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ENVIRONMENTAL ALLYSHIP: HOW TRUSTING THE GOVERNMENT IMPACTS  
ENVIRONMENTAL DISPOSITIONS

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I dedicate my dissertation to my parents who have been an enormous influence in my life. Had I not received support from them both, this research would have never been completed. I also dedicate this work to my children, Chasm and Crest. Their goofy antics always entertain me when I need a laugh.

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## **Abstract**

In this dissertation, I introduce Environmental Allyship: A new measure to capture pro-environmental dispositions. I use this new measure and analyze its relationship with government trust, also measured in a unique way. I review the environmental literature and introduce new theoretical positions regarding this relationship. Structural equations modeling and several confirmatory factor analyses are used to analyze this relationship between Environmental Allyship and government trust. The data used comes from the 2019 Environmental Disposition Survey (EDS) (N = 2,015). Findings suggest that an individual's trust in the government has a strong, statistically significant correlation with environmental allyship. Persons are less likely to be environmental allies if they do not trust the government. These findings and their implications are discussed in the concluding portion of this paper.



## Chapter 1: Introduction

Karl Marx was heavily influenced by the philosophers Epicurus and Feuerbach (Foster 2012), who were philosophical materialists. In the *German Ideology* ([1846] 1976), as well as many of his other writings, Marx's arguments align with the traditions of philosophical materialism. He describes his dispositions about culture, indicating that he believes that the material circumstances in which we find ourselves directly impact how we engage with the material world. These material circumstances come to be the conditions we create as a result of our response to previous material realities. Thus, a continuous cyclical pattern exists, with material conditions impacting our culture, and our culture impacting material conditions. An analysis of a social world that does not include the natural world is rejected in materialist traditions.

By contrast, many philosophical idealist traditions, in opposition to materialist ones, state the momentum of this cycle between culture and material conditions is primarily fueled by ideas. Weber was a philosophical idealist himself as his intellectual work is rooted in neo-Kantian philosophy. In Weber's seminal work, *The Protestant Ethic and the Spirit of Capitalism* ([1905] 2012), Weber describes the impact ideas, in this case Protestant values and hyper-rationalization, can have on our material world. The pursuit over the mastery of the world is, according to Weber, only made possible through the development of ideas, or a culture of ideas, that allows for the rise of the *Berufsmensch*, a person of vocation who is not concerned with the purpose or meaning of their vocation, but rather only the utilitarian outcomes of their vocation.

Marx later rejected philosophical materialism of the time because it was primarily associated with scientific positivism, utilitarianism, instrumentalism, and rationalism (Foster 2012). This contention began with Marx's later writings regarding the environment, agriculture, and urbanization. Because of this, Marx adopted a more pluralist philosophy concerning the

materialist/idealist divide which, in the case of Marx, Foster refers to as “dialectical naturalism” (2012). Marx became very interested in the way humanity engaged with the natural world, particularly ways fueled by the ideas of utilitarianism, instrumentalism, and capitalism, which impacted the degradation of the environment primarily through the mechanism of metabolic rift.

Nevertheless, many scientific materialist thinkers, such as the classic Francis Bacon, believed it was the responsibility of humans to dominate over the natural world, subjugating it to the needs of humanity (Scalercio 2018). These materialist traditions are still present in contemporary culture (Bidhendi, Nigomatullina and Shiravand 2014, Burns 2009). Though these values are not the only values that, directly or indirectly, promote the exploitation of the environment, materialist values are most certainly a large contributor to an anthropocentric culture that devalues conservation or nature over the escalation of standards of living for certain humans.

This dissertation addresses the topic of the environment and human culture. Specifically, I am concerned with how our culture, the culture of the United States, engages with the environment. I argue that, as a philosophical pluralist myself, there is a multitude of cultural variables that interact with one another to create a cultural synthesis of resistance against pro-environmental values. In this chapter, I will specifically talk about the cultural value systems of the United States that interact with environmental values. That being said, I will first begin with a quick overview of some current environmental realities.

### *The Environmental Crisis*

The environment is in a position of crisis. The solutions to this crisis are complex. Some scholars suggest that market incentives can solve environmental problems (Delmas and Young

2009). Some solutions propose to involve massive technological investments that ultimately intend to mitigate the impact that humans have on the environment (Fisher and Jorgenson 2019). Both of these potential solutions have their substantial criticisms mounted against them (Huesemann and Huesemann 2011, Magdoff and Foster 2011). However, the anthropogenic nature of the climate crisis makes it intrinsically a sociological issue. How humans organize society and our patterns of extraction, production, and consumption are major impactors on our environment (Magdoff and Foster 2011, Malm 2018, Wright and Nyberg 2016). The climate crisis is a material phenomenon, but the way humans interact with the material world drastically shapes environmental outcomes (Foster 2012).

The current well-being of our physical environment has been declining for several decades (NASA 2020). This fact has consensus across multiple scientific disciplines (e.g. meteorology, geology, biology). These material changes to our world will ultimately make the future less sustainable for humankind. This ecological negligence is inexcusable, and even now people all around the world are feeling the impacts of climate change, especially in peripheral countries (Crenshaw and Jenkins 1996, Nunn et al. 2014). In core countries such as the United States, these impacts may be abstractions that do not feel as real relative to those directly feeling the consequences of climate change elsewhere.

These consequences are diverse and affect some countries more than others given certain factors specific to their geography. Rising temperatures (Church et al. 2008), changing precipitation patterns (Ban, Schmidli and Schär 2015), stronger hurricanes (Holland and Bruyère 2014), poorer water quality (Jorgenson and Burns 2004, Rehana and Mujumdar 2012), and reduction in animal diversity (Pauls et al. 2013) are all material manifestations of climate change. These factors make environmental issues the most important crises of our age.

Anthropogenic environmental damage is not a new phenomenon. Any form of life impacts the environmental context in which it finds itself (White 1967). Humans have been impacting their environment since the Neolithic revolution. However, with each new age, new technologies and new reasons are developed that encourage humanity to expand, extract, and exploit nature more than before. Anthropogenic factors have drastically exacerbated the progression toward a less sustainable future. Greenhouse gas emissions (Rosa and Dietz 2012), aerosol emissions (Samset et al. 2018), deforestation (Ficko and Bončina 2019, Gibbs, Harris and Seymour 2018), albedo disruption (Fortier et al. 2017), contrails (Boucher 2011), and metabolic rift (Schnoor 2005) are examples of human activities that lead to the degradation of the natural environment's well-being. We passed the ecological overshoot of the human economy in the 80s (Wackernagel et al. 2002), and the more we overshoot that threshold, the more difficult it will be to recover from the damage already done. Due to the potential magnitude of anthropogenic impactors on the environment, this crisis is fundamentally a social crisis, just as much as a material crisis.

### *Culture*

Culture is said to facilitate the meaningful interactions between individuals and the greater society (Handel 1982, Wuthnow 2010). It is a ubiquitous milieu that exists in our minds and shapes our interactions with others. Culture is an ambient force that influences our beliefs, thoughts, values, and actions, whilst having an invisible quality (Brown 1987). It plays a role in indoctrinating us into our societal norms, mores, and folkways. Culture informs us of what is correct, appropriate, proper, etc. (Archer 2004). Of course, by contrast, it also informs us of what is incorrect, inappropriate, and improper.

However, culture alone cannot teach us anything. The agents of culture (e.g., individuals and institutions) teach, directly and indirectly, the beliefs and values of a culture. Cultures themselves are typically found within patterns that are tied to particular categories, such as geography, nationality, ethnicity, and religion. For example, there exists a culture of the United States, a Latino culture, and a Catholic culture.

Cultures can vary across contexts. For example, though there may exist a global Catholic culture (which may show patterns that are statistically significant across all Catholic groups), Catholicism has subcultural pockets where the culture between two Catholic groups, though they may both fall under the culturally Catholic umbrella, practice Catholicism differently based on more localized differences. These differences may be the result of other cultural categories interacting with one another. For example, the national cultural identity that is Brazilian may experience and/or practice Catholicism differently than, say, someone in Austria because the national identities of Brazilian and Austrian interact with the identity of Catholic in different ways. Multiple cultural identities can be synthesized together in a single individual and thus those cultural categories are not universal. Someone who is Catholic, ethnically German, male, masculine, wealthy, and heterosexual, may experience and practice Catholicism differently than someone who is also Catholic, but ethnically Peruvian, female, feminine, poor, and queer.

The interactions and overlapping quality between cultures allow us to interpret cultures using network analysis. Not only across cultures but within the same culture (Burns 2009). The “nodes” of the network are the particularities of the culture itself, such as the culture’s beliefs, values, norms, etc. Some nodes of the network are more central to the culture than others (Burt 2014). Other nodes may exist on the periphery of the network and are therefore less important to the culture.

How these networks can be included in our understanding of cognition can help us construct a more holistic picture of human thought. Humans have an evolutionary tendency to adapt to their environment (Tomasello 1999). Not just our natural environment, but our social environment. Growing up, children gather, passively and actively, as much information as possible through stimulus. The information gained throughout this time is collectively interpreted to construct the child's understanding of reality (Piaget 2013). As children transition into adulthood and have a more well-established understanding of reality, new information is then more likely to be assimilated into their pre-existing understanding of reality. Of course, sometimes new information clashes with this pre-existing understanding paradoxically, which results in either outright rejection of the new information or the reconstruction of the old network to conform to the new information entirely. This reconstruction usually results in some form of cognitive dissonance (Festinger 2009).

The culture, as well as the agents which teach the culture, in which children grow-up are a part of the stimuli by which children learn about reality. This begins the construction of the child's "schema", a term used by the philosopher Kant (Kant [1781] 2017), and later refined (and more applicable for the use of this paper) by Piaget (Piaget 1951), to explain how humans perceive, organize, prioritize, and store information. This idea of the schema overlaps well with the approach that sees our construction of reality as a network of nodes. The schema is responsible for performing the task of organizing this network of information, determining which information is more central, which is more peripheral, as well as organizing new information that comes into the network. The schema is also responsible for controlling which nodes closely relate to other nodes. These closely related connections are referred to as "semantic networks" (Anderson 1983, Shoben and Rips 1974).

These semantic networks are incredibly important to our understanding of cognition. In general, the mechanism of semantic networks means the brain stores less overall information. For example, assigning multiple parameters to the overlapping portion of a Venn diagram means that those parameters do not have to appear multiple times across all categories involved. Said another way, more information can be stored within an individual's cognitive network of information if they can associate the new information with pre-existing information (Burns and LeMoyne 2002). These semantic networks are responsible for what many people experience when one particular idea reminds them of another. These separate parameters become attached within the schema that the thought of one becomes practically inseparable from the other.

However, much of the total picture of reality is not taught to or learned by us during our lifetime. Thus, we tend to “fill in the blanks” (the et cetera principle) regarding the elements of reality we are less clear on (Burns 2009). We do this by using our pre-existing construction of reality, so the information that is unknown to us (the blanks) is filled in with answers that are informed by our current understanding of reality. However, if that understanding happens to be factually incorrect, then the new information that we create is informed by incorrect information and is thus most likely incorrect itself as a result.

The Dominant Social Paradigm (DSP) developed by Pirages and Ehrlich (1974) is a theory regarding the construction of social reality and how that construction guides people in their expectations of that reality. A person's values are a part of this paradigm, and it has been shown that certain value perspectives, such as individualism (Komatsu, Rappleye and Silova 2019), materialism (Banerjee and McKeage 1994), consumerism (Erickson 1997), and libertarianism<sup>1</sup> (Hahnel and Sheeran 2009), have a negative relationship with pro-

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<sup>1</sup> The usage of libertarianism in this context strictly means the values regarding little-to-no government involvement in private spheres and laissez-faire, unfettered markets.

environmentalism. People in the United States have a history of embracing these values (Milbrath 1985, Shafer 2006), which makes it less likely they will adopt pro-environmental dispositions.

Ultimately, I discuss these details regarding cognitive psychology because they will play a role in my theoretical development of environmentalism in the United States. The prominent source of information that I will be focusing on is this aforementioned context of culture, in particular multiple elements of our culture. From capitalism to masculinity, I argue that many elements in the culture of the United States relate either intimately or tangentially to our environmental perspectives.

### *Capitalism*

Once our relationship with the material world changes, so too does our culture (Marx and Engels [1846] 1976). Along with economic capitalism comes a set of supporting cultural value systems that reinforce and legitimize its existence. These values over time develop and become a larger part of the culture, emerging as a value system of their own that seems only tangentially attached to the material circumstances that allowed for their emergence to begin with. The culture not only evolves to the new material circumstances but also, just like all stratified ages in human history, the ruling class has a major role in the construction of its culture (Burns and LeMoyne 2002, Marx 2008, Mosca 1961). They must legitimate their position on the social hierarchy by creating stories that justify the existence of “the haves and the have-nots” (Massey 2008, Mosca 1961, Pareto 1961). Many ideological categories have helped reinforce these particular cultural stories, such as religion and nationalism.



However, with the growing secularization and globalization of the world, these ideological categories are less universal. Cobb (1991) argues that we have navigated into a new ideological category: “economism”. Economism is an ideology promoting the task of solving problems for the sake of economic growth. Economism has no ethos of self-sacrifice like religion and nationalism do, but rather, promotes selfishness (Cobb 1991). When the motive of profiteering becomes a central cultural value, many people suffer as a result of exploitation (Aluko 2015, Wiegratz 2018). These values of exploitation and selfishness extend to the environment.

Progression toward a more sustainable future directly works against contemporary hegemonic interests, whether they be individual actors, groups, or institutions (Brewer and Ley 2013). Corporate interests, such as those in the fossil fuel industry, have put an extraordinary amount of effort into pushing a narrative that climate change is not real, or at least, that it has nothing to do with human activity (Conway and Oreskes 2014, Hoggan and Littlemore 2010, Holden 2020). Some corporations have monopolized patents to ensure they thwart cleaner battery technology (Shnayerson 1996). Mega-agriculture companies have used, and continue to use, non-environmentally friendly business practices that harm local environments all over the globe (Conway and Pretty 2013, Robin 2010). Multinational corporations that continue to extract resources from the global south and bring them to the global north perpetuating the disruption of biogeochemical cycles (Foster, Clark and York 2011).

All of the aforementioned examples are caused by the systemic and economic culture of profiteering, which is an inherent cultural element of capitalism (Wiegratz 2018). Capitalism is the systemic hegemonic force of contemporary societies and intrinsically clashes with the well-being of the environment. Capitalist economies must continue to grow (Binswanger 2009), and

this necessity encourages more extraction and consumption; high degrees of extraction and consumption negatively impact the well-being of the environment (Foster 2000, Kovel 2007, Malm 2018, Wright and Nyberg 2016). Despite this issue, the burden of proof is typically placed on the victims of such environmental damage, rather than the corporations that cause it (Burns 2009). Capitalism also encourages particular economic mechanisms, such as race-to-the-bottom dynamics (Konisky 2007) and resource capture (Homer-Dixon 1994), that further incentivize environmental damage.

Corporate interests have used propaganda to influence the dispositions of Americans on issues of the environment for many years (Beder 1998, Carey 1997, David 2003, Hall 2015, Sale and Foner 2001). This strategy has been incredibly effective at shaping the way many Americans perceive environmental issues (Beder 1998, Chomsky 1995, Good 2008). This creates a significant portion of the populous that, attitudinally speaking, sides with these corporations against the environment (Kilbourne, Beckmann and Thelen 2002)<sup>2</sup>. This propaganda strategy alone has created a great deal of damage to the well-being of the environment that could have been avoided in its absence (Egilman and Bohme 2005). However, cross-sectional research has found, as one would expect, pro-environmental dispositions are significant predictors of support for pro-environmental policies (Rauwald and Moore 2002). For this reason, we must continue to understand and track the trends and patterns in environmental dispositions.

This is not to say that all corporations are exclusively motivated by profit-seeking strategies and that the practice of environmentally conscious strategies is unheard of. For example, products created by companies such as LUSH (cosmetics), Blissmo (cleaning

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<sup>2</sup> For the sake of clarity, Kilbourne, Beckmann, and Thelen's research found that people who side with dispositions regarding economic liberalism are more likely to not support the environment. Part of the propaganda diffused by corporate propagandists is the advocacy of economic liberalism. This is why this citation is important.

products), and Rothy's (shoes) all use sustainable practices as a central and prioritized part of the way they do business (Dunn 2020, Greenwald 2020). However, research has shown that many corporations, especially large ones, who do work "green" strategies into their business models only adopt these strategies because they either believe it will be profitable (Palmer, Oates and Portney 1995, Walley and Whitehead 1994), or use them as window dressing in the hopes that they appear as being a "green" company, obfuscating their traditional profit-centered motives (Bounds 2010, Garrod and Chadwick 1996, Kim and Lyon 2011, Watson 2017).

### *Religion*

The United States has also been deeply influenced by Christian values throughout its history. Despite the United States' secularization throughout time, the values of Christianity that do not directly relate to the supernatural, and maybe some that do, have diffused into the greater culture of the United States. One notable belief is the Protestant work ethic (Weber [1905] 2012). This Protestant (particularly Calvinist) belief emphasizes that a person's frugality and hard work on Earth are part of their service to God. Of course, this belief works to the advantage of the capitalist system, helping to perpetuate its legitimacy.

Another Christian value that has bled into the culture of the United States is our domination over nature (White 1967). As the ideas of animism withered away by Christianity's victory over paganism, one of the fairly ubiquitous cultural values that protected nature from the onslaught of human expansion, extraction, and exploitation of nature was gone. God created a sentient man in his image. The purpose of the rest of God's creations was to benefit man. These value systems were adopted by most of the hegemonic forces since that time, and even to this day are central to, not only part of the Christian community of the world but the hegemonic

secular forces of the world. “Christianity is the most anthropocentric religion the world has seen” (White 1967).

However, this is not to say that these details of Christian values are universal, as some religious scholars have pointed out. Some other Christian denominations abandoned this line of thinking for an environmental approach to stewardship. Hitzhusen (2007) discusses some research that points out the contrary, where people with Judeo-Christian belief systems value the environment more so than their secular counterparts. The main factor that Hitzhusen mentions is once other variables such as political affiliation are considered, religious affiliation tends to lose its significance to environmental dispositions. Nevertheless, the particular denomination of Christianity matters. There are meaningful differences between different types of Christians in the United States (Steensland et al. 2000). Evangelicals are more politically conservative than Mainline and Black Protestants and this influences their dispositions regarding the environment (Smith and Leiserowitz 2013). This is not to say that all evangelicals are anti-environment, because some research shows changing trends in some evangelical congregations (Danielsen 2013). These changes, as well as the stronger link between political conservatism and evangelicalism, do not overcome the fact that this pattern still exists, and that evangelical Christians are less likely to have pro-environmental dispositions.

### *Gender*

Another value system that impacts environmental dispositions in the United States is masculinity (Pease 2019). Research has shown mixed results regarding the relationship between gender and pro-environmental dispositions. Some show that women are more likely to support the environment (Bord and O'Connor 1997, Goldsmith, Feygina and Jost 2013, Köse et al. 2011,

McMillan et al. 1997, Stern, Dietz and Kalof 1993, Zelezny, Chua and Aldrich 2000), while others show no difference or mixed results (Levine and Strube 2012, Rauwald and Moore 2002, Scott and Willits 1994, Wehrmeyer and McNeil 2000). However, the literature contains no consistent findings that men in the United States support the environment more than women.

This lack of support from men can be attributed to value systems of masculinity. Masculinity is characterized by many things, which differ across different contexts. However, there are still frequent patterns. For example, empathy is considered a feminine trait within the culture of the United States, reflected in the fact that women are more empathetic than men (Christov-Moore et al. 2014, Kobach and Weaver 2012, Trobst, Collins and Embree 1994), and empathy is a characteristic that is positively related to pro-environmentalism (Berenguer 2007, Berenguer 2010, Milfont and Sibley 2016, Sevillano, Aragonés and Schultz 2007). One may also connect the care of our planet to a more nurturing and motherly behavior, which would characterize the care of our planet to femininity.

Briefly returning to philosophy, this gender difference can also be seen in the divide between deontological and consequential ways of thinking. Deontology is a school of thought discussing universal righteousness and does what is “right” for the sake of it being “right”; consequentialist, of which utilitarianism as a brand of thinking empathizes the morality of a decision exclusively with its outcomes. Therefore, a deontological and environmental way of thinking may regard the environment as sacred, and thus conclude that its destruction is wrong based on universal moralities, whereas consequentialist (and utilitarian) thinking would only be concerned with the good that comes from, say, deforestation (i.e., more resources and more products for consumption). This relates to findings that show pro-environmentalism is rooted more in deontological value systems, rather than a consequential/utilitarian one (Milfont and

Duckitt 2010, Spash 1997). Overlapping this with research that shows women are more deontological thinkers than men (Friesdorf, Conway and Gawronski 2015, Sacco et al. 2017) makes the relevancy of this philosophical dichotomy to be more important to the environmental discussion.

Research even shows that men in the United States regularly reject pro-environmental behaviors because it might make them look feminine and/or non-heterosexual (Swim, Gillis and Hamaty 2020). This connection between the fragility of masculinity (or just masculinity in general) and the environment stretches beyond the discussions of empathy and deontology. Masculine value systems are connected to many other ideas that, directly or indirectly, affect environmental dispositions with varying magnitudes. In the United States, values such as superordination (Chan and Curnow 2017), dominance (Milfont and Sibley 2016, Plumwood 2015, Rogers and Schutten 2004), gynosexuality (Swim, Gillis and Hamaty 2020), competitiveness (Hibbard and Buhrmester 2010, Shleifer 2004), and even meat consumption (Rogers 2008) are shown to be associated to both masculinity and less environmental concern.

### *Intersections*

It is worth mentioning that capitalism, Christianity, and masculinity are not mutually exclusive. Many scholars have argued that masculinity in the United States and capitalist values share a great deal of overlap (Acker 2004, Burstyn 1983, Connell 1993, Connell 2009, Connell 2020, Hirschman 1993, Kemp 2014, Wright 2001). These value orientations can intersect with one another creating a strong resistance to pro-environmental values. For example, the perception that being an environmental ally, be it attitudes or behaviors, is perceived as feminine (Liu et al. 2019, Swim, Gillis and Hamaty 2020) can say a great deal regarding the interaction

between values of gender, sexuality, and political orientation (Kelly 2017, Kimmel and Ferber 2000, Stein 2005). Also, the Protestant work ethic is a legitimizer of capitalist culture.

Many of these challenges regarding an individual's resistance to pro-environmental orientations can be rooted in foundational and ideological paradigms about reality. Overlapping paradigms synergize with one another to calcify this resistance. Despite this unfortunate phenomenon, understanding this should demonstrate how important it is to examine dispositions regarding the environment.

### *Environmental Dispositions*

Living in an organized society, especially one where the peoples' will is meaningful, makes attitudes about material and social phenomena important. Though one could argue that attitudes of the common people and their relationship to policy creation are weak (Rochon and Mazmanian 1993), especially those of the lower and working classes (Branham, Soroka and Wlezien 2017, Gilens and Page 2014), attitudes related to social movements is positive (Greenberg 1990, Moore 2016, Muller and Jukam 1983), especially when facilitated by conceptions of justice/injustice (Tyler and Smith 1995). If attitudes cause action in this way, then widespread pro-environmental behavior and political action could occur if pro-environmental attitudes became more ubiquitous.

