0.365*	0.562**	0.048	0.466**	0.416**	0.436**	0.323**	0.347**	0.363**	0.281**	0.346**	0.346**	0.397**
Spiritual Beliefs	0.047	-0.030	0.217**	0.239**	-1	-0.079	0.096	0.309**	0.044	0.132*	0.175**	0.205**	0.095	0.192**	0.218**	0.191**	0.218**	0.235**
Political Beliefs	0.271**	0.233**	0.155*	0.094	-0.079	1	0.156*	0.078	-0.196**	0.149*	0.016	0.002	0.055**	0.034	-0.120	-0.143*	-0.115	-0.092
Political Activity	-0.003	0.179**	0.197**	0.136*	0.096	0.154*	1	0.164**	0.005	0.178*	0.078	0.075	0.077	0.101	0.030	0.008	-0.015	-0.010
Purpose	0.377**	0.321**	0.570**	0.562**	0.305**	0.078	0.164**	1	-0.075	0.242**	0.159**	0.388**	0.580**	0.388**	0.415**	0.427**	0.364**	0.425**
Moral Disengagement	-0.222**	-0.212**	-0.030	-0.048	0.044	-0.196**	0.005	-0.075	1	0.159**	-0.153**	-0.067	-0.046	0.098	0.1018	0.027	0.079	0.075
Climate Change Experience	0.230**	0.262**	0.402**	0.466**	0.132*	0.149*	0.178**	0.242**	0.159**	1	0.144*	0.207**	0.149*	0.161**	0.070	0.047	0.131*	0.129*
Psychological Wellbeing	0.226**	0.171**	0.398**	0.416**	0.175**	0.016	0.078	0.519**	0.144*	1	0.693**	0.232**	0.269**	0.311**	0.367**	0.311**	0.351**	0.368**
Entrepreneurial Spirit	0.261**	0.154**	0.433**	0.346**	0.205**	0.002	0.077	0.580**	-0.067	0.207**	0.693**	1	0.294**	0.248**	0.255**	0.279**	0.326**	0.363**
Friends & Family Perception	0.454**	0.296**	0.311**	0.323**	0.095	0.196**	0.101	0.384**	-0.046	0.212**	0.149*	0.248*	1	0.535**	0.535**	0.197**	0.201**	0.239**
Coworker Perception	0.224**	0.128**	0.277**	0.347**	0.192**	0.034	0.030	0.405**	0.088	0.161**	0.269*	0.248*	0.535**	1	0.352**	0.304**	0.371**	0.395**
Organizational Contribution	0.497**	0.150**	0.29**	0.366**	0.218**	-0.120	0.008	0.427**	0.018	0.070	0.131**	0.253**	0.175**	0.535**	1	0.176**	0.645**	0.699**
Organizational Authenticity	0.134*	0.040	0.241**	0.281**	0.191**	-0.143*	-0.064	0.365**	0.027	0.047	0.367**	0.279*	0.197**	0.346**	0.716**	1	0.767**	0.706*
Organizational Guidance	0.198**	0.059	0.271**	0.366**	0.218**	0.196**	0.274**	0.397**	-0.015	0.351**	0.079	0.131*	0.326*	0.201**	0.159**	0.1645**	0.1645**	0.172*
Organizational Inspiration	0.175**	0.015	0.306**	0.397**	0.235**	-0.092	-0.010	0.422**	0.075	0.129*	0.368**	0.363**	0.229**	0.371**	0.076**	0.689**	0.762**	1