It might be intuitive to assume that an individual who rates highly on measures of pro-environmental attitudes would also rate highly on measures of pro-environmental behavior. Despite the relationship between attitudes and behaviors being relatively well-established within the psychology literature (Ajzen and Fishbein 1977, Liska 1974), the consistency of this relationship does not seem to transfer well into environmental domains (Klineberg, McKeever

and Rothenbach 1998). Though some research finds environmental attitudes being significantly associated with environmental behavior (Duerden and Witt 2010, Gadenne et al. 2011, Grunert and Juhl 1995, Luzar and Cosse 1998, Mobley, Vagias and DeWard 2010), just as much research describing the relationship between pro-environmental attitudes and behavior as being weak or mixed (Aoyagi-Usui, Vinken and Kuribayashi 2003, Balderjahn 1988, Best and Kneip 2011, Grob 1995a, Grunert-Beckmann and Kilbourne 1997, Kollmuss and Agyeman 2002, Levine and Strube 2012, Ramsey and Rickson 1976, Scherhorn 1993, Scott and Willits 1994). This ambiguity should encourage us to find out why, in some cases, attitudes are a significant predictor, while in other cases they are not. I do examine this relationship between attitudes and behaviors in my research, but it is not my primary focus.

Klineberg and colleagues (1998) have primarily attributed this inconsistency in findings with the lack of consistency in measuring environmental attitudes and behaviors and controlling for the appropriate variables. For example, environmental variables, such as willingness to give, can be moderated by socio-economic class. Measuring recycling behavior might not be useful in measuring pro-environmental behaviors because those services are not equally accessible to all people. Also, though political ideology is a strong predictor of environmental attitudes and behaviors, this could be the result of perceptions regarding governmental intervention (Klineberg, McKeever and Rothenbach 1998).

Nevertheless, I argue that environmental attitudes and behaviors all originate from the same value system. I do not believe that this would be contested among most environmental sociologists and psychologists, but both variables, attitudes and behaviors, are not often included in the same measure to capture this environmental value system. Throughout this paper, I use the term “dispositions” rather than attitudes and/or behaviors to capture them both. Researchers



within the environmental sociology and psychology literature often use the term “attitudes” to capture a person’s emotions and/or beliefs regarding the environment. These attitudes are typically part of a continuum intending to place respondents on a position ranging from attitudes that are least supportive of the environment to those that are most supportive. Environmental “behaviors” are also used in the literature and are typically intended to capture an individual’s actions, such as recycling or driving less, which is also hierarchical from least performed to most performed.

### *Theory*

In this section, I am going to introduce my theoretical perspectives regarding the relationships I will be analyzing in the latter chapters of this dissertation. I provide a personal theoretical perspective and speculate why the relationships I find might occur. Though some of my speculations draw upon existing theory, it does have many original contributions.

We are socialized into dominant and hegemonic value systems (Bates 1975, Katz 2006, Sallach 1974). These values systems tend to, in many cases, reflect the interests of the ruling class (Mosca 1961). There is no doubt that the ruling class in the United States diffuses politically conservative values (Frank 2005, Sexton 1992). These values, throughout our history, have facilitated the development of institutions that, directly or indirectly, propagate practices that help maintain the current power structures (Burns and LeMoyne 2002). These cultural values will often become internalized and deeply embedded into our schemata. However, these well-established hegemonic institutions, such as capitalism, imperialism, individualism, and consumerism, to name a few, have an antithetical relationship with environmentalism.

Each person's judgments, biases, and habits are connected in psychological schemas (Wood et al. 2018). Ideological perspectives, such as conservatism in the United States, are no exception to this way of mental organization (Larson 1994). Values that we hold tend to be connected in a network of varying degrees of proximity. Some values are more central to our lives than others, and thus are more prioritized, while others are more peripheral. Exposure to ideas in the proximity of one another with some degree of regularity binds and calcifies those values to one another. This calcification of values can lead to the construction of an ideology (Sidanius and Pratto 1999). For example, we can map this theory onto neo-conservatism of the Bush-era, where various values, such as weak labor laws, weak economic regulation, civil rights antipathy, abortion regulation, warmongering, and weak social welfare, were propagated near one another through various forms of media, and thus became collectively placed under the ideological umbrella that is neo-conservatism. This is an example of a semantic network of associated ideas.

Of course, this is not to say that proximity is the only phenomenon at work here. Various ideas typically contain some sort of philosophical consistency that makes intuitive sense to those who adopt an ideology. Someone may argue that there are foundational elements among conservative values that make each value within the ideology seem philosophically consistent. All conservative values, from anti-abortion to unfettered markets, may have some underlying foundational sources which connect them, albeit genuinely, or manufactured.

Because of the schematic mechanism that entangles values together into semantic networks, some values are supplemental and are adopted as a consequence of their proximity to other values. I refer to these as *supplemental values*. Anti-environmentalism is a supplemental value because very few people, if anyone at all, ally themselves with a particular ideology

primarily because they are anti-environmental, but rather, are anti-environmental because anti-environmentalism is ideologically attached to other more foundational values they adopt. For example, someone can become anti-environmentalist as a consequence of supporting libertarian ideals of unfettered markets, cherry-picking particular religious texts, or because green behavior is interpreted as effeminate behavior. Conservatism has been a strong predictor of environmental dispositions since the early 70s (Dunlap 1975). Thus, if a person believes in the legitimacy of economic libertarianism, a particular branch of religious evangelicalism, and/or toxic masculinity, they may also adopt other politically conservative dispositions as a consequence of their allegiance to the ideology.

Anti-environmentalism's connection to conservative ideology in the United States manifests in a collection of ways. First, since conservative ideology aligns with free-market ideas and low-to-no government regulation, they also align themselves with big business. Big business tends to not support potential government involvement in the creation of regulations that support the environment because this means that corporations will have an additional expense that needs to be considered (Kamieniecki 2006). This is more obvious within certain sectors of industry, such as chemical, oil, and gas. Thus, big business can utilize their close connection of politicians to propagate the idea that these regulations are unnecessary. How it chooses to do that may vary. In the United States, the strategy has seemed to be the denial of climate changes very existence and manufacturing denial (Klein 2014).

The environmental crisis we are currently experiencing is taking place on a global scale (Greene 2001). It has global implications for a global populace. Practically every human-being on this planet has bisphenol A (BPA) in their bodies, which is a bio-accumulating chemical found in plastics that has been linked to many health concerns, including cancer. Therefore,

solutions to this crisis would be most effective at a global level. International bodies can establish rules, but unless they have support from hegemonic interests, they have no legitimized and regulatory power to enforce those rules. This leaves national governing bodies, the largest bodies with direct regulatory power, to create regulations to help protect the environment.

However, trust in the government has been declining over the past several decades (Intawan and Nicholson 2018, Welch, Hinnant and Moon 2004). The effectiveness of national environmental laws might be mediated and/or moderated by the level of trust the citizens' have in their national governing body. Citizens may not approve of environmental regulations and/or might not be willing to engage in environmental practices legislated by the government if they do not trust them. Government trust is a strong predictor of support for other macro-level legislation, such as redistributive programs (Hetherington 2005). Research finds that government trust is a factor in citizen's opinions on other concerns unrelated to the environment as well. Chanley, Rudolph, and Rahn (2000) found that the presence of government scandals, high perceptions of crime, and poor perceptions of the well-being of the economy are significant predictors of government trust. Some indicate that the perceived lack of political connectedness (i.e., feeling of political alienation) also impacts their trust in the government (Welch, Hinnant and Moon 2004).

I theorize that the magnitude of the relationship between environmental dispositions and trust in the government is strong. This strength is the result of many interlocking values overlapping to create a strong resistance to pro-environmental dispositions. Certain value orientations such as pro-capitalism (Magdoff and Foster 2011), individualism (Komatsu, Rappleye and Silova 2019), materialism (Banerjee and McKeage 1994), consumerism (Erickson 1997), masculinity (Swim, Gillis and Hamaty 2020), utilitarianism (Milfont and Duckitt 2010,

Spash 1997), and market libertarianism (Hahnel and Sheeran 2009) have been shown to have a negative relationship with pro-environmentalism. People in the United States have a history of embracing many of these values, which makes it less likely for them to adopt pro-environmental dispositions.

The United States has a history of anti-government sentiment (Wills 2014). This has been a persistent cultural norm throughout the history of the United States. This cultural distrust in the government intersects with the construction of a conservative value system in a way where environmental regulation is so entangled with the prospect of government interference that the very nature of regulations sets them at a disadvantage. If citizens subscribe to an ideology in which government is interpreted as regulatory agents that take away personal liberty, most legislation that emerges from that government will be interpreted in bad faith.

My theory is the following: Many people, primarily those who are politically conservative, exercise reactionary antipathy to propositions regarding solutions to environmental problems because these propositions are associated with government regulation, and thus, are impositions on personal liberty. This relationship has been posited (Klineberg, McKeever and Rothenbach 1998), but very few environmental publications examine this relationship directly. Given this theory, I hypothesize that government trust is a powerful predictor of environmental dispositions, with higher degrees of government trust predicting higher degrees of pro-environmental dispositions. I will directly examine this hypothesis in chapter four.

### *Conclusion*

In the above sections, I laid out particular cultural elements in the United States related to the environment. These details, in one way or another, relate to the following chapters. I've

explained my general theoretical speculation on the relationship between some of the variables I will be examining, as well as explaining why I believe research regarding dispositions is important. Most importantly, I have articulated the severity of the environmental crisis facing us today, and hope that the urgency of this topic is taken seriously.

As researchers analyze the social components of the environmental crisis, we will most certainly encounter conclusions regarding potential solutions that go against hegemonic interests. We can expect that when only one hundred companies are responsible for over 70 percent of global emissions (Griffin 2017), we can expect pushback from the well-established institutions that seek to perpetuate their hegemonic position in the world, whether that be the forces of American imperialism or corporatism. We must then question where our loyalties lie: with the planet, or with corporate elites?

In the Methods chapter, I will define the methodological and analytical approach I take in this research. In the three chapters following my Methods chapter, I will perform my substantive analyses and discuss my findings. Finally, I will finish this dissertation with a concluding chapter to synthesize my findings and theories.

## Chapter 2: Methods

The methodological approach used in performing a research project is important to the research's validity. The researcher's theory and research question should align with the methodological and statistical strategies they use to justify the efficacy of their findings. Without this alignment, the research can be challenged by academic peers. This being the case, let me begin by addressing my research question: How does trust in the government, or lack of, impact an individual's dispositions regarding the environment. In this chapter, I explain my methodological decisions, from collecting my data to the analytical methods I use to generate my findings. I will also explain why I use specific methods to fit the data. I then go into detail using robustness checks to point to strengths and limitations. Last, I summarize the methods to be used before proceeding into my substantive chapters.

### *Existing Data*

My primary research question focuses on government trust and how a person's level of trust in the government impacts their dispositions regarding the environment. I was also originally interested in rural populations and how, after controlling for many variables, they differed, if at all, from the rest of the population. I first tried to answer these questions by looking into secondary datasets. I found several survey datasets that include environmental variables, both attitudinal and behavioral. However, many of these datasets had limitations making them inadequate to answer my research questions.

The General Social Survey (GSS) is a major dataset constructed by the National Opinion Research Center. It is one of the most well-known social science datasets in the United States and has its surveys replicated in many other countries, such as Germany and Japan.

Unfortunately, the last survey year the GSS asked environmental questions is in 2010. Even in 2010, the environmental items are only asked on ballots A and B (only two out of the three ballots). There is also an under-representation of rural populations. Roughly 11% of the GSS sample is rural despite 18 percent of the American population living in rural locations (America Counts 2017).

The International Social Survey Program (ISSP) is another widely used dataset I checked. Many of the items the ISSP uses come directly from the GSS, so it has many of the same inadequacies when it comes to answering my research questions. It is, however, an international dataset, of which the United States is included. Like the GSS, the ISSP has not asked environmental questions since 2010. Unfortunately the environmental behavior items in the ISSP have high degrees of missing data. The ISSP also has no rural respondents in the United States and has high missing values for other important variables relevant to this research, like government trust.

The World Values Survey (WVS) is an incredibly large international dataset that is also regularly used in sociological research. Though it is an international dataset, it does include a large sample of respondents from the United States. Unfortunately, during the time I was deciding whether or not to collect my data, the latest WVS wave available was from 2011. The environmental behavior variables in the WVS were also inadequate in quality. I tested the relevant variables from the WVS using a structural equations measurement model, but the fit statistics indicated a poor fit.

Last, I checked the National Survey on Energy and the Environment. This dataset is smaller, but still has a good sample of respondents from the United States. Its most recent wave



of data collection took place in 2015. However, the two waves (the first was in 2008) did not use the same environmental items, and it was very limited on political and ideological items.

The inadequacy of the publicly available data to answer my particular research question is why I chose to collect my own. After being awarded a grant from the National Science Foundation (NSF), I began using Qualtrics to construct my survey instrument on environmental dispositions, as well as other variables of interest (e.g. government trust, political affiliation, household income, etc.). I call this dataset the Environmental Dispositions Survey (EDS) 2019 (Wolford 2019). The EDS includes a variety of questions regarding environmental dispositions, many of which have been used in other datasets and examined in the environmental sociology and psychology literature. It also includes many non-environmental items such as demographic and other social characteristics that may be linked to dispositions toward the environment. My first step was to operationalize my variables of interest, starting with environmental dispositions.

### *Variable Operationalization*

Many of the variables of interest I want to examine are conceptual. A concept is “a grouping of phenomena that organizes observations and ideas by virtue of their possessing common features” (Bryman and Bell 2020). By a concept’s nature, it is measured by a collection of observed variables. This, methodologically speaking, can be done in many ways. I have chosen to capture these concepts in my research using factor analysis (specifically confirmatory). Factor analysis does not include many of the problematic consequences of scales and indices. This methodological strategy is facilitated by structural equations modeling, which is a sophisticated procedure of statistical modeling. Therefore, I construct many of my concepts of concern by using multiple observed variables.

The primary dependent variable for this analysis is a second-order confirmatory factor analysis (CFA) referred to as environmental allyship, which I discuss in more detail in chapter three. This concept is intended to capture elements associated with pro-environmental dispositions, both attitudinal and behavioral. Other environmental measures have used this statistical technique to separate multiple dimensions within a concept (Kopnina 2011). This is done by constructing a CFA that is a combination of meaningfully different elements of pro-environmentalism. Some of these elements created as part of this analysis are also CFAs. Thus, environmental allyship is a second-order CFA that loads from other CFAs and observed variables. These first-order CFAs are dimensions within the concept of environmental allyship, which are “aspects of a concept” (Bryman and Bell 2020). In the case of environmental allyship, its construction is formed from three first-order CFAs (i.e., environmental willingness, environmental investment, and environmental behavior) and one observed survey item, which is a general attitudinal question stated as, “Generally speaking, how concerned are you about environmental issues?” There are five response categories for this general attitudinal item, ranging from “Not at all concerned” to “Concerned a great deal.” This general observed variable is the reference category for allyship. Both attitudinal CFAs, environmental willingness and environmental investment, load from environmental behavior, to test the aforementioned long-standing debate regarding the relationship environmental attitudes has on behavior.

Environmental willingness, a common attitudinal construct throughout the environmental literature, loads from three survey matrix items, prompted by the statement “How willing would you be to do the following to protect the environment?” and then proceeded by the following items, “Willingness to pay higher prices,” “Willingness to pay higher taxes,” and “Willingness to lower your standard of living.” These three items load onto the first-order CFA of environmental

willingness. These items are on a seven-point Likert scale, ranging from “Very unwilling” to “Very willing”. A covariance is added between the first two items (i.e., higher prices and higher taxes) because they share a direct connection to “monetary cost” that the third factor (i.e., lower standard of living) does not.

Environmental investment loads from four survey matrix items, prompted with the statement “How much should these levels of government invest in improving and protecting the environment?” The statement is then followed by the following items: “Local government,” “State government,” “Federal government,” and “International governmental institutions.” Each item has four response categories: “No investment,” “Minor investment,” “Moderate investment,” and “Major investment.” A covariance is added between the first two items (i.e., local and state investment). Financial similarities, such as majority revenue from property taxes and no legal protections to run deficits, set local and state governments apart from the federal level. Also, in an international context, local and state governments have far less recognition, while federal bodies do. The magnitude of federal elections also sets it apart from the less noticed local and state elections. Citizen approval rates of the federal government have been declining, while local and state government favorability remains much higher (Pew Research Center 2013). Geographical proximity makes people feel as though local and state governments and their leadership are more personal, with federal institutions perceived as relatively more distant (Welch, Hinnant and Moon 2004). These reasons justify a covariance between local and state-level governments.

Environmental behavior loads from five survey matrix items, prompted with the statement “How often do you do the following?” then followed up by “Make a special effort to buy fruits and vegetables grown without pesticides and chemicals,” “Cut back on driving a car to

help protect the environment,” “Reduce the energy or fuel you use at home to help protect the environment,” “Choose to reduce or re-use water to help protect the environment,” and “Avoid buying certain products to help protect the environment.” These items had four response categories: “Never,” “Sometimes,” “Often,” and “Always.” These matrix items also included the response category “These services/products are not available in my area.” For all matrix items mentioned above, the “not available in my area” response was under five percent representation and are included within the parameters of maximum likelihood estimation<sup>3</sup>. A covariance is added between the items, “Make a special effort to buy fruits and vegetables grown without pesticides and chemicals,” and “Avoid buying certain products to help protect the environment.” This is done because they directly address the purchase of a product and could include overlapping products that are true for both statements.

The main independent variable in this analysis is government trust. These items are part of a survey matrix prefaced with the statement “How much do you trust the following levels of government to do the right thing?”<sup>4</sup> The statement is then followed up by the following items: “Local government,” “State government,” “Federal government,” and “International governmental institutions.” These items have five response categories: “Not at all,” “A little,” “A moderate amount,” “A lot,” and “A great deal.” A covariance is added between the first two items (i.e., local and state investment). This is done for the same aforementioned reasons regarding environmental investment.

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<sup>3</sup> Along with these five, there is also another matrix item regarding recycling (“Make a special effort to sort glass, tins, plastic, and/or newspapers and so on for recycling”). However, this item has over five percent of the sample claim that it was a service not available in their area. The results of this item were also heavily skew and were not normally distributed, meaning it should not be subject to maximum likelihood. Its coefficient of determination in the CFA was also very poor. Therefore, it was removed from the matrix item set and not used in this analysis.

<sup>4</sup> This specific articulation measuring trust in the government is a better measure of government trust because other measures tend to exaggerate the level of disaffection a respondent may have toward the government (Cook and Gronke 2005).

Many control variables are included within the analysis. The control variables included are age, race, gender, sexual orientation, marital status, number of children, self-reported physical health, self-reported mental health, self-reported happiness, education (in years), employment type, household income, municipality size, political affiliation, religious affiliation, anti-intellectualism score, and post-material score. Items such as age, number of children, and education are interval variables with numerical ranges we would expect to see (e.g. education is operationalized in years of education). The rest are explained in the following paragraphs.

Race and ethnicity were asked separately in this dataset. Respondents were first asked “Are you Spanish, Hispanic, or Latino/Latina/Latinx?”, and were then asked, “Which of the following races would you say best describes you?” with White, Black/African American, Native American/Alaska Native, Asian, Native Hawaiian/Pacific Islander, and Other as the response categories. In this research, the racial/ethnicity variable used is dichotomized between “white” and “non-white”, with “white” indicating those who responded they were racially white and ethnically not Spanish, Hispanic, Latino, Latina, or Latinx. This was done to separate the most hegemonic category (i.e., white non-Hispanic) from the rest of the sample.

The EDS asks respondents, “Which of the following genders best describes you?” Respondents had the option of “Man,” “Woman,” or “Non-binary.” Only nine respondents (0.45% of the sample) answered non-binary. The gender variable used for this research is “Male,” which places women and non-binary people in the same category. This is done for the same reasons as race/ethnicity (hegemony). The EDS also asks respondents “Which of the following sexual orientations best describes you?” and has the following five response categories: “Straight/Heterosexual,” “Gay/Lesbian/Homosexual,” “Bi/Pan/Omni/Polysexual,” “Asexual,” and “Other,” which allows respondents to specify their orientation. Approximately

203 (10.57% of the sample) indicated they are some other sexual orientation other than straight/heterosexual. For this research, I dichotomized the variable by treating all non-straight/non-heterosexual respondents as their group.

The EDS asks respondents about their marital status, which has five response categories: Married, Separated, Divorce, Widowed, or Single/Never Married. In the analysis, I dichotomized this variable to make respondents either “ever married” or “never married.” Approximately 30% of the sample have never been married.

Both physical health and mental health were measured on a sliding scale between zero and ten. Respondents were instructed, “In regard to this last year, rate your physical and mental health”. The mean physical health is 7.09 with a standard deviation of 2.26, while the mean mental health is 7.28 with a standard deviation of 2.53. Happiness was measured using a seven-point Likert scale, ranging from “Extremely Unhappy” to “Extremely Happy”. Respondents were asked, “Over the last year, how would you rate your happiness?” The mean happiness level is 4.94 with a standard deviation of 1.58.

The EDS asks “Please make your best estimate. Select the group that includes your household annual income in dollars (before taxes).” Household income has seven different response categories: “None,” “Under \$25,000,” “\$25,000 to \$49,999,” “\$50,000 to \$99,999,” “\$100,000 to \$149,999,” “\$150,000 or over,” or “I do not know.” Approximately 70 cases (3.48% of the sample) either responded “I do not know” or did not respond at all. These 70 cases were controlled for using maximum likelihood estimation. For this analysis, I broke household income down into three categories: “Under \$49,999,” “\$50,000 to \$99,999” or “\$100,000 or over”<sup>5</sup>. Approximately 41.59% have a household income of \$49,999 or less. 28.73% have a

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<sup>5</sup> This was also tested with the first category being “Under \$25,000” and the second being “\$25,000 to \$100,000”. This variant made no difference in the outcomes of the analysis.

household income of \$50,000 To \$99,999, with the remainder of the sample (exclude those who were missing) making over \$99,999. The middle category of “\$50,000 to \$99,999” was used as the reference category in the analysis.

The work type question was articulated as “Which statement best describes your current employment status?” Work type has many response categories but was ultimately reduced to four: “Professional,” “Precarious,” “Self-Employed,” and “Unemployed.” I have used this way of categorizing work types in previous publications (Piotrowski et al. 2018, Piotrowski et al. 2019). Approximately 40.79% of the sample are professionally employed, while 10.27% are precariously employed. Only 5.56% of the sample are self-employed, leaving the rest unemployed. Professional employment is used as the reference category in the analysis.

The EDS asks respondents about their municipality size by asking, “Which of the following would you say best describes your residency?” Respondents choose between the following four response categories: “Rural/Village (Population of less than or equal to 2,500 people),” “Small Town (Population of 2,501 to 49,999),” “City (Population of 50,000 to 999,999),” or “Large City (Population of greater than or equal to 1 million people).” These categories reflect how the Census Bureau defines them (2010). Since I am mostly concerned with how rurality impacts environmental dispositions, I dichotomized this variable into rural and non-rural categories. Approximately 24.76% of the sample is rural, with the remainder being non-rural.

Religious affiliation is measured in the EDS using the common religious classification scheme used in the academic literature referred to as RELTRAD (Steensland et al. 2000) while also adding “Muslim” as a response category. However, with a very low sample size of 3.33% Jewish and 0.84% Muslim, these two categories were combined with the “Other” category

(which also allowed respondents to type in their affiliation). The survey asks respondents, “Which of the following categories best describes your religious affiliation?” The “Mainline/Christian/Protestant” response category was used as the reference category for Religious affiliation.

The EDS asks respondents about their political affiliation by asking “Which of the following categories best describes your political views?” Their response categories are on a seven-point Likert scale from “Extremely Conservative/Traditional/Right-wing” to “Extremely Progressive/Liberal/Left-wing”. Since roughly one-third of the sample answered “Moderate /Centrist/Middle-of-the-road”, I split this variable up into three categories, with any degree of conservative as one group and any degree of progressive as another group, leaving centrists as the reference category in the analysis.

The EDS measures post-material values similarly to Inglehart (1977). Post-materialism is measured as a ranked-order item with four statements, asking respondents to place the statements in order from most important to least important. The prompt states, “In regard to your beliefs and values, please rank the following ideas in order from most important (1) to least important (4).” The four items are “Giving people more say in important government decisions,” “Teaching more kindness and compassion in schools,” “Law and order in the nation,” and “Economic growth.” The latter two are considered materialist values, while the former two of considered post-material values. Post-materialism is measured as either high, mixed, or low, which is contingent on which items are ranked as the two most important statements.

Lastly, anti-intellectualism is a measure I developed. It is a matrix question that asks respondents “How much do you disagree or agree with the following statements?” and then



proceeds with the following three<sup>6</sup> questions: “I do not have a lot of confidence in the scientific community,” “I’d rather place my trust in the wisdom of ordinary people over experts and intellectuals,” and “The social sciences (e.g. political science, sociology, philosophy, etc.) are a waste of time and do nothing to improve society.” These three items were measured using a seven-point Likert scale from “Strongly disagree” to “Strongly agree”. These three observed variables then construct a CFA.

### *Metadata and Demographics*

The EDS is a primary data survey instrument created by me and administered by Qualtrics in July of 2019. The data pays targeted attention to rural-living people in the United States (25% of the sample is rural<sup>7</sup>), but is representative across all other parameters, such as age, race, ethnicity, and gender. Weights were used in the analysis to control for this rural representation. The EDS has a sample size of 2,015.

Table 01 shows the descriptive statistics of the data used for this dissertation. The sample is roughly 72% white, 50% women, 89% straight, 52% married, 41% professionally employed, 25% rural-living, 41% conservative, and 25% progressive. The mean age is 47 years with a standard deviation of 17 years, and the mean education in years is 15 with a standard deviation of 3 years.

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<sup>6</sup> This matrix question was originally four questions. However, one question had a very poor coefficient of determination, which may have been the result of the question’s reversed nature (as in, the directionality of the question was different than the others and would have been reverse-coded).

<sup>7</sup> According to the Census Bureau, roughly 18% of the population in the United States is rural (America Counts 2017).

**Table 01.** Descriptive statistics for the Environmental Disposition Survey 2019.

Item	Freq.	Percent	Miss	Item	Min	Max	Mean	SD	Miss
Race	-	-	0	Age	18	95	46.6	16.67	0
White	1,451	72.01	-	Number of children	0	8	1.19	1.32	1
Black	318	15.78	-	Self-reported physical health	0	10	7.09	2.26	8
Other	246	12.21	-	Self-reported mental health	0	10	7.28	2.53	10
Gender	-	-	0	Self-reported happiness	1	7	4.94	1.58	0
Woman	1,007	49.98	-	Education in years	7	24	15.3	2.94	2
Man	999	49.58	-	Anti-intellectualism	-	-	-	-	9
Non-binary	9	0.45	-	Confidence in science	1	7	3.44	1.72	-
Sexual orientation	-	-	0	Wisdom of ordinary people	1	7	3.76	1.66	-
Straight	1,802	89.43	-	Social science uselessness	1	7	3.47	1.73	-
Not straight	213	10.57	-	Government trust	-	-	-	-	0
Marital status	-	-	0	Local	0	4	1.61	1.09	-
Married	1,039	51.56	-	State	0	4	1.6	1.11	-
Post-marriage	370	18.36	-	Federal	0	4	1.34	1.18	-
Single/never married	606	30.07	-	International institutions	0	4	1.42	1.17	-
Work type	-	-	0	Green behavior	-	-	-	-	220
Professional	822	40.79	-	Buy green produce	0	3	1.48	1.05	-
Precarious	207	10.27	-	Cut back on driving	0	3	1.33	1.05	-
Self-employed	112	5.56	-	Reduce home energy	0	3	1.71	1	-
Unemployed	874	43.37	-	Reduce and/or reuse water	0	3	1.52	1.02	-
Household income	-	-	70	Avoid dirty products	0	3	1.42	0.99	-
Under 25K	400	19.85	-	Green willingness	-	-	-	-	16
25K to 100K	1,016	50.42	-	Pay higher prices	1	7	3.61	1.77	-
Over 100K	529	26.25	-	Pay higher taxes	1	7	3.46	1.85	-
Municipality size	-	-	1	Lower standard of living	1	7	3.85	1.69	-
Rural/village	499	24.76	-	Green investment	-	-	-	-	17
Small town	432	21.44	-	Local government	0	3	1.77	0.98	-

City	736	36.53	-	State government	0	3	1.92	0.97	-
Large city	347	17.22	-	Federal government	0	3	2.01	1.05	-
Political affiliation	-	-	0	International institutions	0	3	1.92	1.05	-
Conservative	828	41.09	-	Green concern	0	4	2.38	1.17	0
Centrist	677	33.6	-						
Progressive	510	25.31	-						
Religious affiliation	-	-	2						
Mainline Christian/protestant	514	25.51	-						
Black Christian/protestant	171	8.49	-						
Evangelical Christian/protestant	167	8.29	-						
Catholic	437	21.69	-						
Other	182	9.03	-						
Unaffiliated	542	26.9	-						
Post-material score	-	-	0						
Low	326	16.18	-						
Middle	925	45.91	-						
High	764	37.92	-						

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Source: EDS 2019, N = 2,105

For all independent variables, there are few instances of missing data. Less than five percent (specific, 85 instances) had one or more missing datum. Even income (household in this case), notorious for having high degrees of missing values, is missing only a few cases (70 to be exact). However, environmental behavior, a first-order CFA on the dependent side of the analyses, does have a high number of missing cases. It is constructed from five observed behavioral variables, which collectively have 11 percent (220) of the sample as missing. Respondents were given the option to state that “These services/products are not available in my area”, which accounts for these missing cases. However, a maximum likelihood estimation method was used to control for all missing cases, and no listwise deletion was used. Thus, the final sample includes 2,015 cases.

#### *Methods and Robustness Checks*

Structural equations modeling (SEM) is used for this analysis. This is primarily because my main model has six CFAs. SEM has been used many times before in social-environmental research to study a variety of outcomes (Amburgey and Thoman 2012, Balderjahn 1988, Burns et al. 1994, Cottrell 2003, Grob 1995b, Kaltenborn et al. 2008, Lavergne and Pelletier 2015, Milfont and Duckitt 2004, Murray et al. 1994). SEM controls for covariances across all observed variables within the model can provide several fit statistics, and controls for measurement error (Kenneth A. Bollen, Stephen J. Tueller and Oberski 2013). For these reasons, I use SEM throughout my analysis.

Several robustness checks were made to ensure the quality of the data and methods used. Models with and without the weights controlling for overrepresentation of rural-living individuals in the United States are run for comparison using complex survey features (Kenneth

A. Bollen, Stephen J. Tueller and Oberski 2013). The desired fit statistics were not part of the weighted output but were part of the unweighted output due to a limitation with Stata. Therefore, the fit statistics from the unweighted output have been used as a reference for fit. This is only appropriate if the findings across both models weighted and unweighted are the same. This is consistently the case across my models, and therefore, the findings presented throughout all the tables hereafter are from the weighted models, while the fit statistics presented are from the unweighted models.

There are some issues, statistically speaking, given that all observed variables used in the construction of environmental allyship are ordinal level variables. Generalized SEM is a method more tailored to the task of ordinal level outcomes rather than standard SEM. Also, maximum likelihood estimations are usually only justified when the dependent variables are continuous and normally distributed. I am aware of these issues, but there are several reasons why these are not considerations for my research.

Statisticians argue that, when a CFA uses ten or more observed variables in its construction, the characteristics reflect those of an interval level variable more so than an ordinal one (Kline 2016). This also applies to the use of maximum likelihood estimation to control for missing data; the environmental behavior items, which include most of the missing data, are also normally distributed, which helps further justify the use of maximum likelihood. Nevertheless, polychoric matrices are used when constructing the measurement model. Polychoric correlation matrices better represent ordinal level data as continuous relative to the standard Pearson correlation matrices (Holgado–Tello et al. 2008). In this research, these matrices yield similar correlation coefficients.

**Table 02. Polychoric correlation matrices for all confirmatory factor analyses with standardized residual covariances**

Item	1	2	3	4	5	Item	1	2	3	4
Environmental willingness	-	-	-	-	-	Environmental investment	-	-	-	-
1) Pay higher prices	1	-	-	N/A	N/A	1) Local government	1	-	-	-
2) Pay higher taxes	0.812	1	-	N/A	N/A	2) State government	0.862	1	-	-
3) Lower standard of living	0.622	0.624	1	N/A	N/A	3) Federal government	0.757	0.871	1	-
						4) International institutions	0.709	0.766	0.827	1
Environmental behavior	-	-	-	-	-	Government trust	-	-	-	-
1) Buy green products	1	-	-	-	-	1) Local government	1	-	-	-
2) Avoid bad products	0.7	1	-	-	-	2) State government	0.761	1	-	-
3) Drive less	0.552	0.653	1	-	-	3) Federal government	0.612	0.727	1	-
4) Reduce energy use	0.582	0.653	0.647	1	-	4) International institutions	0.587	0.677	0.701	1
5) Reduce water use	0.59	0.682	0.639	0.691	1					

Source: EDS 2019, N = 1,756

I add some standardized residual covariances in most of my CFAs, which are supported by theoretical reasoning as mentioned in the Variable Operationalization section of this chapter. These covariances apply to two observed variables within the same CFA. I observed polychoric correlation matrices on all CFAs in the structural model to see the correlation coefficients between variables of the same CFA. Some of these correlation coefficients in Table 02 are high enough for concern. However, this issue is taken care of because the covariances I control for are the standardized residual covariances with the highest correlation coefficients.

Many fit statistics were used throughout this analysis to demonstrate the reliability of the model's findings. The four fit statistics I am most concerned with are the Tucker-Lewis index (TLI), Comparative Fit Index (CFI), 1 - root mean square error of approximation (1 - RMSEA), and Schwarz-Bayesian information criterion (BIC). The acceptable ranges of each of these fit statistics have been debated throughout the statistical literature. Most research places the acceptable lower limit of the TLI and CFI anywhere between 0.9 (Bentler and Bonett 1980, Bentler 1990, Forza and Filippini 1998, Hair et al. 2019, Zainudin 2013, Zainudin 2016) to 0.95 (Hu and Bentler 1999). The RMSEA seems to have a similar acceptable range anywhere from 0.08 (Browne and Cudeck 1992, MacCallum, Browne and Sugawara 1996, Zainudin 2013, Zainudin 2016), 0.06 (Hu and Bentler 1999), and 0.05 (Hair et al. 2019, MacCallum, Browne and Sugawara 1996, Zainudin 2013). The BIC is acceptable if the value is negative (Bollen and Brand 2010). Concerning the TLI, CFI, and 1 - RMSEA, I use the 0.92 threshold for acceptability, as it takes a middle-ground and standardized approach.

**Table 03. Polychoric correlation matrix including all dependent items in each first-order confirmatory factor analysis**

Item	1	2	3	4	5	6	7	8	9	10	11	12
Environmental willingness	-	-	-	-	-	-	-	-	-	-	-	-
01) Pay higher prices	1	-	-	-	-	-	-	-	-	-	-	-
02) Pay higher taxes	0.823	1	-	-	-	-	-	-	-	-	-	-
03) Lower standard of living	0.624	0.630	1	-	-	-	-	-	-	-	-	-
Environmental Investment	-	-	-	-	-	-	-	-	-	-	-	-
04) Local government	0.326	0.308	0.342	1	-	-	-	-	-	-	-	-
05) State government	0.346	0.313	0.342	0.890	1	-	-	-	-	-	-	-
06) Federal government	0.297	0.284	0.297	0.778	0.887	1	-	-	-	-	-	-
07) International institutions	0.301	0.272	0.272	0.728	0.789	0.842	1	-	-	-	-	-
Environmental behavior	-	-	-	-	-	-	-	-	-	-	-	-
08) Buy green products	0.454	0.412	0.460	0.310	0.267	0.221	0.178	1	-	-	-	-
09) Avoid bad products	0.520	0.502	0.513	0.334	0.343	0.279	0.267	0.700	1	-	-	-
10) Drive less	0.448	0.450	0.471	0.292	0.286	0.228	0.197	0.553	0.650	1	-	-
11) Reduce energy use	0.436	0.430	0.445	0.338	0.344	0.327	0.312	0.580	0.651	0.645	1	-
12) Reduce water use	0.453	0.456	0.465	0.309	0.298	0.247	0.251	0.586	0.681	0.639	0.690	1

Source: EDS 2019, N = 1,756



Polychoric correlation matrices presented in Table 03 across all dependent first-order CFAs were investigated to determine convergent and divergent validity. All items within the same CFA have coefficients high enough to infer convergent validity. All orthogonal coefficients have values less than their within-CFA counterparts, indicating the CFAs have divergent validity. This was also performed comparing each CFA as its unit of coefficients<sup>8</sup>, which demonstrated similar results and can be found in Table 04.

**Table 04. Validscale correlation matrix including all dependent first-order confirmatory factor analyses**

Item	Willingness	Investment	Behavior
Environmental willingness	-	-	-
Pay higher prices	0.769	0.283	0.398
Pay higher taxes	0.763	0.266	0.396
Lower standard of living	0.612	0.29	0.445
Environmental investment	-	-	-
Local government	0.303	0.764	0.226
State government	0.31	0.854	0.223
Federal government	0.26	0.826	0.161
International institutions	0.261	0.757	0.172
Environmental behavior	-	-	-
Buy green products	0.352	0.128	0.552
Avoid bad products	0.405	0.171	0.634
Drive less	0.308	0.141	0.544
Reduce energy use	0.352	0.203	0.594
Reduce water use	0.322	0.173	0.554

Source: EDS 2019, N = 2,105

### *Conclusions*

In this chapter, I discussed why I chose to collect my data (the EDS), how I constructed my survey instrument, and how it was funded and administered. I described the operationalization of my variables and presented the EDS metadata. I explained why I chose the

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<sup>8</sup> These coefficients were produced using the “validscale” utility in Stata and thus are Pearson coefficients, rather than polychoric ones.

methodological strategies I use and demonstrate, using multiple robustness checks, how those strategies are valid. Since I have dedicated this section to addressing my methods, I will forgo the duplication of this information in forthcoming chapters unless they differ in some way. In the next chapter, I will discuss the concept of environmental allyship, why I choose to use it, and the measurement model that represents it.

### **Chapter 3: Environmental Allyship**

Throughout this dissertation, I have used the term “dispositions” as a catch-all term to refer to environmental attitudes and behaviors. I do this because both environmental attitudes and behaviors emerge from the same environmental value system. Further, the likelihood of having pro-environmental attitudes and performing pro-environmental behaviors is rooted in the same respect for the planet.

In this chapter, I discuss a new measure, environmental allyship, and how I conceptualize it as a way of capturing individual environmental value systems. I first examine the environmental literature as it relates to the history of how research in the past has captured environmental value systems. I then discuss environmental allyship specifically and use structural equations modeling (as discussed in chapter two) to validate its statistical efficacy. This environmental allyship measurement model will be used in the chapters to follow.

#### *Literature Review*

Environmental attitudes, and how to measure them, have been a central part of environmental sociology and psychology literature. These measures are used in most parts in an attempt to represent a general environmental ethic or value system. Many measures have emerged, some more popular than others, that claim to capture what is meant by environmental attitudes. In the environmental literature, environmental attitudes have been referred to as an “anarchy measure” (Milfont and Duckitt 2010). Many researchers use preexisting measures, while others develop their own<sup>9</sup>. However, the adequacy of these measures can be debated

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<sup>9</sup> Citing all research that uses an environmental measure for attitudes would congest the page, and thus is not cited here. However, if a list is desired, the reader can contact the author.

(Klineberg, McKeever and Rothenbach 1998). I will review some major measures throughout the frontend of this chapter and then introduce environmental allyship, as well as justifications for its use.

One of the most notable and frequently used methods of measuring environmental concern is the New Environmental Paradigm, created by Dunlap and Van Liere (1978) and then later revised (Dunlap et al. 2000) and changed to be the New Ecological Paradigm (NEP). The NEP is a 15-item scale that is a “measure of endorsement of an ecological worldview” (Dunlap et al. 2000:426) that focuses on “beliefs about humanity’s ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity’s right to rule over the rest of nature.”

However, the NEP is intended to measure a respondent’s knowledge and worldview (or paradigm) regarding ecological issues. Of course, context matters, and the NEP, as well as other measures, have their place contingent on the researcher’s goals. Though the NEP is an important measure and is useful in environmental sociology and psychology scholarship, it does not measure other important dispositional elements, such as an individual’s environmental behavior and willingness to sacrifice. The NEP also suffers from the same limitations that many other attitudinal measures of pro-environmentalism face when predicting pro-environmental behaviors. The results are mixed, with some research showing clear positive significance between the two (Gkargkavouzi, Paraskevopoulos and Matsiori 2018), while others find either a weak relationship or none at all (Mobley, Vagias and DeWard 2010, Scott and Willits 1994).

Many studies have used individual actions to measure environmental values (Balderjahn 1988, Dzialo 2017, Hurst et al. 2013, Scott and Willits 1994), such as recycling, buying green products, or driving less. This variable is referred to in many ways, such as environmentally

responsible behavior (ERB) (Mobley, Vagias and DeWard 2010), environmental protective behavior (EPB) (Kaiser, Merten and Wetzel 2018), or pro-environmental behavior (PEB) (Best and Kneip 2011, Dzialo 2017). Many researchers who exclusively use environmental behavior articulate the limitations of using it. The structural conditions needed to facilitate environmental behavior are not universally available to everyone (Klineberg, McKeever and Rothenbach 1998). Nevertheless, measuring an individual's behavior is still a part of a holistic environmental value system, and should be considered despite its limitations. We, as researchers, just need to ensure its limitations are mitigated as much as possible and that other environmental items are taken into consideration.

Other measures intend to measure environmental dispositions. One notable measure is environmental consciousness (EC), developed by Krause (Krause 1993) and later used by others (Bodur and Sarigöllü 2005, Mida 2009, Schlegelmilch, Bohlen and Diamantopoulos 1996). Environmental consciousness is a measure that combines many variables, such as concern for particular environmental issues, willingness to make lifestyle changes, opinions about environmental organizations, government spending on environmental problems, as well as knowledge of environmental understanding. This collection of arguably connected items is closer to the approach I am making with environmental allyship. Nevertheless, my experience with doing this causes more sophisticated statistical models (like those using SEM) to become oversaturated and produce poor fit statistics<sup>10</sup>.

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<sup>10</sup> The EDS collects more environmental data than the three main first-order CFAs I use in its construction. In earlier iterations, I used a fourth CFA that included large-scale actions such as participating in an environmental protest and giving money to an environmental organization. The inclusion of this dimension reduced the overall fit statistics more than the other three CFAs to the point that it crossed acceptable thresholds. It was therefore left out.

As I have mentioned, it is important to capture both attitudes and behaviors in a single measure, because both originate from the same environmental value system (though they may impact each other in unique ways). I also argue that attitudes and behaviors are meaningfully different and are mediated and moderated by different factors, and thus must be captured separately. Thus, they are separate first-order CFAs in my measurement model.

The concept of “Dispositions” works well to capture both attitudinal and behavioral elements. However, in this research, I use the term *allyship*, rather than dispositions. While allyship is not often used in environmental sociology and psychology literature, the term is appropriate because it implies directionality to a metric that includes a continuum (in this case, being an ally to the environment). Within the phrase “being an ally,” a position within a continuum, or at least a side of a continuum, is implied within the statement. An individual that is an ally is understood to be on the supportive side of the “least supportive/most supportive” continuum. This is useful, because, rather than being a neutral term that, by default, sits at the “0” position and can contain values that are both positive and negative, allyship’s “zero-point” is at one end of the dichotomy, while being an ally sits on the other.

Allyship is the state of being an ally, and the term is used in many spheres of social justice. It is typically used in the context in which a person, an ally, is being supportive of a marginalized group, such as women, people of color, and/or people within the LGBTQ+ community. Allyship is the state or condition of being supportive of another person or group, usually of a marginalized group to which one does not belong (Merriam-Webster 2019). To be an ally is to adopt and internalize the struggle of those who are oppressed and to continue fighting for social progress as though the fight was your own (Gay 2016, Lamont 2018). Of

course, the environment is not a person or group. However, one could argue that, at this point in history, it is most certainly marginalized, and requires allies to support its continued well-being.

Environmental allyship, as it is constructed in this research, includes multiple dimensions within environmental thinking. Multiple studies have used environmental willingness as a way of measuring environmental attitudes. These measures are in many environmental datasets, including the General Social Survey. Environmental items of willingness ask respondents how willing they are to pay higher prices, pay higher taxes, and lower their standard of living to help the environment. Self-reported willingness to sacrifice to help the environment has been used in many studies to capture an individual's environmental attitudes (Clements et al. 2015, Hedlund-de Witt, de Boer and Boersema 2014, Taye, Vedel and Jacobsen 2018, Ziegler 2017). All other things considered equal, it is intuitive to assume that the decision to support a cause is easier to make when there is little or nothing to lose by supporting it. However, as the cost of supporting a cause increases, the likelihood of supporting that cause decreases; this is found in the environmental literature as well (Niemeyer 2010, Ozaki 2011, Sidoras and Koukios 2004). This is why the environmental willingness measures are so useful. We might assume that a majority of the American population would support the preservation of the well-being of the environment if it did not come with a cost. However, taking steps to preserve the well-being of the environment does have a cost (i.e., time, labor, and money). If normal Americans are faced with the choice to bear their portion of the burden, some Americans will choose not to support the environment.

However, as mentioned before, one single measure does not capture all elements of pro-environmentalism. Many studies have also included asking respondents about their behavior and what they do to help the environment (Best and Kneip 2011, Clements et al. 2015, Dzialo 2017, Gkargkavouzi, Paraskevopoulos and Matsiori 2018, Grob 1995b, Grunert and Juhl 1995, Hurst et

al. 2013, Kennedy and Kmec 2018, Klain et al. 2017, Levine and Strube 2012, Mobley, Vagias and DeWard 2010, Scott and Willits 1994, Tarrant and Green 1999). Examples of this include recycling, driving less, buying fewer wasteful products, and other behaviors like these. As discussed in chapter 2, the EDS has several environmental behavioral items that are used to construct this measure.

Both environmental willingness and behavior are measures regarding the individual's perspective and actions. However, given the scale of environmental issues (NASA 2020), more macro-level parameters might be useful in the construction of measuring a respondent's environmental allyship. Therefore, I use items regarding large-scale government intervention or investment into environmental problems to construct environmental allyship. The EDS asks respondents how much they feel the local, state, federal, and international government(s) should invest in environmental issues. These questions, like those of willingness and behavior, were used to construct second-order CFA Environmental Allyship.

This being said, I am concerned with how government trust (or lack thereof) impacts environmental allyship. Before I can do this, I need to statistically validate environmental allyship as a concept. I hypothesize that robustness checks and fit statistics will indicate that environmental allyship is a reliable factor for measuring pro-environmental dispositions. In the next section, I will cover the findings of my analysis.

## *Results*

The construction of this new measurement of Environmental Allyship is possible due to the EDS 2019. This dataset is an original survey with a sample of 2,015 respondents gathered from all over the United States. The survey was developed using Qualtrics's survey interface and



administered by their team. Data were collected in July of 2019. The dataset was intended to collect demographic and attitudinal data, especially regarding the environment, from the adult population. The data is representative for demographic characteristics such as age, gender, and race, but was purposely oversampled for rural-living people. Roughly 25 percent of the sample is rural, which is defined by the Census Bureau as a municipality of 2,500 persons or less. The sample is also 38 percent non-white, 50 percent female, and has a mean age of 46.6 with a standard deviation of 16.67 and with an age range of 18 to 95 years. The sample is also roughly 43 percent unemployed and has a mean education in years of 15.3 with a standard deviation of 2.94. Approximately one-third of the sample is politically moderate, a quarter are progressive, and the rest are conservative.

**Table 05. Fit statistic comparison between multi-order and single-order measurement models**

Fit statistics	Multi-order	Single-order
Alpha	N/A	0.89
1-RMSEA	0.941	0.724
CFI	0.981	0.530
TLI	0.974	0.436
SBIC	-21	8244
CD/R <sup>2</sup>	0.88	0.92

Source: EDS 2019, N = 1,756

I first perform a robustness check on environmental allyship by comparing the main second-order CFA (the main measurement model) against an alternative single-order version. I removed all first-order CFAs and had environmental allyship load from all twelve observed variables used to construct the first-order latent variables as well as the general green concern observed variable. As is shown in Table 05, the fit statistics for this single-order latent model are unacceptable. This demonstrates that each first-order CFA in the multi/second-order allyship

model is in some way meaningfully different from the others and that the model gets better when it controls for these differences.

**Table 06. Fit statistics for all confirmatory factor analyses in the structural model**

Fit Statistics	Allyship	Willingness	Investment	Behavior	Gov. Trust	Anti-Int.
1-RMSEA	0.941	Nil	0.845	0.965	0.970	Nil
CFI	0.981	Nil	0.994	0.998	1.000	Nil
TLI	0.974	Nil	0.964	0.996	0.998	Nil
SBIC	-21	Nil	41	-17	-5	Nil
CD/R <sup>2</sup>	0.88	0.91	0.96	0.89	0.88	0.8

Source: EDS 2019

After demonstrating that the multi/second-order measurement model is superior to its single-order counterpart, I examine the fit statistics for each first-order CFA. All fit statistics fell within acceptable ranges other than one value. Environmental willingness and Anti-intellectualism only have three observed variables each and thus are just identified. CFAs that are just identified cannot provide many fit statistics, such as the Tucker-Lewis and comparative fit, but some can still be calculated. Environmental investment's 1-RMSEA is lower than 0.92, and the SBIC is positive, and thus has a substandard fit. However, these are the fit statistics for the CFA exclusively calculated on their own, with no other variables considered. When included in the full measurement and structural models, the fit RMSEA and SBIC are acceptable.

In Table 07, the results of the entire measurement model can be seen<sup>11</sup>. All loadings for both first and second-order CFAs are positive and statistically significant relationships with the concepts they are apart from. The only exception to this rule is the relationship between environmental investment and environmental behavior. This relationship is statistically

<sup>11</sup> The results in this table use polychoric coefficients and thus use listwise deletion of cases with missing values. I compared these findings to a version of the model which does not use polychoric coefficients but used maximum likelihood estimators to control for missing cases. Both models have acceptable fit statistics and have practically identical findings.

significant but is negative. This does not impact the validity of the measurement model because this is an effect between two first-order CFAs. The directionally simply suggests that, notwithstanding their unidirectional relationship with environmental allyship, they impact one another negatively. I will further speculate on this relationship later in this chapter.

The fit statistics for the measurement model also fall within acceptable ranges, which can also be found in Table 07. The TLI, CFI, and 1-RMSEA are all above 0.92, while the SBIC is negative. This implies that the measurement model fits the data very well, and further justifies its use in the forthcoming chapters. Figure 1 shows the path diagram for the environmental allyship measurement model.

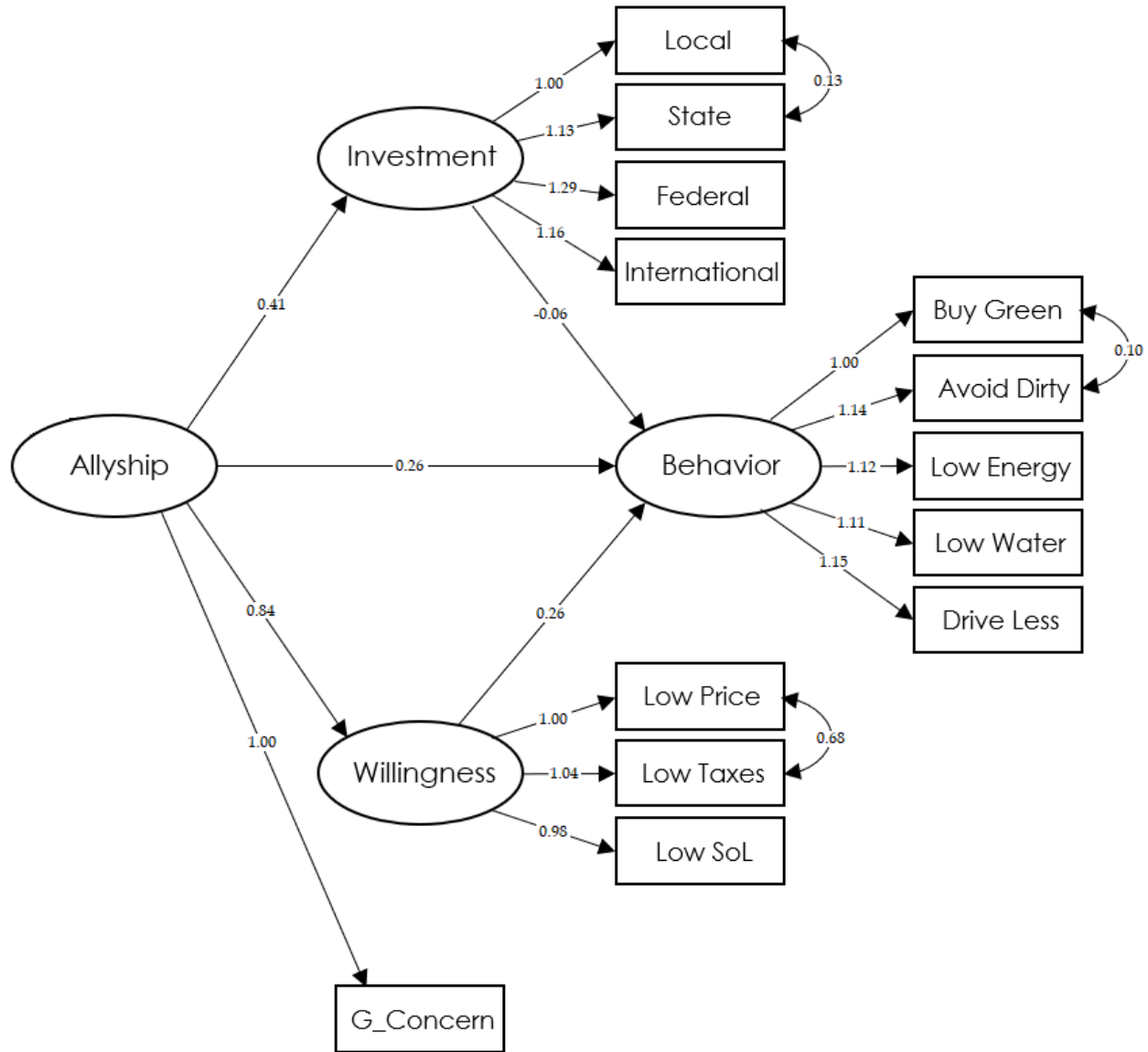
**Table 07. Main measurement model results using polychoric correlation matrices**

Item	Coef.	Std. err.	Item	Coef.	Std. err.
Environmental allyship	-	-	Environmental investment	-	-
Environmental willingness	0.59***	0.039	Environmental behavior	-0.06*	0.029
Environmental investment	0.53***	0.032	Local government	Reference category	
Environmental behavior	0.32***	0.048	State government	1.13***	0.016
Green concern	Reference category		Federal government	1.19***	0.024
Environmental willingness	-	-	International institutions	1.07***	0.024
Environmental behavior	0.44***	0.039	Environmental behavior	-	-
Pay Higher prices	Reference category		Buy green products	Reference category	
Pay Higher taxes	1.00***	0.021	Avoid bad products	1.15***	0.03
Lower standard of living	1.00***	0.035	Drive less	1.09***	0.035
Covariances	-	-	Reduce energy use	1.14***	0.036
Higher prices, higher taxes	0.19***	0.019	Reduce water use	1.14***	0.035
Local invest, state invest	0.14***	0.009			
Green products, avoid products	0.10***	0.013			
Fit statistics			-		
1-RMSEA			0.941		
CFI			0.981		
TLI			0.974		
SBIC			-21		
CD			0.88		

Source: EDS 2019, N = 1,756

† p &gt; 0.1, \* p &lt; 0.05, \*\* p &lt; 0.01, \*\*\* p &lt; 0.001

**Figure 1. Environmental allyship measurement model**



*Conclusion*

There were two interesting additional findings in the measurement model. First, the relationship between environmental willingness and environmental behavior is positive and statistically significant, meaning that a person’s reported willingness to help the environment does accurately reflect their tendency to perform pro-environmental behavior. Previous literature has found mixed results on this relationship (as mentioned in previous chapters), with some

claiming that there is a relationship between attitudes and behavior, and others not so much. My results concur the former, which further supports to the findings that there is a relationship between these two variables.

The second additional finding I want to address is the relationship between environmental investment and environmental behavior. Despite all three first-order CFAs being statistically significant and positive concerning environmental allyship, environmental investment's relationship to environmental behavior was negative with statistical significance. This means that, as a respondent's likelihood of rating high in environmental investment increases, their likelihood of rating high on environmental behavior decreases. This is an unexpected and interesting relationship. Nevertheless, the first-order CFAs collectively load on environmental allyship with positive statistical significance. This further demonstrates that each dimension, despite their relationship with one another, still emerge from the same environmental value system.

My theory regarding why we see the negative relationship between environmental investment and behavior is due to a respondent's perception of environmental responsibility. I theorize that people are more likely to respond highly to ratings of environmental investment if they feel as though it is the responsibility of larger scale governmental institutions to solve environmental problems. These respondents would be less motivated to have individualist-type attitudes toward the environment because they may feel their attitudes and actions have little-to-no effect on the well-being of the environment. They may also believe that the main contributors of environmental degradation are those who own the means of large-scale extractive and productive operations (Griffin 2017), and thus feel that the government needs to step in and regulate these operations. On the other hand, people who feel it is their responsibility to help the

environment (as well as other individuals) may feel as though environmental solutions are rooted in individual consciousness and action, and thus, do not feel as though it is the government's responsibility to improve environmental conditions. Research shows that people living in the United States are less likely to believe that environmental problems are the responsibility of the government compared to European countries (Peycheva et al. 2014), which makes sense given theories regarding American individualism.

This chapter addresses previous work in which environmental sociologists and psychologists have operationalized environmental attitudes. Notwithstanding the contextual use of these measures, my theory regarding how environmental dispositions should be operationalized justifies my choice to develop the, environmental allyship measure.

Environmental allyship includes both attitudinal and behavioral items; it includes both individual and macro-level items; it includes a regularly used general concern variable that is used as a balancer and reference category for the remainder of the model. I further validate environmental allyship by performing multiple robustness checks and reference many fit statistics. Though the focus of this chapter is to validate the usefulness of environmental allyship, there are still some interesting relationships using the measurement model that I want to examine. In chapter 04, I use the entire environmental allyship measure model as my primary dependent variable. In chapter 05, I use each first-order CFA separately to parse out how each of these dimensions is shaped by government trust and other control variables.

## Chapter 4: Government Trust

There is little environmental literature that considers the potential connection between government trust and environmental dispositions. Some research has shown that trust in the government, or trust in specific types of governance, has positively impacted dispositions regarding environmental related phenomena, such as pro-environmental projects (Klijn, Edelenbos and Steijn 2010). Other research has speculated that the relationship between political affiliation and pro-environmental dispositions is primarily the result of attitudes regarding governmental intervention (Klineberg, McKeever and Rothenbach 1998). This speculation regarding government intervention, as I discuss in the first chapter, is the root of my hypothesis. The main objective of this chapter is to examine the relationship between government trust and environmental allyship.

### *Literature Review*

In the United States, government trust is usually associated with political perspectives. Republicans, the right-wing party in the United States, have been perceived as the party of low government involvement, while Democrats, the “left-wing” party, have advocated for higher levels of government involvement (Pew Research Center 2017). However, this is only partially true. If we were to separate policy into categories of both economic and social, we would find that the topic of government involvement is reversed in the context of social policy (Janoff-Bulman 2009). The Republican party is more likely to restrict things like abortion rights and marriage rights (i.e., social policy). They are also the party that advocates for the continued criminalization of recreational drugs, as well as fewer religious freedoms, and the inclusion of Christian teachings in public schools.



Other parties don't fit within the left-right paradigm as we typically conceptualize it. For example, libertarians are usually categorized on the right side of the left-right paradigm but align more with progressives when it comes to social issues (e.g., drug, abortion, and marriage regulations) (Zwolinski 2007). Radical left parties, such as most socialists, typically align more with Democrats, but on issues regarding gun regulations, align closer to the Republicans (Marx and Engels [1847] 2017). Because of these nuanced differences, we cannot simply assume that an individual's likelihood of trusting the government is going to overlap synchronistically with their position on a left-right political scale. Therefore, government trust as a variable is worth measuring separately from a person's political position.

Trust is an important predictor of information absorption (Tsfati and Cappella 2003). If an individual does not trust the source of information, then they are less likely to assimilate that information into their understanding of reality. When it comes to environmental issues, the government is not the only source of information. The scientific community and other environmental institutions, both governmental and non-governmental, play a role in diffusing information about the environment to the general populous. Therefore, trust in these communities and institutions is also important regarding the adoption of pro-environmental messages. Trust in the scientific community has been shown to positively impact the likelihood of pro-environmental attitudes (Malka, Krosnick and Langer 2009).

This lack of trust in institutions overlaps well with the history of cynicism in the United States. Citizens of the U.S. have a history of resistance to believing in governmental institutions (Purdy 2013). This general disposition is part of the overall cultural character of the U.S., with people less likely to trust one another and less likely to feel as though people generally act with good intentions. Of course, this counts more so for politicians in the U.S. (Pew Research Center

2015). Even in Alexis de Tocqueville's classical writings regarding the culture of the U.S., he found a cynicism in the ways of thinking that led to an anti-intellectual perspective that even experts in particular fields had their interests and could not be believed (De Tocqueville 2015). He explained that even an uneducated lack of understanding would not stop people from feeling like they knew better than even experts.

This cynicism of the United States runs parallel with values of American exceptionalism. Many people in the U.S. feel as though the U.S. is the best country and that superiority justifies the supervision of the world (Johnson 2008). Citizens of the U.S. are far more likely to rank themselves and their nation as the most desirable (Kohut and Stokes 2007). Other Western cultures are more critical of their nations and find other countries to be desirable (of which the U.S. is not often picked among the most desired). One can imagine how this interacts with comparisons to other countries. If people in the U.S. believe that they live in the greatest nation, to what extent are they willing to see the successes of other countries and adopt those strategies?

Both cynicism and exceptionalism in the United States interact in interesting ways. These two social phenomena go hand-in-hand according to some scholars (Chaloupka 2001). Many people in the U.S. develop tensions between the myth of American exceptionalism and the lack of outcomes in their lives, and those tensions often manifest into cynical dispositions (Caldwell 2007). Those tensions are externalized, blaming others for their personal woes and the woes of the nation, rather than internalizing them and putting into question their ideological perspectives (such as American exceptionalism). Research does suggest these interactions to be true. Of those who are dissatisfied with the government of the U.S., high political cynicism is associated with high American exceptionalism (Kaiser 2017).

Anti-intellectualism is the “distrust and dislike of scientists, academics, and experts” of which politicians are a part (Motta 2018). De Tocqueville’s characterized the culture of the United States as anti-intellectual in 1832 (De Tocqueville 2015). Hofstadter (1991) recognized these same patterns roughly a century and a half later. These observations are still relevant today as anti-intellectualism perspectives grow (Pew Research Center 2020) and play a role in trusting the government. With the election of Donald Trump in 2016, many have examined what role anti-intellectualism played in his election. As an anti-intellectual himself, Trump was able to rally a large body of other anti-intellectuals to his cause (Motta 2018). Like the overlapping cultural elements mentioned in chapter one, these elements related to government trust synthesize with one another to create a semantic network that develops a strong resistance to change. Though I include a measure for anti-intellectualism in the structural model, it is not the primary item of focus in this analysis.

In chapter one, I explain my theoretical perspective regarding the relationship between government trust and environmental allyship. In this chapter, I will examine this relationship directly. With my theory considered, I hypothesize that government trust is a powerful predictor of environmental allyship. As an individual’s trust increases, so too will their likelihood of being an environmental ally. This next section will include the results of my structural model with examines the relationship between government trust and environmental allyship. The methodological details for this model can be found in previous chapters.

### *Results*

In Table 08, both the unweighted and weight models are included. Figure 2 shows the path diagram for the main structural model (which only includes significant findings). The

results are shown in this table only include the items or category of items that were found to be statistically significant. Age, gender, marital status, number of children, physical health, mental health, work type, household income, and rurality were found to be nonsignificant. Also, fit statistics for this model are within acceptable ranges. CFI, TLI, and 1-RMSEA are all above 0.92, while the SBIC is negative. This indicates a good fit of the overall model.

**Table 08. Main structural model results for both unweighted and weighted variations only including statistically significant findings**

Structural model	<u>Unweighted</u>		<u>Weighted</u>	
	Coef.	Std. err.	Coef.	Std. err.
White	-0.12*	0.053	-0.12*	0.054
Non-heterosexual	0.17*	0.072	0.15*	0.076
Happiness	-	-	-	-
Unhappy	0.11	0.079	0.13	0.078
Neither	Reference category		Reference category	
Happy	0.19**	0.070	0.19**	0.067
Education	0.03***	0.008	0.02**	0.009
Political Affiliation	-	-	-	-
Conservative	-0.23***	0.053	-0.23***	0.055
Moderate	Reference category		Reference category	
Progressive	0.41***	0.061	0.43***	0.061
Religion	-	-	-	-
Mainline	Reference category		Reference category	
Black protestant	0.09	0.093	0.09	0.090
Evangelical	-0.17*	0.086	-0.17*	0.089
Catholic	0.03	0.064	0.01	0.065
Other	0.03	0.085	0.03	0.085
Unaffiliated	-0.04	0.062	-0.04	0.064
Post-material score	-	-	-	-
Low	-0.21***	0.063	-0.21***	0.064
Middle	Reference category		Reference category	
High	0.01	0.048	0.03	0.048
Anti-intellectualism	-0.11***	0.024	-0.11***	0.028
Government trust	0.44***	0.039	0.45***	0.044
Fit statistics	-		-	
1-RMSEA	0.964		-	

CFI	0.933	-
TLI	0.921	-
SBIC	-2,419	-
CD/R <sup>2</sup>	0.97	0.97

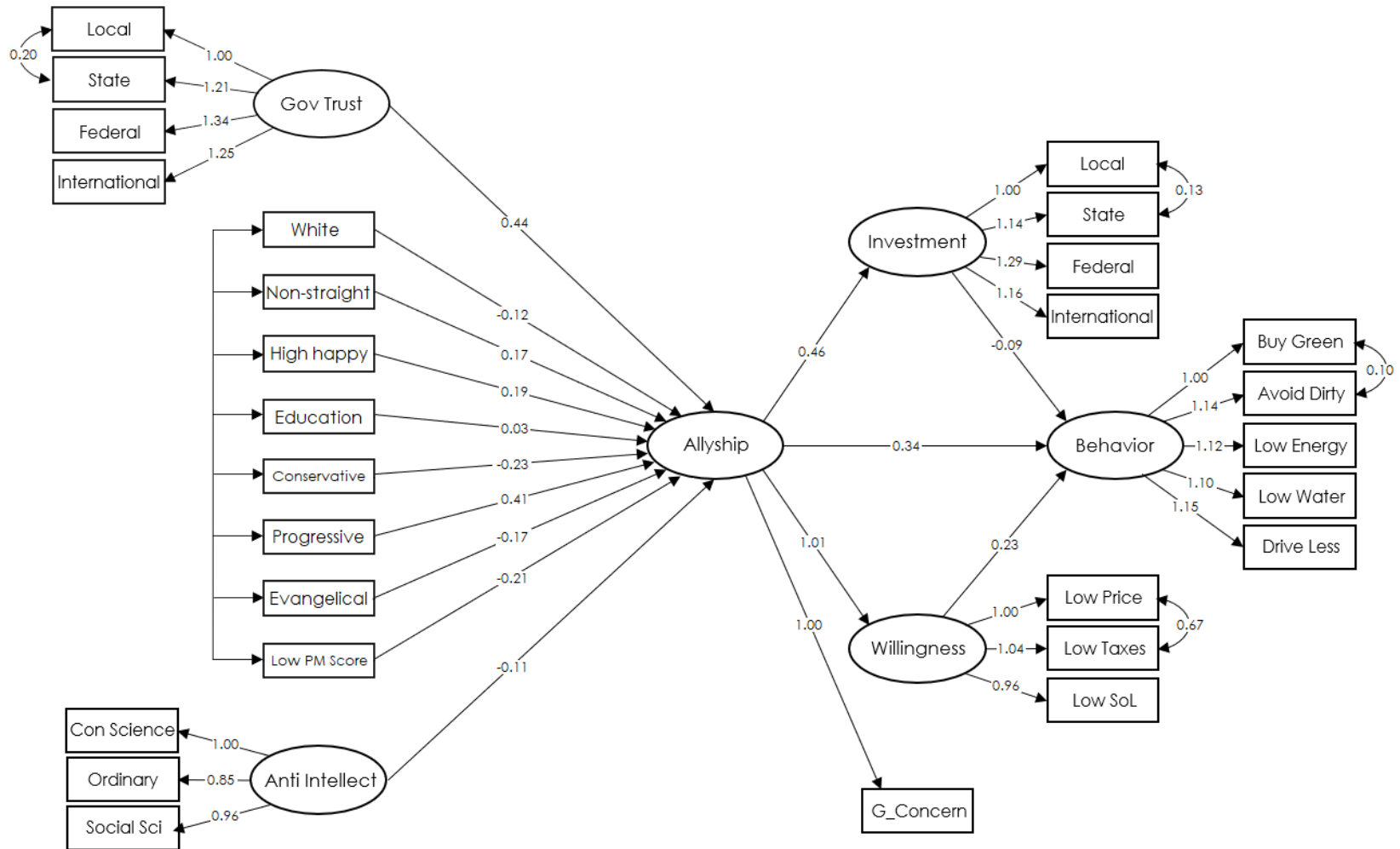
Source: EDS 2019, N = 2,105

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

As it can be seen, both models have functionally the same results, thus using the fit statistics of the unweighted model should be a valid measure of the weighted model's goodness of fit. In both models, government trust is a powerful predictor of environmental allyship. The more trust a respondent has in the government, the more likely they are to be an environmental ally. This strong positive relationship is also present between environmental allyship and other variables, such as education and political progressivism. Conversely, political conservatism has a powerful negative relationship with environmental allyship.

Several other variables are found to be significant in this analysis. White people are less likely to be environmental allies. Those who are happy or non-heterosexual are also more likely to be environmental allies. Respondents with a low post-material score and evangelical protestants are also less likely to be environmental allies. Lastly, anti-intellectualism is also a predictor of environmental allyship, with people who are more anti-intellectual being less likely to be environmental allies.

**Figure 2. Main structural model of the impact of government trust on environmental allyship including only statistically significant variables.**



## *Conclusions*

In this chapter, I examined the relationship between government trust and environmental allyship. I start with a literature review regarding government trust in the United States. I include additional conceptual discussions of concepts connected to trust, such as cynicism, exceptionalism, and anti-intellectualism in the United States. Then, using SEM, I have shown that government trust is a powerful predictor of environmental allyship. This relationship aligns with my hypothesis. Along with government trust, political progressivism and education are also have a positive and significant relationship with environmental allyship.

This examination of the relationship between government trust and environmental allyship is not without its limitations. Research does find that there is a distinct difference between explicit and implicit levels of government trust. People tend to have higher levels of implicit government trust than they do explicit measures (Intawan and Nicholson 2018). This distinction is not controlled for in this research, as I only use an explicit measure of government trust. With that in mind, future research should consider this.

Another limitation to my research relates to its intranational nature. The theory I use to speculate on the relationship between government trust and environmental allyship is specific to the context of the United States. The United State has a particular history regarding its relationship to the government, as well as having a more contemporary climate change denialism. Many other environmental measures, such as the NEP, have been more successful at measure environmental concern in the United States, but have found mixed results in international contexts (Khan, Khan and Adil 2012, Pienaar, Lew and Wallmo 2013, Wu 2012). My measure for environmental allyship may suffer from the same limitations.

Ultimately, none of these findings comes as a surprise. With the discussions regarding the culture of the United States, the connections between conservatism, anti-intellectualism, etc., make this relationship somewhat obvious. Nevertheless, as I have mentioned before, no publication has directly examined this relationship while controlling for the variables I do, and thus it contributes to the existing literature. This contribution should be taken into consideration in future research.



## **Chapter 5: Specific Environmental Dimensions**

In the previous chapter, I argue that the first-order CFAs (i.e., environmental willingness, investment, and behavior) are all part of what it means to be an environmental ally. The statistical models, robustness checks, and fit statistics are used to indicate that these environmental dispositions are indicators of a single multi-dimensional latent construct. However, in my Methods chapter, I also validate how each of the first-order CFAs has both convergent and divergent validity, which demonstrates that these factors measure something meaningfully different from one another.

In this chapter, I will be examining the relationship between government trust and each first-order CFA in environmental allyship separately. The results of these relationships will be juxtaposed to the results of the previous main environmental allyship model (in chapter four). These results will be more easily interpretable with this juxtaposition. In the conclusion of this chapter, I will speculate about some of the differences between these results and the results of the main environmental allyship model.

### *Literature Review*

As previously discussed, the literature examining the relationship between government trust and environmental dispositions is limited. However, because I will be examining the dimensions of environmental allyship separately, the dependent variables in the forthcoming three models are different. Most of these dependent variables are not new measures in the environmental sociology literature. The first model I test uses environmental willingness as the dependent variable. Many studies in the sociological literature have used willingness to sacrifice as a central variable (Clements et al. 2015, Hedlund-de Witt, de Boer and Boersema 2014, Taye,

Vedel and Jacobsen 2018, Ziegler 2017). Willingness to sacrifice, sometimes called willingness to pay or willingness to change lifestyle, is useful because it circumvents the problems of general concern questions where practically anyone will say they support the well-being of the environment. However, if doing so comes at a cost, then what?

I use environmental investment as my dependent variable in the second model. Though some research has examined the relationship between environmental dispositions and opinions on environmental government spending (Krause 1993), my particular way of measuring environmental investment, as it is defined in this dissertation, is not used currently in the environmental literature.

In my third model, I use environmental behavior as the dependent variable. Researchers have also used environmental behavior as a main variable of interest (Best and Kneip 2011, Duerden and Witt 2010, Dzialo 2017, Gkargkavouzi, Paraskevopoulos and Matsiori 2018, Levine and Strube 2012, Mobley, Vagias and DeWard 2010, Pooley and O'Connor 2000, Scott and Willits 1994), albeit sometimes economic consumer behavior (Balderjahn 1988, Gadenne et al. 2011, Grunert and Juhl 1995). Using environmental behavior is useful because it circumvents some of the problems that come with environmental attitudes. As I have mentioned before, some of the literature claims that the relationship between attitudes and behavior is weak, if present at all. If attitudes do not translate into action, then it means that reported attitudes are worth less than other measures (such as behavioral ones) that are more connected to doing something materially meaningful for the environment.

I have hypothesized and shown that government trust is a powerful predictor of environmental allyship. The more trust you have in the government the more likely you are to be an environmental ally. I suspect that this will be true for the results in the analyses of this

chapter. However, as for the rest of the potential results and their comparisons to the main model presented in chapter four, I take an inductive approach. I am unsure of the results I will find and why they may differ from one another. I suspect that there will be significant differences between the models because each dimension of environmental allyship, as mentioned before, measures something meaningfully different relative to the other dimensions. Thus, I will speculate on the findings and why I believe they are what they are after I observe the results.

The following sections will provide detailed findings regarding each of the first-order CFA models. The control variables used in these analyses are the same as I used in previous chapters. Along with examining the findings as they relate to government trust, I will also discuss the findings regarding particular control variables. I will then speculate on these findings in the concluding section of this chapter.

### *Results: Environmental Willingness*

In the first model, I use environmental willingness as the dependent variable. As a reminder, environmental willingness loads from three survey matrix items, prompted by the statement “How willing would you be to do the following to protect the environment?” and then followed up by the following items: “Willingness to pay higher prices,” “Willingness to pay higher taxes,” and “Willingness to lower your standard of living.” These items are on a seven-point Likert scale, ranging from “Very unwilling” to “Very willing.”

**Table 09. Structural model results for environmental willingness for both unweighted and weighted variations only including statistically significant findings**

Structural model for Willingness	Unweighted		Weighted	
	Coef.	Std. err.	Coef.	Std. err.
Age	-0.01***	0.003	-0.01***	0.003
Non-heterosexual	0.31**	0.107	0.27**	0.1134619
Ever married	0.18*	0.083	0.18*	0.0859486
Education	0.05***	0.012	0.05***	0.0125068
Household Income	-	-	-	-
Low Income	-0.22*	0.091	-0.22*	0.0973518
Middle Income	Reference Category		Reference Category	
High Income	0.14	0.084	0.13	0.0833829
Political affiliation	-	-	-	-
Conservative	-0.17*	0.079	-0.17*	0.0790157
Moderate	Reference Category		Reference Category	
Progressive	0.61***	0.090	0.62***	0.0941404
Post-material score	-	-	-	-
Low	-0.33***	0.094	-0.32***	0.0947621
Middle	Reference Category		Reference Category	
High	-0.14*	0.071	0.15*	0.0718947
Government trust	0.79***	0.059	0.79***	0.067
Fit statistics		-		-
1-RMSEA		0.967		0.967
CFI		0.955		0.955
TLI		0.935		0.935
SBIC		-948		-948
CD		0.97		0.97

Source: EDS 2019, N = 2,105

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

**Figure 3. Structural model for of the impact of government trust on environmental willingness including only statistically significant variables.**

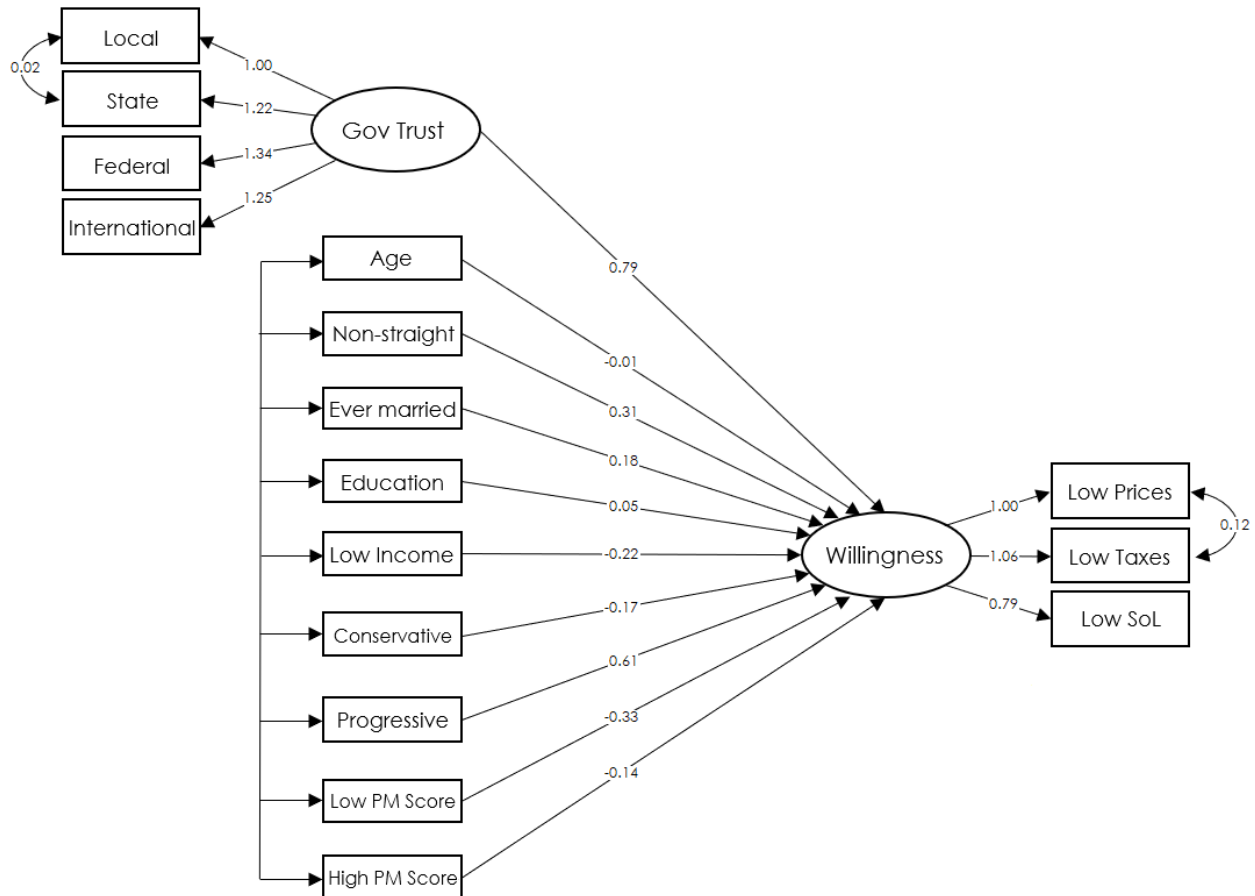


Table 09 shows the findings for the first model. Figure 3 shows the path diagram for the willingness structural model. It can be seen that government trust is a strong predictor of environmental willingness. People who trust the government are more willing to sacrifice to protect the environment. This relationship is potent, with a p-value of 0.001. These findings are similar to the main environmental allyship model.

There are many similar findings when comparing this model with the model in chapter four. Political conservatism and low post-material values have negative, significant relationships with environmental willingness, which they did with environmental allyship. Political progressivism, non-heterosexualism, and education also have a positive and significant relationship with environmental willingness as they did with allyship.

There are also many unique findings to be found here. Age has a strong negative relationship with environmental willingness. Those who are older are less likely to be willing to sacrifice for the environment. Political conservatism’s relationship with environmental willingness is much weaker than it is with allyship. Also, several effects from the main allyship model are not salient in the willingness model. For instance, high happiness and anti-intellectualism, despite having a p-value of 0.01 or less in the allyship model, are not significant in this model. I will speculate on some of these findings in the conclusion section of this chapter.

*Results: Environmental Investment*

Environmental investment is the dependent variable for the second model. To summarize, environmental investment loads from four survey matrix items, prompted with the statement “How much should these levels of government invest in improving and protecting the environment?” The statement is then followed up by the following items: “Local government investment,” “State government investment,” “Federal government investment,” and “International government investment.” Each item has four response categories, from “No investment” to “Major investment.”

**Table 10. Structural model results for environmental investment for both unweighted and weighted variations only including statistically significant findings**

Structural model for Investment	Unweighted		Weighted	
	Coef.	Std. err.	Coef.	Std. err.
Age	0.00***	0.001	0.00***	0.001
Political affiliation	-	-	-	-
Conservative	-0.11**	0.039	-0.10**	0.040
Moderate	Reference Category		Reference Category	
Progressive	0.16***	0.044	0.17***	0.044
Religion	-	-	-	-
Mainline	Reference Category		Reference Category	
Black protestant	-0.02	0.068	-0.02	0.071

Evangelical	-0.17**	0.063	-0.17**	0.062
Catholic	-0.03	0.047	-0.03	0.046
Other	-0.06	0.062	-0.05	0.060
Unaffiliated	-0.07	0.046	-0.06	0.046
Anti-Intellectualism	-0.15***	0.018	-0.15***	0.019
Government trust	0.22***	0.028	0.21***	0.032
Fit statistics	-		-	
1-RMSEA	0.969		-	
CFI	0.963		-	
TLI	0.949		-	
SBIC	-1160		-	
CD	0.97		0.97	

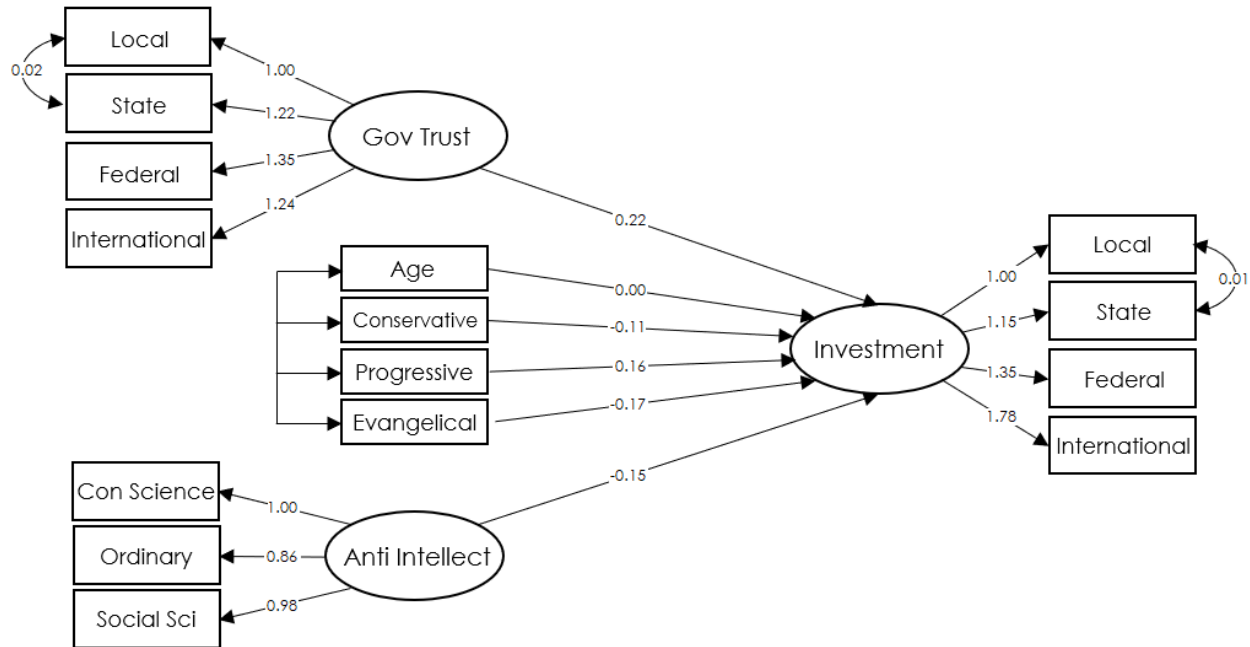
Source: EDS 2019, N = 2,105

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table 10 shows the findings for the second model. Figure 4 shows the path diagram for the environmental investment structural model. Government trust is a strong predictor of environmental investment. People who trust the government are more likely to feel that the government should invest more into managing environmental issues. These findings are similar to the main environmental allyship model presented in chapter four and those found in the previous environmental willingness model.

Similar to the main allyship model, political conservatism, religious evangelicalism, and anti-intellectualism are negative predictors of environmental investment, while political progressivism is a positive predictor. Some significant outcomes in the allyship model are not significant in this model. High happiness, low post-material score, and education lose their impact when only examining environmental investment.

**Figure 4. Structural model for of the impact of government trust on environmental investment including only statistically significant variables.**



Age, like in the willingness model, is significant. However, this relationship with investment is positive, rather than being negative, as it is in the willingness model. Older individuals are more likely to feel as though the government should invest in environmental issues. This relationship is also very potent, with a p-value of 0.001.

*Results: Environmental Behavior*

The last model has environmental behavior as the dependent variable. Environmental Behavior loads from five survey matrix items, prompted with the statement “How often do you do the following?” then followed up by “Make a special effort to buy fruits and vegetables grown without pesticides and chemicals,” “Cut back on driving a car to help protect the environment,” “Reduce the energy or fuel you use at home to help protect the environment,” “Choose to reduce or re-use water to help protect the environment,” and “Avoid buying certain



products to help protect the environment.” These items had four response categories ranging from “Never” to “Always.”

**Table 11. Structural model results for environmental behavior for both unweighted and weighted variations only including statistically significant findings**

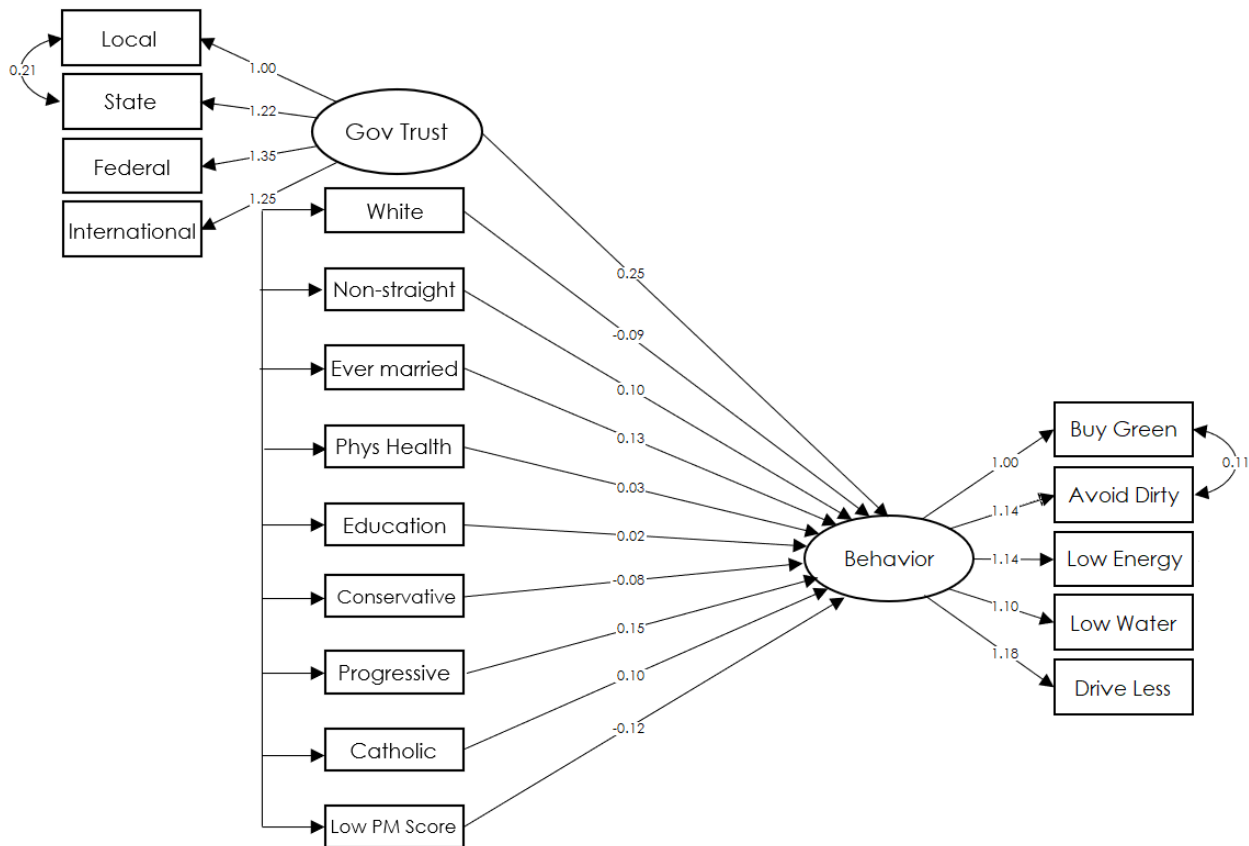
Structural model for Behavior	<u>Unweighted</u>		<u>Weighted</u>	
	Coef.	Std. err.	Coef.	Std. err.
White	-0.09*	0.038	-0.09*	0.039
Non-heterosexual	0.10*	0.052	0.10*	0.054
Ever married	0.13***	0.040	0.15***	0.041
Physical health	0.03**	0.009	0.03**	0.009
Education	0.02***	0.006	0.02***	0.006
Political affiliation	-	-	-	-
Conservative	-0.08*	0.038	-0.08*	0.038
Moderate	Reference Category		Reference Category	
Progressive	0.15***	0.043	0.16***	0.043
Religion	-	-	-	-
Mainline	Reference Category		Reference Category	
Black protestant	0.05	0.066	0.05	0.064
Evangelical	-0.04	0.062	-0.04	0.061
Catholic	0.10*	0.046	0.10*	0.047
Other	0.09	0.060	0.08	0.060
Unaffiliated	-0.03	0.044	-0.02	0.045
Post-material score	-	-	-	-
Low	-0.12**	0.045	-0.13**	0.044
Middle	Reference Category		Reference Category	
High	0.05	0.034	0.05	0.034
Government trust	0.25***	0.028	0.25***	0.031
Fit statistics	-		-	
1-RMSEA	0.969		-	
CFI	0.950		-	
TLI	0.934		-	
SBIC	-1317		-	
CD	0.97		0.97	

Source: EDS 2019, N = 2,105

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table 11 shows the findings for the environmental behavior model. Figure 5 shows the path diagram for the environmental behavior structural model. Many of the findings are similar to those found in the main allyship model, but there are some differences. There is no effect of high happiness on environmental behavior, unlike the main environmental allyship. Self-reported physical health seems to have a positive and significant relationship with environmental behavior as well. Lastly, being ever married has a very strong relationship with environmental behavior. To me, this is the most interesting unique effect and I will speculate on this in the upcoming conclusion section.

**Figure 5. Structural model for of the impact of government trust on environmental behavior including only statistically significant variables.**



## *Conclusions*

First, I want to point out that all the models have good fit statistics. The Tucker-Lewis and comparative fit indices are better in all first-order CFA models than they are in the main allyship model. The SBICs for all models are also. Though it is not a primary fit statistic for this research, the coefficient of determination of all models rests at 0.97, which is very high for sociological research.

Government trust is found to be positively and statistically significant across models. In all models, including the allyship model, the strength of this relationship can be demonstrated with a very low p-value of equal to or under 0.001. The only other variable in the analysis that shows that much strength consistently across all models is political progressivism. These supplemental analyses of all first-order CFAs further demonstrate the powerful connection between government trust and environmental value systems.

Examining the unique findings and patterns across the first-order models, we see that age has a unique effect, by being a powerful predictor in two of the models, but in opposite directions. First, age is a negative and strong predictor of environmental willingness. Older individuals are less likely to be willing to sacrifice for the environment. This might be explained by how much the respondent feels they will be able to personally benefit from their actions. People with fewer years left to live might feel as though their sacrifices will not benefit them, or if they do, not benefit them for long. This relationship could also be explained by the interpretation of these sacrifices as personal risks and how older people are less likely to take risks in general (London 2016, Rolison et al. 2013).

These age effects are also one reason why examining all the first-order CFAs independently is incredibly useful. Observing the findings from the main allyship model would

make one believe that age is not a significant predictor of environmental allyship. This illusion only appears because the strong positive and negative effects of age cancel each other out in aggregate. This loss masks part of the story. Though I have shown that these variables all originate from a similar environmental value system, it does not mean that some findings in the main aggregated model, such as those found with age, tell the whole story. This is why I will, in all future research I perform using environmental allyship, will also examine each first-order CFA separately.

Another interesting effect is how being married impacts environmental behavior. This is potentially due to many reasons. First, never-married people who are already participating in environmental behavior also possess characteristics that make them more appealing on the marriage market, such as being more responsible and being long-term oriented. Also, because I argue that many people feel as though performing green behavior is the responsible thing to do, there may be an accountability effect occurring, especially for women (Shelton and John 1993). It might be easy to dismiss green behavior if a person has no one looking over their shoulder. For the sake of maintaining a good impression with those around them, a person may be more likely to perform green behavior. People who are separated from their previous partners might also continue performing green behavior habitually and/or out of internalization. Lastly, people who have a family might be more inclined to have patterns of long-term thinking, which can include green behavior.

Lastly, I want to bring attention to anti-intellectualism. Though anti-intellectualism is significant in the main allyship model, the only first-order model it is significant in is the investment model. I suspect this has to do with the macro-level nature of the variable, whereas willingness and behavior are items asking respondents about what they do or what they are

willing to personally do. The anti-intellectual CFA is based on items that relate to confidence in experts and scientists. This confidence in experts could be similar to confidence in governmental personnel and are thus connected to the macro-level narrative. These are just simple speculations to investigate further in future research.

These speculative interpretations of the findings are a product of the inductive nature of this chapter. These findings, beyond those that relate directly to government trust, are not the focus of this dissertation, but are still significant, nonetheless. Notwithstanding the secondary nature of these findings, They still require further investigation because any effect that relates to the environment is a useful effect to understand.

## Chapter 6: Conclusion

I have many goals in this dissertation, and one of them is to create a measure that captures an environmental value system. I believe that I have done this through my development of environmental allyship for many reasons. Environmental allyship is the main dependent variable of this dissertation. In chapters three (and somewhat in chapter four), I demonstrate how this measure is highly useful in capturing an individual's environmental value system. Despite environmental allyship being ordinal, I presented justifications for why it was acceptable to treat it as an interval variable, allowing me to use structural equations modeling. Environmental behavior, the variable which includes the most missing cases, is normally distributed and thus, along with being interval, maximum likelihood can be used. I provide theoretical justifications for the inclusion of some standardized residual covariances that were then validated by their correlation coefficients compared to all other possible covariances. I tested the fit statistics of the measurement model by using polychoric matrices, which indicated that, even after controlling for the ordinal nature of each item, the goodness of fit was still above the acceptable thresholds.

The most important detail of validating environmental allyship is validating the use of the particular dimensions (i.e., environmental willingness, behavior, and investment) within the concept of environmental allyship. Doing this demonstrates that, notwithstanding their unidirectionally positive relationship with the concept (i.e., environmental allyship), each dimension is meaningfully different from other dimensions. I do this in two ways. First, I compare the single-order measurement model with the multi-order measurement model. Examining the fit statistics demonstrates that the single-order model has poor goodness of fit and that control for these meaningfully different dimensions greatly improves the model. Second, I examine the inter/intra-dimensional correlation coefficients to demonstrate both convergent and

divergent validity. Doing this demonstrates that each dimension is measuring related factors different from one another, despite their unidirectionally positive relationship to environmental allyship. With this, I believe that environmental allyship captures an environmental value system.

Adding to this, I have theoretically laid out why government trust is a good predictor of environmental allyship. Politically speaking, the topic of the environment is closely attached to other ideas, such as big government, government regulation, femininity, progressivism, etc., that place environmental issues in a space that is in opposition to those ideas and is thus rejected by consequence. This relationship between government trust and environmental allyship is powerful, and that is what this dissertation finds. Government trust, along with political progressivism, is the most consistently positive and significant predictor of environmental allyship across all models (in both chapters 4 and 5). The more someone trusts governmental institutions (at all levels of governance), the more likely they are to be an environmental ally. The effect is powerful enough that I encourage future research examining environmental dispositions to include a measure of government trust.

Despite these findings, I do not directly examine all aspects of my theory. My theory is one that addresses the culture of the United States and how many aspects of the culture interact with one another to create a strong resistance to a culture of environmental allyship. Nevertheless, the earth does not care for our culture. The degradation of our planet will continue, and a crisis will ensue if we do not make changes now.

In this dissertation, I discuss the environmental dispositions of the United States and our cultural barriers that resist pro-environmental values. I create a new measure intended to capture an individual's environmental value system called *environmental allyship*. I then, after validating

its usefulness, use environmental allyship as my primary dependent variable in an analysis that examines its relationship with government trust. Lastly, I examine each of the dimensions within environmental allyship separately to see how each one differs from the overall environmental allyship model.

My findings are revealing. They demonstrate the magnitude of significance that government trust has in the United States. The significance of government trust is also seen in each of the dimensions in allyship. Government trust is one of two variables that are consistently significant across every model in this dissertation (the other being political progressivism). These consistently significant findings confirm my hypotheses throughout and provide support but do not confirm my theories.

### *Future Research*

In future research, I plan to include variables that more directly investigate my theories. In some cases, this means investigating my more simplified variables in more detail. For example, in addition to asking respondents about political orientation, I would ask about specific dimensions regarding political ideology. I could inquire about the origins of their environmental dispositions. I also plan to include some measure of implicit government trust, rather than just an explicit measure. As mentioned before, these two types of government trust are meaningfully different (Intawan and Nicholson 2018), and therefore should be asked separately of respondents.

Given the statistical power of environmental allyship, I would suggest researchers use allyship over other measures of environmental attitudes/behaviors/concerns/dispositions. As mentioned before, many of the existing measures have contexts in which they excel. However, environmental allyship has many uses beyond a specific context. I claim it measures an



environmental value system. I would also suggest researchers use environmental allyship within an international context. Some value system measures do not translate well when trying to apply them in an international context (Franzen and Vogl 2013, Knight 2016). Environmental allyship needs to be tested internationally in future research.

### *Barriers*

Many barriers prevent the ubiquitous diffusion of pro-environmental values in the United States. I discussed many of these barriers in the first chapter of this dissertation. Major cultural values systems, such as those entangled with capitalism, masculinity, and to many extents Christianity, are deeply synthesized together within an individual's construction of reality, which runs antithetical to environmental allyship. Political conservatism is also a major barrier. Anti-environmental values are supplemental values that are attached to ideological perspectives (in particular political conservatism) that are adopted by consequence of an individual's allegiance to those ideological perspectives.

Despite that, cultures have shifted and changed throughout all human history. The rate at which these changes have occurred has been slow. Returning to the Marxist/materialist understanding of cultural change, as our relationship to the material world changes, so too does our culture. However, given the major material changes that have occurred in the last several centuries (i.e., industrialization, globalization, technological developments, etc.) the speed by which these material changes have occurred has outpaced the rate at which cultural changes usually occur. This creates a misalignment between culture and our material circumstances (Burns 2009). This phenomenon is referred to as *cultural lag* (Ogburn 1957).

Cultural changes generally take time to diffuse into the greater culture and to be accepted by the majority of people. However, as these new cultural ideas diffuse, they usually encounter some sort of resistance. The more divergent the new cultural idea is from the mainline culture, the more likely it will be rejected. This relates to a political concept called the *Overton Window* (The Mackinac Center 2019). This “window” is an abstract range of acceptable ideas overlapping a particular ideological dichotomy, where radical ideas that fall outside of the range will be resisted/rejected. The closer to the center of the window, the more likely the idea will be accepted. Nevertheless, new ideas that are closer to the edges of the window have the power to pull or expand the window. Arguably, the window has shifted over time, where certain ideas that were previously unacceptable are now acceptable.

The urgency of the environmental problems and the need for immediate change is directly antithetical to the realities of cultural lag. Despite the tendency for cultures to change slowly, humanity cannot afford to let environmental values diffuse into the culture organically. Change must happen as soon as possible to curb the future climate crisis. However, the possibility for an enantiodromic response is cause for concern. Enantiodromia is a backlash that occurs when a cultural idea that runs contrary to the mainline culture emerges too quickly and/or strongly (Burns 2009). Put another way, a cultural idea that pushes the boundaries of cultural lag. This would be an idea that occurs outside of the Overton Window but forces itself into existence. This creates an enantiodromic response, which are the actions that are taken by individuals as a response to enantiodromia. For example, if strong authoritarian regulations are pushed into law “too quickly”, and these regulations run contrary to the mainline culture, then the forced change clashes too much with the values of individuals, and thus those individuals become reactionary. This might result in large-scale national uprisings. Major environmental regulations could

potentially create such a response from the people of the United States, especially if the ruling elite continue their propaganda campaign against the legitimacy of environmental science and regulation.

### *Praxis*

Given this urgency, we have no choice but to do what is possible to accelerate pro-environmental ideas. Environmental allies, be they organizations, movements, or individuals, must be strategic. Attacking the cultural barriers that intrinsically resist environmental values, such as capitalism and masculinity, is a strategy environmental sociologists should utilize. Doing what little we are capable of to diffuse environmental ideas and values throughout the culture is a simple step. Many of us already do this through our writings and teachings, but we should not stop there. The infiltration of institutional spheres of influence is also a tactic that could encourage revolutionary change.

Each new idea that enters into the culture is more or less likely to be adopted by the mainline culture based on many factors. Some of these factors are more passive, while others are more active. An active example is when preexisting institutions take part in its adoption. Since these institutions have a degree of legitimacy and are far-reaching, they can sometimes be the main diffusers of new cultural ideas (Burns 2009). Institutions are bureaucratic and are mostly concerned with organization and efficiency, and thus do not consider (at least as much) traditional cultural values that would impede their progress. Institutions also tend to copy off one another (institutional isomorphism) which further helps the diffusion of these values. However, as mentioned before, typically environmental values are not efficient for businesses or institutions. Given the hyper-rational nature of these contemporary institutions, it is more

difficult to attempt to diffuse a cultural value usually rooted in deontological ways of thinking (Spash 1997), rather than consequential ways. Nevertheless, if this rationalized barrier were broken, the rate at which pro-environmental values could be diffused would be far greater.

It is also possible to forge alliances with political elites. This could also help with the diffusion of environmental ideas (Burns and LeMoyne 2001). Most people, including politicians, have some moment in their life where they realize how important the environment is and how we, as a society, are destroying it. For example, Al Gore said he started to become an environmentalist as a teenager when his mother introduced him to Rachel Carson's *Silent Spring* (Gore 1989). Bob Inglis, a conservative politician from South Carolina, changed his views on climate change once he was presented with the physical evidence (Cohn 2013).

There may be attempts on the part of political entities to mitigate the effects of climate change with policies that encourage more pro-environmental behavior through monetary incentives (e.g. cap-and-trade and carbon taxes), but these strategies have their problems, which may include accounting fraud (Lindquist and Goldberg 2010), the lack of impact on consumption (Magdoff and Foster 2011), or no meaningful change in emissions at all (Song 2019). These problems continue to occur because policies like cap-and-trade do not eliminate the fact that maximizing profits runs contrary to the steps necessary to reduce their carbon footprint (Wright and Nyberg 2016). This is not to say that emissions trading programs can never be effective (Schmalensee and Stavins 2017), but the necessity of these solutions only exists because capitalism inherently works against the interests of the planet. Since that inherent clash exists, there will always be forces that desire to continue profiteering despite patchwork laws attempting to prevent it.

However, systematic economic reconstruction may be impossible at the moment. It is sad to consider that revolutionary change will only be possible once environmental collapse is so apparent that it sits on the doorstep of every citizen of the United States. It may be naive to assume that operating in bourgeois systems leads to anything other than bourgeois outcomes. However, that cannot prevent public sociologists from acting.

As environmental sociologists, we need to educate people to give them the intellectual tools to combat this propaganda. I firmly believe we must participate in public sociology and to take actions within our power to turn our culture into a more progressive one. A culture where we overcome our anthropocentric ignorance and adopt cultural principles that view the planet as sacred. If it is this deontological perspective that is necessary if we hope to overcome our contemporary hyper-rational, utilitarian culture. The forces that we are fighting against are powerful. As in any age in history, the ruling class will do what they can to maintain their dominance in society. The power they wield makes it difficult to combat them. Nevertheless, in the spirit of Antonio Gramsci, we may experience pessimism of the intellect, but we must maintain optimism of the will.

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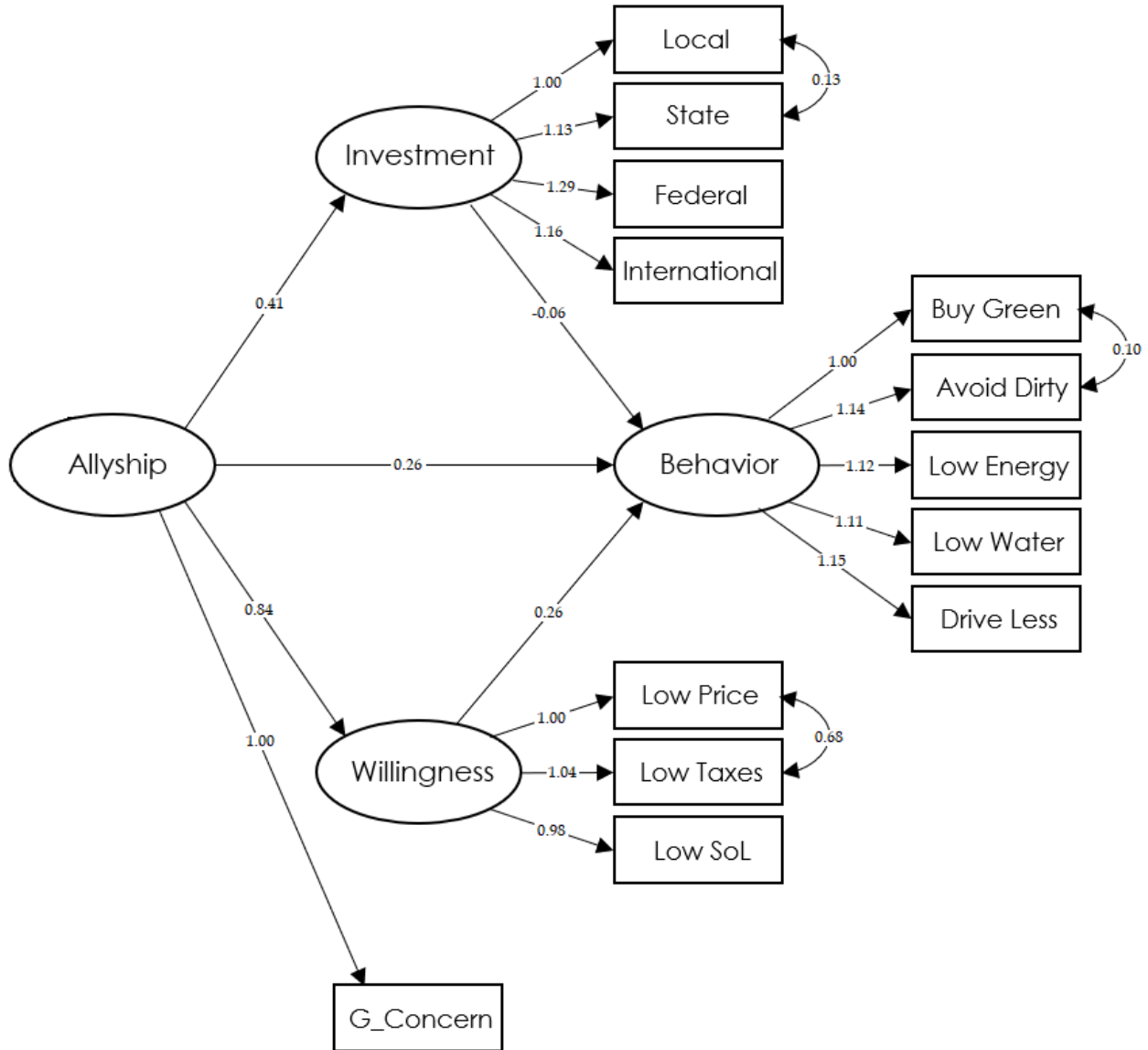
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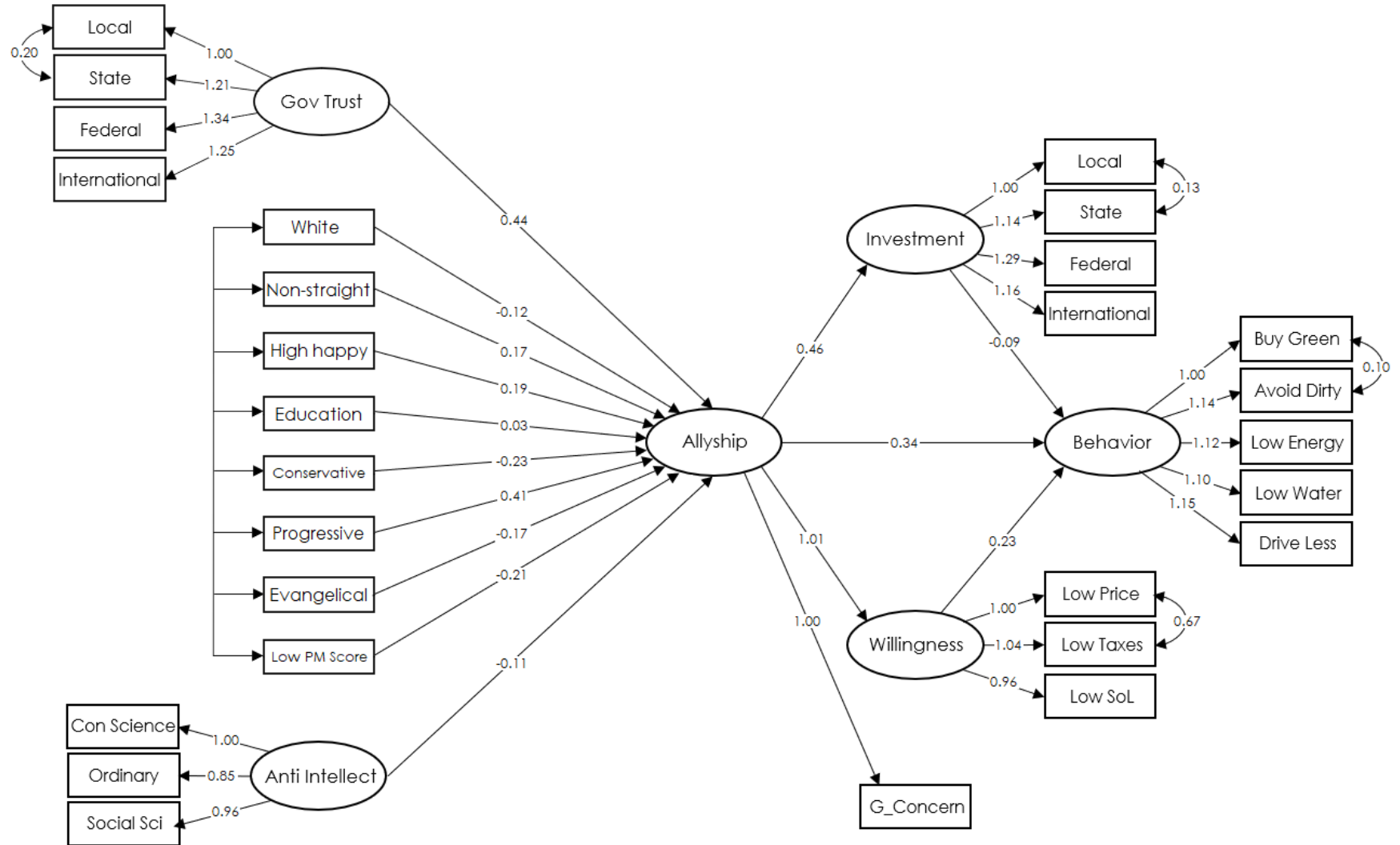
# Appendices

## Appendix 1. Figures

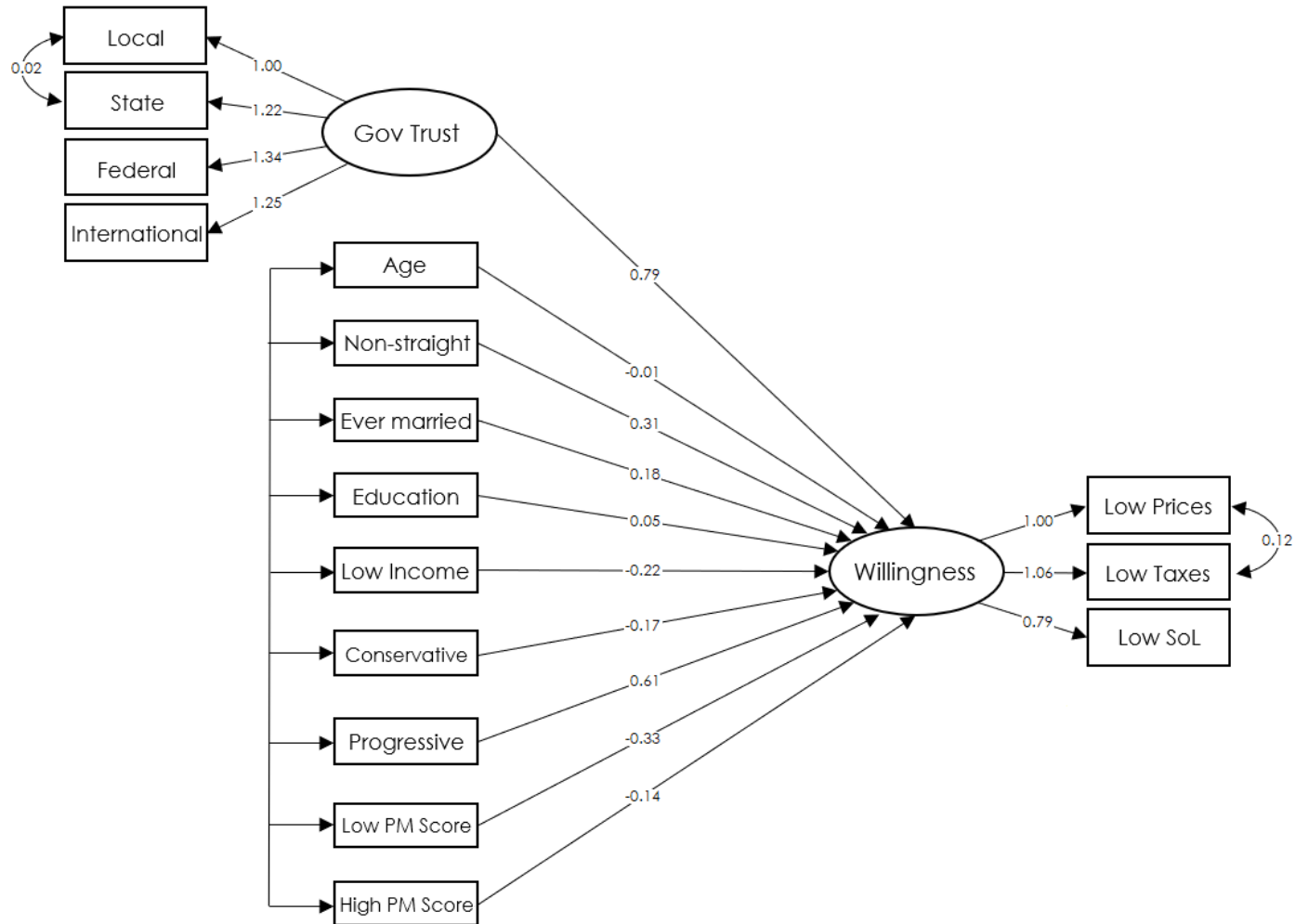
**Figure 1.** Environmental allyship measurement model.



**Figure 2.** Main structural model of the impact of government trust on environmental allyship including only statistically significant variables.

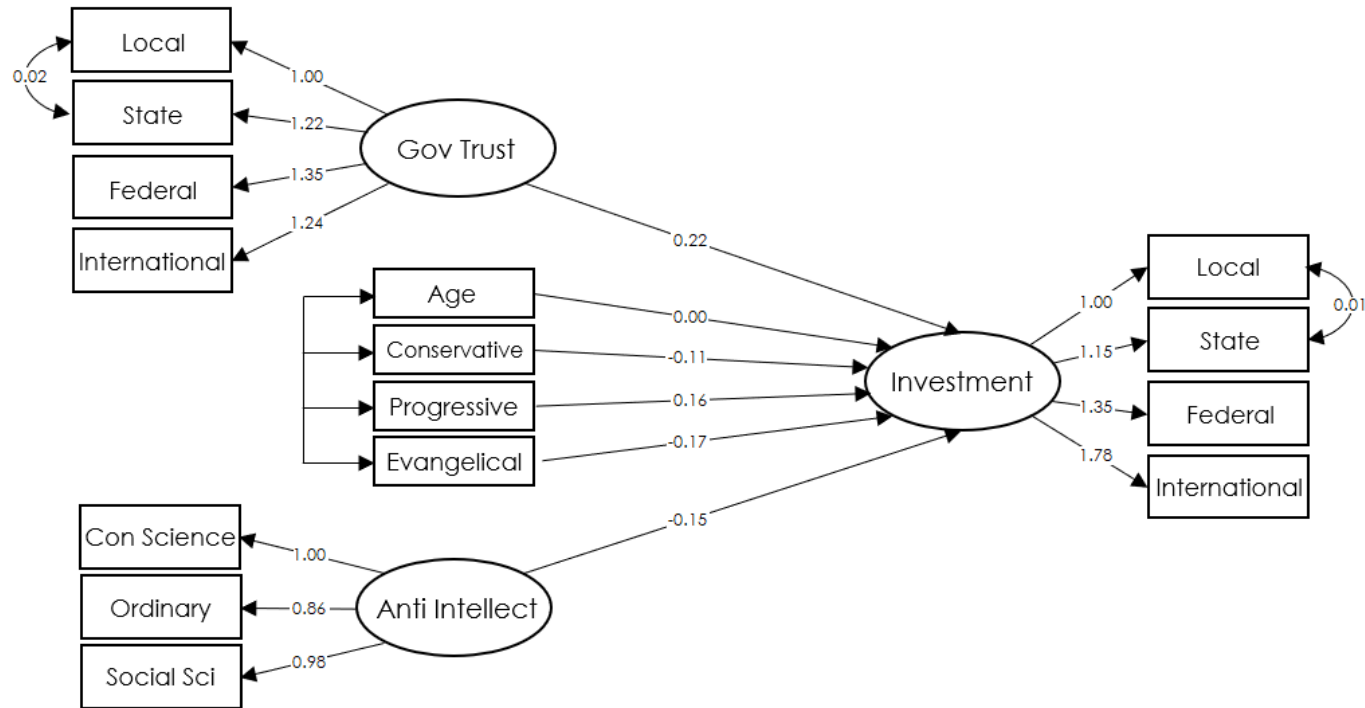


**Figure 3.** Structural model for of the impact of government trust on environmental willingness including only statistically significant variables.

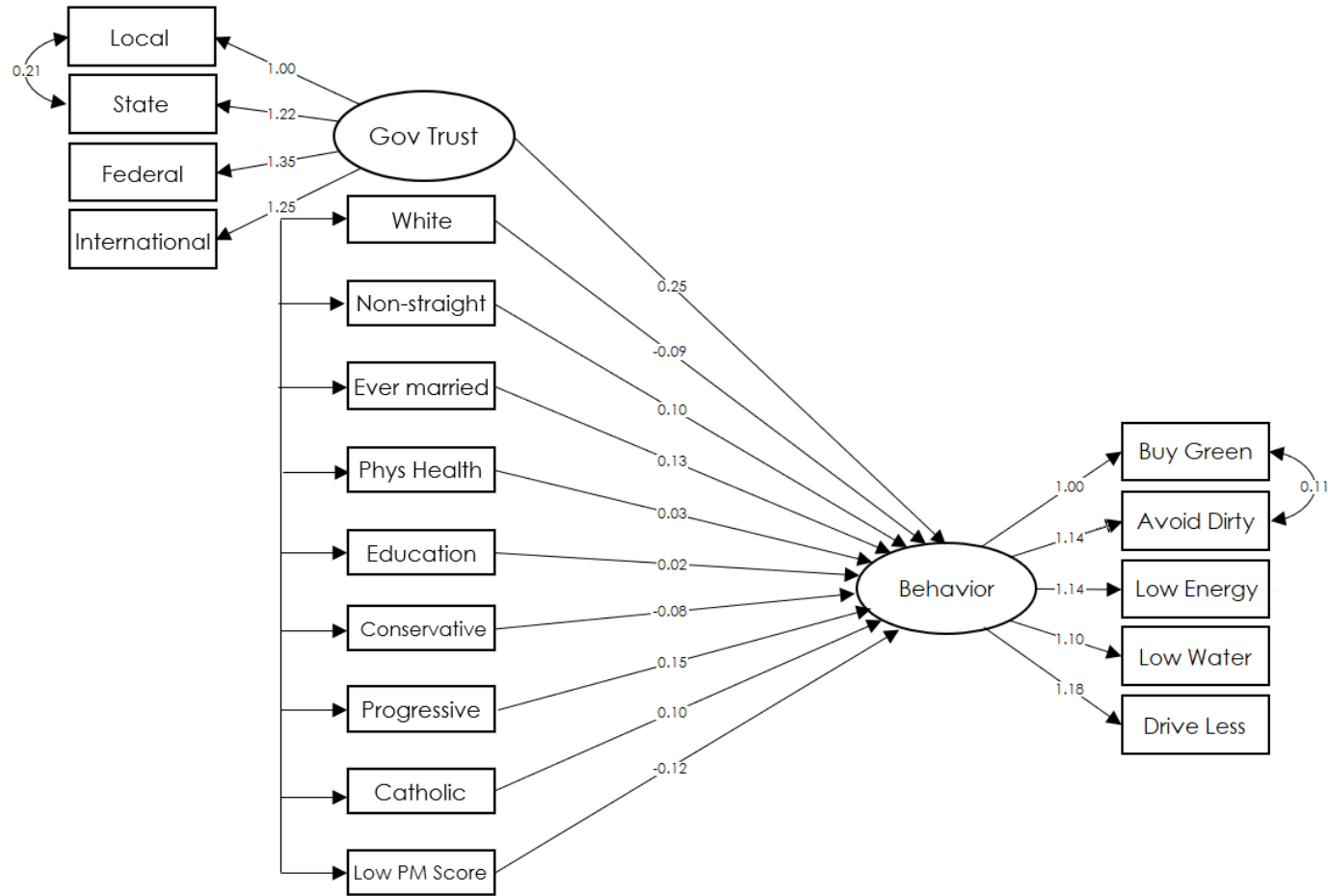




**Figure 4.** Structural model for of the impact of government trust on environmental investment including only statistically significant variables.



**Figure 5.** Structural model for of the impact of government trust on environmental behavior including only statistically significant variables.



Appendix 2. Tables

**Table 01.** Descriptive statistics for the Environmental Disposition Survey 2019.

Item	Freq.	Percent	Miss	Item	Min	Max	Mean	SD	Miss
Race	-	-	0	Age	18	95	46.6	16.67	0
White	1,451	72.01	-	Number of children	0	8	1.19	1.32	1
Black	318	15.78	-	Self-reported physical health	0	10	7.09	2.26	8
Other	246	12.21	-	Self-reported mental health	0	10	7.28	2.53	10
Gender	-	-	0	Self-reported happiness	1	7	4.94	1.58	0
Woman	1,007	49.98	-	Education in years	7	24	15.3	2.94	2
Man	999	49.58	-	Anti-intellectualism	-	-	-	-	9
Non-binary	9	0.45	-	Confidence in science	1	7	3.44	1.72	-
Sexual orientation	-	-	0	Wisdom of ordinary people	1	7	3.76	1.66	-
Straight	1,802	89.43	-	Social science uselessness	1	7	3.47	1.73	-
Not straight	213	10.57	-	Government trust	-	-	-	-	0
Marital status	-	-	0	Local	0	4	1.61	1.09	-
Married	1,039	51.56	-	State	0	4	1.6	1.11	-
Post-marriage	370	18.36	-	Federal	0	4	1.34	1.18	-
Single/never married	606	30.07	-	International institutions	0	4	1.42	1.17	-
Work type	-	-	0	Green behavior	-	-	-	-	220
Professional	822	40.79	-	Buy green produce	0	3	1.48	1.05	-
Precarious	207	10.27	-	Cut back on driving	0	3	1.33	1.05	-
Self-employed	112	5.56	-	Reduce home energy	0	3	1.71	1	-
Unemployed	874	43.37	-	Reduce and/or reuse water	0	3	1.52	1.02	-
Household income	-	-	70	Avoid dirty products	0	3	1.42	0.99	-
Under 25K	400	19.85	-	Green willingness	-	-	-	-	16
25K to 100K	1,016	50.42	-	Pay higher prices	1	7	3.61	1.77	-
Over 100K	529	26.25	-	Pay higher taxes	1	7	3.46	1.85	-

Municipality size	-	-	1	Lower standard of living	1	7	3.85	1.69	-
Rural/village	499	24.76	-	Green investment	-	-	-	-	17
Small town	432	21.44	-	Local government	0	3	1.77	0.98	-
City	736	36.53	-	State government	0	3	1.92	0.97	-
Large city	347	17.22	-	Federal government	0	3	2.01	1.05	-
Political affiliation	-	-	0	International institutions	0	3	1.92	1.05	-
Conservative	828	41.09	-	Green concern	0	4	2.38	1.17	0
Centrist	677	33.6	-						
Progressive	510	25.31	-						
Religious affiliation	-	-	2						
Mainline Christian/protestant	514	25.51	-						
Black Christian/protestant	171	8.49	-						
Evangelical Christian/protestant	167	8.29	-						
Catholic	437	21.69	-						
Other	182	9.03	-						
Unaffiliated	542	26.9	-						
Post-material score	-	-	0						
Low	326	16.18	-						
Middle	925	45.91	-						
High	764	37.92	-						

---

Source: EDS 2019, N = 2,105

**Table 02.** Polychoric correlation matrices for all confirmatory factor analyses with standardized residual covariances.

Item	1	2	3	4	5	Item	1	2	3	4
Environmental willingness	-	-	-	-	-	Environmental investment	-	-	-	-
1) Pay higher prices	1	-	-	N/A	N/A	1) Local government	1	-	-	-
2) Pay higher taxes	0.812	1	-	N/A	N/A	2) State government	0.862	1	-	-
3) Lower standard of living	0.622	0.624	1	N/A	N/A	3) Federal government	0.757	0.871	1	-
						4) International institutions	0.709	0.766	0.827	1
Environmental behavior	-	-	-	-	-	Government trust	-	-	-	-
1) Buy green products	1	-	-	-	-	1) Local government	1	-	-	-
2) Avoid bad products	0.7	1	-	-	-	2) State government	0.761	1	-	-
3) Drive less	0.552	0.653	1	-	-	3) Federal government	0.612	0.727	1	-
4) Reduce energy use	0.582	0.653	0.647	1	-	4) International institutions	0.587	0.677	0.701	1
5) Reduce water use	0.59	0.682	0.639	0.691	1					

Source: EDS 2019, N = 1,756

**Table 03.** Polychoric correlation matrix including all dependent items in each first-order confirmatory factor analysis.

Item	1	2	3	4	5	6	7	8	9	10	11	12
Environmental willingness	-	-	-	-	-	-	-	-	-	-	-	-
01) Pay higher prices	1	-	-	-	-	-	-	-	-	-	-	-
02) Pay higher taxes	0.823	1	-	-	-	-	-	-	-	-	-	-
03) Lower standard of living	0.624	0.630	1	-	-	-	-	-	-	-	-	-
Environmental Investment	-	-	-	-	-	-	-	-	-	-	-	-
04) Local government	0.326	0.308	0.342	1	-	-	-	-	-	-	-	-
05) State government	0.346	0.313	0.342	0.890	1	-	-	-	-	-	-	-
06) Federal government	0.297	0.284	0.297	0.778	0.887	1	-	-	-	-	-	-
07) International institutions	0.301	0.272	0.272	0.728	0.789	0.842	1	-	-	-	-	-
Environmental behavior	-	-	-	-	-	-	-	-	-	-	-	-
08) Buy green products	0.454	0.412	0.460	0.310	0.267	0.221	0.178	1	-	-	-	-
09) Avoid bad products	0.520	0.502	0.513	0.334	0.343	0.279	0.267	0.700	1	-	-	-
10) Drive less	0.448	0.450	0.471	0.292	0.286	0.228	0.197	0.553	0.650	1	-	-
11) Reduce energy use	0.436	0.430	0.445	0.338	0.344	0.327	0.312	0.580	0.651	0.645	1	-
12) Reduce water use	0.453	0.456	0.465	0.309	0.298	0.247	0.251	0.586	0.681	0.639	0.690	1

Source: EDS 2019, N = 1,756

**Table 04.** Validscale correlation matrix including all dependent first-order confirmatory factor analyses.

Item	Willingness	Investment	Behavior
Environmental willingness	-	-	-
Pay higher prices	0.769	0.283	0.398
Pay higher taxes	0.763	0.266	0.396
Lower standard of living	0.612	0.29	0.445
Environmental investment	-	-	-
Local government	0.303	0.764	0.226
State government	0.31	0.854	0.223
Federal government	0.26	0.826	0.161
International institutions	0.261	0.757	0.172
Environmental behavior	-	-	-
Buy green products	0.352	0.128	0.552
Avoid bad products	0.405	0.171	0.634
Drive less	0.308	0.141	0.544
Reduce energy use	0.352	0.203	0.594
Reduce water use	0.322	0.173	0.554

Source: EDS 2019, N = 2,105

**Table 05.** Fit statistic comparison between multi-order and single-order measurement models.

Fit statistics	Multi-order	Single-order
Alpha	N/A	0.89
1-RMSEA	0.941	0.724
CFI	0.981	0.530
TLI	0.974	0.436
SBIC	-21	8244
CD/R <sup>2</sup>	0.88	0.92

Source: EDS 2019, N = 1,756



**Table 06.** Fit statistics for all confirmatory factor analyses in the structural model.

Fit Statistics	Allyship	Willingness	Investment	Behavior	Gov. Trust	Anti-Int.
1-RMSEA	0.941	Nil	0.845	0.965	0.970	Nil
CFI	0.981	Nil	0.994	0.998	1.000	Nil
TLI	0.974	Nil	0.964	0.996	0.998	Nil
SBIC	-21	Nil	41	-17	-5	Nil
CD/R <sup>2</sup>	0.88	0.91	0.96	0.89	0.88	0.8

Source: EDS 2019

**Table 07.** Main measurement model results using polychoric correlation matrices.

Item	Coef.	Std. err.	Item	Coef.	Std. err.
Environmental allyship	-	-	Environmental investment	-	-
Environmental willingness	0.59***	0.039	Environmental behavior	-0.06*	0.029
Environmental investment	0.53***	0.032	Local government	Reference category	
Environmental behavior	0.32***	0.048	State government	1.13***	0.016
Green concern	Reference category		Federal government	1.19***	0.024
Environmental willingness	-	-	International institutions	1.07***	0.024
Environmental behavior	0.44***	0.039	Environmental behavior	-	-
Pay Higher prices	Reference category		Buy green products	Reference category	
Pay Higher taxes	1.00***	0.021	Avoid bad products	1.15***	0.03
Lower standard of living	1.00***	0.035	Drive less	1.09***	0.035
Covariances	-	-	Reduce energy use	1.14***	0.036
Higher prices, higher taxes	0.19***	0.019	Reduce water use	1.14***	0.035
Local invest, state invest	0.14***	0.009			
Green products, avoid products	0.10***	0.013			
Fit statistics			-		
1-RMSEA			0.941		
CFI			0.981		
TLI			0.974		
SBIC			-21		
CD			0.88		

Source: EDS 2019, N = 2,105

† p > 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

**Table 08.** Main structural model results for both unweighted and weighted variations only including statistically significant findings.

Structural model	Unweighted		Weighted	
	Coef.	Std. err.	Coef.	Std. err.
White	-0.12*	0.053	-0.12*	0.054
Non-heterosexual	0.17*	0.072	0.15*	0.076
Happiness	-	-	-	-
Unhappy	0.11	0.079	0.13	0.078
Neither	Reference category		Reference category	
Happy	0.19**	0.070	0.19**	0.067
Education	0.03***	0.008	0.02**	0.009
Political Affiliation	-	-	-	-
Conservative	-0.23***	0.053	-0.23***	0.055
Moderate	Reference category		Reference category	
Progressive	0.41***	0.061	0.43***	0.061
Religion	-	-	-	-
Mainline	Reference category		Reference category	
Black protestant	0.09	0.093	0.09	0.090
Evangelical	-0.17*	0.086	-0.17*	0.089
Catholic	0.03	0.064	0.01	0.065
Other	0.03	0.085	0.03	0.085
Unaffiliated	-0.04	0.062	-0.04	0.064
Post-material score	-	-	-	-
Low	-0.21***	0.063	-0.21***	0.064
Middle	Reference category		Reference category	
High	0.01	0.048	0.03	0.048
Anti-intellectualism	-0.11***	0.024	-0.11***	0.028
Government trust	0.44***	0.039	0.45***	0.044
Fit statistics	-	-	-	-
1-RMSEA	0.964	-	-	-
CFI	0.933	-	-	-
TLI	0.921	-	-	-
SBIC	-2,419	-	-	-
CD/R <sup>2</sup>	0.97	-	0.97	-

Source: EDS 2019, N = 2,105

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

**Table 09.** Structural model results for environmental willingness for both unweighted and weighted variations only including statistically significant findings.

Structural model for Willingness	Unweighted		Weighted	
	Coef.	Std. err.	Coef.	Std. err.
Age	-0.01***	0.003	-0.01***	0.003
Non-heterosexual	0.31**	0.107	0.27**	0.1134619
Ever married	0.18*	0.083	0.18*	0.0859486
Education	0.05***	0.012	0.05***	0.0125068
Household Income	-	-	-	-
Low Income	-0.22*	0.091	-0.22*	0.0973518
Middle Income	Reference Category		Reference Category	
High Income	0.14	0.084	0.13	0.0833829
Political affiliation	-	-	-	-
Conservative	-0.17*	0.079	-0.17*	0.0790157
Moderate	Reference Category		Reference Category	
Progressive	0.61***	0.090	0.62***	0.0941404
Post-material score	-	-	-	-
Low	-0.33***	0.094	-0.32***	0.0947621
Middle	Reference Category		Reference Category	
High	-0.14*	0.071	0.15*	0.0718947
Government trust	0.79***	0.059	0.79***	0.067
Fit statistics	-		-	
1-RMSEA	0.967		0.967	
CFI	0.955		0.955	
TLI	0.935		0.935	
SBIC	-948		-948	
CD	0.97		0.97	

Source: EDS 2019, N = 2,105

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

**Table 10.** Structural model results for environmental investment for both unweighted and weighted variations only including statistically significant findings.

Structural model for Investment	Unweighted		Weighted	
	Coef.	Std. err.	Coef.	Std. err.
Age	0.00***	0.001	0.00***	0.001
Political affiliation	-	-	-	-
Conservative	-0.11**	0.039	-0.10**	0.040
Moderate	Reference Category		Reference Category	
Progressive	0.16***	0.044	0.17***	0.044
Religion	-	-	-	-
Mainline	Reference Category		Reference Category	
Black protestant	-0.02	0.068	-0.02	0.071
Evangelical	-0.17**	0.063	-0.17**	0.062
Catholic	-0.03	0.047	-0.03	0.046
Other	-0.06	0.062	-0.05	0.060
Unaffiliated	-0.07	0.046	-0.06	0.046
Anti-Intellectualism	-0.15***	0.018	-0.15***	0.019
Government trust	0.22***	0.028	0.21***	0.032
Fit statistics	-		-	
1-RMSEA	0.969		-	
CFI	0.963		-	
TLI	0.949		-	
SBIC	-1160		-	
CD	0.97		0.97	

Source: EDS 2019, N = 2,105

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

**Table 11.** Structural model results for environmental behavior for both unweighted and weighted variations only including statistically significant findings.

Structural model for Behavior	Unweighted		Weighted	
	Coef.	Std. err.	Coef.	Std. err.
White	-0.09*	0.038	-0.09*	0.039
Non-heterosexual	0.10*	0.052	0.10*	0.054
Ever married	0.13***	0.040	0.15***	0.041
Physical health	0.03**	0.009	0.03**	0.009
Education	0.02***	0.006	0.02***	0.006
Political affiliation	-	-	-	-
Conservative	-0.08*	0.038	-0.08*	0.038
Moderate	Reference Category		Reference Category	
Progressive	0.15***	0.043	0.16***	0.043
Religion	-	-	-	-
Mainline	Reference Category		Reference Category	
Black protestant	0.05	0.066	0.05	0.064
Evangelical	-0.04	0.062	-0.04	0.061
Catholic	0.10*	0.046	0.10*	0.047
Other	0.09	0.060	0.08	0.060
Unaffiliated	-0.03	0.044	-0.02	0.045
Post-material score	-	-	-	-
Low	-0.12**	0.045	-0.13**	0.044
Middle	Reference Category		Reference Category	
High	0.05	0.034	0.05	0.034
Government trust	0.25***	0.028	0.25***	0.031
Fit statistics	-		-	
1-RMSEA	0.969		-	
CFI	0.950		-	
TLI	0.934		-	
SBIC	-1317		-	
CD	0.97		0.97	

Source: EDS 2019, N = 2,105

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

### Appendix 3. Survey Instrument

The following is the survey instrument I developed using the [Qualtrics](#) survey software tool and administered by Qualtrics.

---

# Environment Disposition Survey 2019

## Survey Flow

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### Start of Block: Consent Form



Q01 Online Consent to Participate in Research **Would you like to be involved in research at the University of Oklahoma?** I am Rick Wolford from the Sociology Department at the University of Oklahoma. I invite you to participate in my research project entitled Americans and their Environmental Attitudes. This research is being conducted online. You were selected as a possible participant because Qualtrics has contacted you. You must be at least 18 years of age to participate in this study.

Please read this document and contact me to ask questions that you may have BEFORE agreeing to take part in my research.

**What is the purpose of this research?** The purpose of this research is to gather information about how people view the environment.

**How many participants will be in this research?** Up to 2000 people will take part in this research.

**What will I be asked to do?** If you agree to be in this research, you will complete a survey.

**How long will this take?** Your participation will take between 12 and 15 minutes on average.

**What are the risks and/or benefits if I participate?** There are no risks and the benefits you will receive, if any, are provided by Qualtrics.

**Will I be compensated for participating?** You will be reimbursed for your time and participation by Qualtrics for a previously disclosed amount.

**Who will see my information?** In research reports, there will be no information that will make it possible to identify you. Research records will be stored securely and only approved researchers and the OU Institutional Review Board will have access to the records. Data are collected via an online survey system that has its own privacy and security policies for keeping your information confidential. Please note no assurance can be made as to the use of the data you provide for purposes other than this research.

**What will happen to my data in the future?** After removing all identifiers, we might share your data with other researchers or use it in future research without obtaining additional consent from you.

**Do I have to participate?** No. If you do not participate, you will not be penalized or lose benefits or services unrelated to the research. If you decide to participate, you don't have to answer any question and can stop participating at any time.

**Who do I contact with questions, concerns or complaints?** If you have questions, concerns or complaints about the research or have experienced a research-related injury, contact us at phone: 405-325-1751 or email: RickWolford@ou.edu or TBurns@ou.edu. You can also contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405-325-8110 or irb@ou.edu if you have questions about your rights as a research participant, concerns, or complaints about the research and wish to talk to someone other than the researcher(s) or if you cannot reach the researcher(s).

This research has been approved by the University of Oklahoma, Norman Campus IRB.  
*IRB Number: 10907, Approval Date: 2109/07/05*

By providing information to the researcher(s), I am agreeing to participate in this research.

- I agree to participate (1)
- I do not want to participate (0)

*Skip To: End of Block If Q01 = 0*

---

Page Break

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Q02 We care about the quality of our data. Do you commit to provide your best answers?

- Yes. I commit to providing my best answers. (1)
- No. I do not commit to providing my best answers. (0)
- I cannot commit either way. (9)

*Skip To: End of Block If Q02 != 1*

**End of Block: Consent Form**

---

**Start of Block: Geographic Block**



Q03 In which state do you currently live?

▼ I do not live in the U.S. (99) ... Wyoming (52)

*Skip To: End of Block If Q03 = 99*

---



Q04 At age 16, did you live in a different state than you do now?

- No (0)
- Yes (1)

*Display This Question:*

*If Q04 = 1*



Q05 Which state did you live in at age 16?

▼ Alabama (1) ... I cannot recall (99)

---



Q06 What is your current residential ZIP code?

---



Q07 Which of the following would you say best describes your residency?

- Rural/Village (Population of less than or equal to 2,500 people) (1)
- Small Town (Population of 2,501 to 49,999) (2)
- City (Population of 50,000 to 999,999) (3)
- Large City (Population of greater than or equal to 1 million people). (4)



Q08 Which of the following would you say best described your residency AT AGE 16?

- Rural/Village (Population of less than or equal to 2,500 people) (1)
- Small Town (Population of 2,501 to 49,999) (2)
- City (Population of 50,000 to 999,999) (3)
- Large City (Population of greater than or equal to 1 million people). (4)
- I cannot recall (9)

End of Block: Geographic Block

---

Start of Block: Demographic Block



Q33 What is your birth year?

---

Q34 Which of the following genders best describes you?

- Man (1)
  - Woman (2)
  - Non-Binary (3)
- 



Q35 Are you Spanish, Hispanic, or Latino/Latina/Latinx?

- No (0)
  - Yes (1)
- 

Q36 Which of the following races would you say best describes you?

- White (1)
  - Black or African American (2)
  - American Indian or Alaska Native (3)
  - Asian (4)
  - Native Hawaiian or Pacific Islander (5)
  - Other (6)
- 

Page Break

---

Display This Question:

If Q36 = 6

Q37 How would you describe your race?

---

Q38 Which of the following sexual orientations best describes you?

- Straight/Heterosexual (1)
- Gay/Lesbian/Homosexual (2)
- Bisexual/Pansexual/Omnisexual/Polysexual (3)
- Asexual (4)
- Other (5) \_\_\_\_\_



Q39 What is your current marital status?

- Married (1)
- Married but separated (2)
- Single/Divorced (3)
- Single/Widowed (4)
- Single/Never married (5)



Q40 Are you currently living with a romantic partner?

- No (0)
  - Yes (1)
- 



Q41 Including yourself, how many people currently live in your household?

---



Q42 How many children do you have?

---

End of Block: Demographic Block

---

Start of Block: Environmental Block



Q09 Generally speaking, how concerned are you about environmental issues?

- Not at all concerned (0)
  - A little concerned (1)
  - Moderately concerned (2)
  - Concerned a lot (3)
  - Concerned a great deal (4)
- 



Q10 How often do you do the following?

	Never (0)	Sometimes (1)	Often (2)	Always (3)	These services/products are not available in my area (9)
Make a special effort to sort glass, tins, plastic, and/or newspapers and so on for recycling. (Q10_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make a special effort to buy fruits and vegetables grown without pesticides and chemicals. (Q10_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cut back on driving a car to help protect the environment. (Q10_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduce the energy or fuel you use at home to help protect the environment. (Q10_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choose to reduce or re-use water to help protect the environment. (Q10_05)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avoid buying certain products to help protect the environment. (Q10_06)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Q11 How willing would you be to do the following to protect the environment?

	Very unwilling (1)	Unwilling (2)	Somewhat unwilling (3)	Neither willing nor unwilling (4)	Somewhat willing (5)	Willing (6)	Very willing (7)
Pay higher prices. (Q11_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pay higher taxes. (Q11_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduce your standard of living. (Q11_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Q12 In the last five years, have you done any of the following:

	No (0)	Yes (1)
Signed a petition about an pro-environmental issue. (Q12_01)	<input type="radio"/>	<input type="radio"/>
Given money to a pro-environmental group. (Q12_02)	<input type="radio"/>	<input type="radio"/>
Taken part in a protest or demonstration about an pro-environmental issue. (Q12_03)	<input type="radio"/>	<input type="radio"/>



Q13 How much should these levels of government invest in improving and protecting the environment?

	No investment (0)	A minor investment (1)	A moderate investment (2)	A major investment (3)
Local Government (Q13_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State Government (Q13_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Federal Government (Q13_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International governmental institutions (e.g. The United Nations, The World Bank, etc.) (Q13_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

---

Page Break





Q14 Listed below are statements about the relationship between humans and the environment. For each one, please indicate how strongly you agree or disagree with it.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
The earth is abundant in resources and will continue to provide for humanity in the future. (Q14_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humans should be careful of how we interfere with its natural processes. (Q14_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humans should continue to exploit nature to fulfill our needs. (Q14_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Despite our uniqueness among other animal species, human beings are still subject to the forces of nature. (Q14_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If we continue exploiting the planet, we will cause an ecological crisis too strong to manage. (Q14\_05)



Q15 Which of the following best describes your position regarding the economy and the environment?

- I would be willing to sacrifice the well-being of the environment A GREAT DEAL for the sake of improving the economy. (1)
- I would be willing to sacrifice the well-being of the environment SOMEWHAT for the sake of improving the economy. (2)
- I would prefer to balance the well-being of both the environment and the economy. (3)
- I would be willing to sacrifice the well-being of the economy SOMEWHAT for the sake of improving the environment. (4)
- I would be willing to sacrifice the well-being of the economy A GREAT DEAL for the sake of improving the environment. (5)



Q16 How much do you agree or disagree with the following statements?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Any society with a high population and a high standard of living will face severe problems avoiding environmental degradation. (Q16_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The public is more concerned about convenience and comfort than with preservation of resources and prevention of pollution. (Q16_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our society is preoccupied with economic growth and pays too little attention to environmental quality. (Q16_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a political-economic system, capitalism inevitably leads to the exploitation of the environment. (Q16_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Q17 Is America being impacted by environmental problems?

- No (0)
- Yes (1)

---

*Display This Question:*

*If Q17 = 1*



Q18 Are the environmental problems in America worth trying to solve?

- No (0)
- Yes (1)

---

*Display This Question:*

*If Q18 = 1*



Q19 Which of the following statements are you most likely to agree with?

- Environmental problems can be solved within our present political-economic system if enough people become involved. (1)
- Environmental problems can be solved only if significant changes are made in our present political-economic system. (2)
- Environmental problems can only be solved if our present political-economic system is replaced by a radically different system. (3)



Q20 How much do you think your local environment is being polluted (e.g. air pollution, soil pollution, water pollution, etc.)?

- None at all (0)
- A little (1)
- A moderate amount (2)
- A lot (3)
- A great deal (4)
- I do not know (9)

End of Block: Environmental Block

---

Start of Block: Rural Block

Q21 How much do you agree or disagree with the following statement: Rural-living Americans are being ignored and/or left behind by the rest of society.

- Strongly agree (1)
- Agree (2)
- Somewhat agree (3)
- Neither agree nor disagree (4)
- Somewhat disagree (5)
- Disagree (6)
- Strongly disagree (7)

End of Block: Rural Block

---

Start of Block: Political Block



Q22 Which of the following categories best describes your political views?

- Extremely Conservative/Traditional/Right-wing (1)
  - Conservative/Traditional/Right-leaning (2)
  - Slightly Conservative/Traditional/Right-leaning (3)
  - Moderate/Centrist/Middle of the road (4)
  - Slightly Progressive/Liberal/Left-leaning (5)
  - Progressive/Liberal/Left-leaning (6)
  - Extremely Progressive/Liberal/Left-wing (7)
- 



Q23 Which of the following categories best described your political views AT AGE 16?

- Extremely Conservative/Traditional/Right-wing (1)
  - Conservative/Traditional/Right-leaning (2)
  - Slightly Conservative/Traditional/Right-leaning (3)
  - Moderate/Centrist/Middle of the road (4)
  - Slightly Progressive/Liberal/Left-leaning (5)
  - Progressive/Liberal/Left-leaning (6)
  - Extremely Progressive/Liberal/Left-wing (7)
  - I cannot recall (99)
- 



Q24 How much do you trust the following levels of government to do the right thing?

	None at all (0)	A little (1)	A moderate amount (2)	A lot (3)	A great deal (4)
Local government (Q24_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State government (Q24_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Federal government (Q24_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International governmental institutions (e.g. The United Nations, The World Bank, etc.) (Q24_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Political Block

---

Start of Block: Anti-Intellectualism Block



Q25 How much do you disagree or agree with the following statements?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly Agree (7)
I do not have a lot of confidence in the scientific community. (Q25_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I personally value a college/university education. (Q25_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'd rather place my trust in the wisdom of ordinary people over experts and intellectuals. (Q25_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The social sciences (e.g. political science, sociology, philosophy, etc.) are a waste of time and do nothing to improve society. (Q25_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Anti-Intellectualism Block

Start of Block: Educational Block

Q26 What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree (1)
- High school graduate (high school diploma or equivalent including GED) (2)
- Some college but no degree (3)
- Associate/Vocational degree (2-year) (4)
- Bachelor's degree (4-year) (5)
- Master's degree (6)
- Doctoral degree (7)
- Professional degree (e.g. JD, MD, etc.) (8)

---

*Display This Question:*

*If Q26 = 1*



Q27 At what grade did you stop going to school?

---

---

*Display This Question:*

*If Q26 = 3*

*Or Q26 = 4*

*Or Q26 = 5*

*Or Q26 = 6*

*Or Q26 = 7*

*Or Q26 = 8*



Q28 How many total years of college/university education do you have?

---

End of Block: Educational Block

---

Start of Block: Financial Block



Q29 Please make your best estimate. Select the group that includes your PERSONAL annual income in dollars (before taxes)?

- No personal income (0)
- Under \$25,000 (1)
- \$25,000 to \$49,999 (2)
- \$50,000 to \$99,999 (3)
- \$100,000 to \$149,999 (4)
- \$150,000 or over (5)
- I do not know (9)



Q30 Please make your best estimate. Select the group that includes your HOUSEHOLD annual income in dollars (before taxes)?

- No household income (0)
- Under \$25,000 (1)
- \$25,000 to \$49,999 (2)
- \$50,000 to \$99,999 (3)
- \$100,000 to \$149,999 (4)
- \$150,000 or over (5)
- I do not know (9)



Q31 If you were asked to use one of these four names for your social class, which would you say you belong?

- Lower Class (1)
- Working Class (2)
- Middle Class (3)
- Upper-Middle Class (4)
- Upper Class (5)



Q32 Which social class would you say you belonged AT AGE 16?

- Lower Class (1)
- Working Class (2)
- Middle Class (3)
- Upper-Middle Class (4)
- Upper Class (5)
- I cannot recall (9)

End of Block: Financial Block

---

Start of Block: Employment Block



Q43 Which statement best describes your current employment status (choose highest paid status over unpaid status)?

- In paid employment (professional/full-time employee) (1)
- In paid employment (precarious/temporary/part-time employee) (2)
- In paid employment (self-employed) (3)
- Not in paid employment (keeping house) (4)
- Not in paid employment (student) (5)
- Not in paid employment (temporary layoff from a job) (6)
- Not in paid employment (looking for work) (7)
- Not in paid employment (retired) (8)
- Not in paid employment (disabled) (9)
- Not in paid employment (other) (10)

---

*Display This Question:*

*If Q43 = 1*

*Or Q43 = 2*

*Or Q43 = 3*



Q44

How many hours a week do you work on AVERAGE in paid employment? Give your best estimate.

---

Display This Question:

If Q43 = 1

Or Q43 = 2

Or Q43 = 3



Q45

How many hours did you work LAST WEEK in paid employment? Give your best estimate.

---

Display This Question:

If Q43 = 1

Or Q43 = 2

Or Q43 = 3

Q46 Are the tasks you do at work mostly manual? Use this scale where 0 means “mostly manual tasks” and 10 means “mostly non-manual tasks”

Mostly Manual

Mostly Non-Manual

0 1 2 3 4 5 6 7 8 9 10

1 ( )



Display This Question:

If Q43 = 1

Or Q43 = 2

Or Q43 = 3



Q47 Which of the following best describes your primary occupational category?

▼ Architecture and Engineering Occupations (1) ... Unsure (99)

Page Break



*Display This Question:*

*If Q43 = 1*

*Or Q43 = 2*

*Or Q43 = 3*



Q48 Are you a federal, state, or local government employee?

- No (0)
- Yes (1)
- I do not know (9)

*Display This Question:*

*If Q43 = 1*

*Or Q43 = 2*

*Or Q43 = 3*



Q49 Are you a contract employee (e.g. 1099) with your primary employer?

- No (0)
- Yes (1)
- I do not know (9)

*Display This Question:*

*If Q43 = 1*

*Or Q43 = 2*

*Or Q43 = 3*



Q50 Are you a labor union member?

- No (0)
- Yes (1)

---

*Display This Question:*

*If Q50 = 0*



Q51 Do you have ACCESS to labor union membership?

- No (0)
- Yes, but I do not want to join a union (1)
- Yes, but I am unsure if I want to join a union (2)
- Yes, and I would like to join a union (3)
- I do not know if I have access to union membership (9)

---

*Display This Question:*

*If Q43 = 1*

*Or Q43 = 2*

*Or Q43 = 3*



Q52 Do you have ACCESS to health insurance through your primary employer?

- No (0)
- Yes (1)

---

Page Break



Q53 Do you have health insurance?

- No (0)
- Yes (1)

---

*Display This Question:*

*If Q53 = 1*



Q54 How do you get your health insurance?

- I obtain health insurance through my employer (1)
- I obtain health insurance through a private provider (2)
- I obtain health insurance through my marriage (3)
- I obtain health insurance through my parents (4)
- I obtain health insurance through the government (e.g. Tricare, ACA, Medicare, Medicaid, etc.) but not through a marriage or parent (5)
- Other (6) \_\_\_\_\_

---

*Display This Question:*

*If Q53 = 1*



Q55 How satisfied are you with your health insurance?

- Not at all satisfied (0)
- A little satisfied (1)
- Pretty satisfied (2)
- Very Satisfied (3)
- I do not know (9)

---

Page Break

Display This Question:

If Q43 = 1

Or Q43 = 2

Or Q43 = 3



Q56 How likely do you feel you will still be employed by your primary employer in 6 months?

- Very unlikely (1)
  - Unlikely (2)
  - Somewhat unlikely (3)
  - Neither likely nor unlikely (4)
  - Somewhat likely (5)
  - Likely (6)
  - Very likely (7)
  - I plan on willingly leaving my job within the next 6 months (99)
- 

Display This Question:

If Q43 = 1

Or Q43 = 2

Or Q43 = 3



Q57 Do you have access to paid time off through your primary employer?

- No (0)
  - Yes (1)
-

Display This Question:

If Q43 = 1

Or Q43 = 2

Or Q43 = 3



Q58 In general, how would you rate your employment benefits through your primary employer (e.g. health insurance, paid time off, job security, etc.)?

- Very poor (1)
- Poor (2)
- Average (3)
- Good (4)
- Very good (5)
- I have no benefits (9)

End of Block: Employment Block

---

Start of Block: Post-Materialist Block



Q59 In regard to your beliefs and values, please rank the following ideas in order from most important (1) to least important (6). Ranks will appear after moving a single item.

- \_\_\_\_\_ Giving people more say in important government decisions (1)
- \_\_\_\_\_ Law and order in the nation (2)
- \_\_\_\_\_ Teaching more kindness and compassion in schools (3)
- \_\_\_\_\_ Economic growth (4)
- \_\_\_\_\_ Protecting the well-being of the environment (5)
- \_\_\_\_\_ A strong defense force (6)

End of Block: Post-Materialist Block

---

Start of Block: Religious Block



Q60 Which of the following categories best describes your religious affiliation?

- Mainline Christian/Protestant (e.g. Methodist, Baptist, etc.) (1)
  - Black Christian/Protestant (Denominations with predominantly black/African-American congregations) (2)
  - Evangelical Christian/Protestant (3)
  - Catholic (4)
  - Jewish (5)
  - Muslim (6)
  - Other (7) \_\_\_\_\_
  - Unaffiliated (8)
- 



Q61 Which of the following categories best described your religious affiliation AT AGE 16?

- Mainline Christian/Protestant (e.g. Methodist, Baptist, etc.) (1)
- Black Christian/Protestant (Denominations with predominantly black/African-American congregations) (2)
- Evangelical Christian/Protestant (3)
- Catholic (4)
- Jewish (5)
- Muslim (6)
- Other (7) \_\_\_\_\_
- Unaffiliated (8)
- I cannot recall (99)

---

*Display This Question:*

*If Q60 != 8*



Q62

How often do you attend religious services?

- At least once a week (3)
  - At least once a month (2)
  - At least once a year (1)
  - Never (0)
-



Display This Question:

If Q62 = 3



Q63 On average, how many times do you attend religious services per week?

---

Display This Question:

If Q62 = 2



Q64 On average, how many times do you attend religious services per month?

---

Display This Question:

If Q62 = 1



Q65 On average, how many times do you attend religious services per year?

---

Display This Question:

If Q60 != 8



Q66 Which of the following most accurately reflects your understanding of your religious text (e.g. the Bible, the Tanakh, the Quran, etc.)?

- God created the world for humans to do with as they please (1)
- God created the world for humans to use responsibly (2)
- God created the world and charged humans to care for it (3)
- Unsure (9)

---

*Display This Question:*

*If Q60 = 1*

*Or Q60 = 2*

*Or Q60 = 3*

*Or Q60 = 4*



Q67 Indicate if you think any of these events in the bible definitely happened, probably happened, not sure, probably fictional, or definitely fictional.

	Definitely happened (1)	Probably happened (2)	Not sure (3)	Probably fictional (4)	Definitely fictional (5)
Jesus' mother, Mary, was a virgin when she conceived Jesus. (Q67_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Noah built an ark and filled it with animals. (Q67_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jesus turned water into wine. (Q67_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adam and Eve lived in a garden called Eden. (Q67_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jesus raised Lazarus from the dead. (Q67_05)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jonah was in the belly of a fish (or whale) for three days. (Q67_06)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Religious Block

Start of Block: Individualism Block



Q68 How much do you agree or disagree with the following statements?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly Agree (7)
I am prone to make decisions without taking other peoples feelings into consideration. (Q68_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm more likely to treat a competition as something to enjoy, rather than something to win. (Q68_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to differentiate myself from others. (Q68_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm more likely to prioritize the welfare of the group, over my own welfare. (Q68_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm more likely to deal with the problems in my life alone, rather than sharing my problems with others. (Q68_05)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I'm more likely to feel joy, rather than jealousy, when people around me experience happy events.  
(Q68\_06)



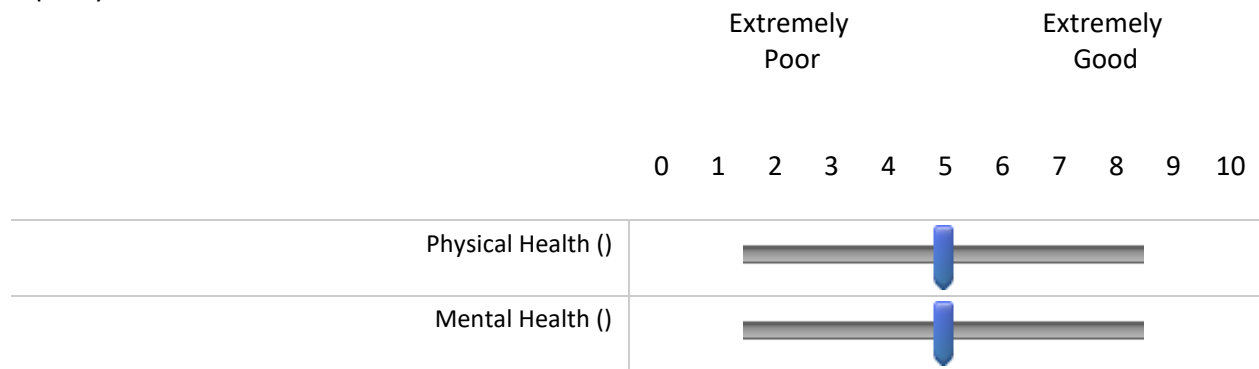
End of Block: Individualism Block

---

Start of Block: Well-Being Block



Q69 In regard to this last year, rate your physical and mental health. You must click on the slider to report your answer.



Q70 Over the last year, how would you rate your happiness.

- Extremely unhappy (1)
- Unhappy (2)
- Somewhat unhappy (3)
- Neither happy nor unhappy (4)
- Somewhat happy (5)
- Happy (6)
- Extremely happy (7)

Q71

Looking back now, how would you rate your physical and mental health AT AGE 16? You must click on the slider to report your answer.

	Extremely Bad	Extremely Good	Cannot recall								
	0	1	2	3	4	5	6	7	8	9	10
Physical Health ()											
Mental Health ()											



Q72 Looking back now, how would you rate your happiness AT AGE 16?

- Extremely unhappy (1)
- Unhappy (2)
- Somewhat unhappy (3)
- Neither happy nor unhappy (4)
- Somewhat happy (5)
- Happy (6)
- Extremely happy (7)
- I cannot recall (99)

---

*Display This Question:*

*If Q20 != 0*

*And Q20 != 9*

Q73 How much do you agree or disagree with the following statement: The pollution of my environment is negatively impacting my health and/or the health of the people around me.

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

**End of Block: Well-Being Block**

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Start of Block: Utilitarian Block



Q74 How much do you agree or disagree with the following statements?

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
It is morally acceptable to prioritize the well-being of a doctor over the well-being of someone who is homeless. (Q74_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is morally acceptable to cause harm to a few people if it maximizes the well-being of more people in the long-term. (Q74_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is morally acceptable to acquire more wealth than you need even when it could be distributed to people around you who are suffering. (Q74_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is morally acceptable to systematically cause harm to animals if it benefits humans. (Q74_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

It is morally acceptable to sacrifice the well-being of the environment if it can create a higher standard of living for humans.  
(Q74\_05)

It is morally acceptable to politically oppress people for a limited period of time if it ensures the well-being and happiness of the nation in the future.  
(Q74\_06)

End of Block: Utilitarian Block

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Start of Block: News Block



Q75 How much of the national and world news do you get from the following sources? For clarity, select YouTube (the media platform) if you are watching television programming on YouTube.

	None at all (0)	A little (1)	A moderate amount (2)	A lot (3)	A great deal (4)
Television (Q75_01)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Print media (Newspapers, Magazines, etc.) (Q75_02)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Word of mouth (Friends, Family, etc.) (Q75_03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Auditory media (Radio, Podcasts, etc.) (Q75_04)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social media (Facebook, Twitter, etc.) (Q75_05)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Video services (YouTube, Vimeo, etc.) (Q75_06)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet sources (other than YouTube and social media) (Q75_07)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other sources (Q75_08)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: News Block

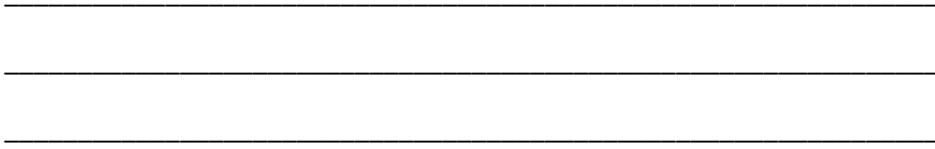
Start of Block: Closing Block

Q76 Do you have any questions, comments, or concerns you would like the researchers to know?

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End of Block: Closing Block

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