

**IUL - School of Social Sciences and Humanities**

Department of Social and Organizational Psychology

**Human Values and Attitudes towards Immigration and Climate Change in  
Germany: The Moderating Role of Challenge and Threat Perceptions and  
Political Ideology**

Julius von Zitzewitz

Dissertation submitted as partial requirement for the conferral of  
*Master in Psychology of Intercultural Relations*

Supervisor:

Dr. Elizabeth Claire Collins, Investigadora Integrada

November, 2020



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**Abstract**

Immigration and climate change are the cause of heated debates among the German public. From a socio psychological perspective, it is crucial to understand which factors shape and influence opinions and attitudes towards these topics. We proposed the human values as developed by Schwartz (1992) as good determinants of attitudes towards immigration and climate change. The present study also examined how challenge and threat perceptions of either immigration or climate change influenced the relationship between human values, namely conservation and self-transcendence, and attitudes towards immigration, or climate change respectively, as well as attitudes towards institutional and social trust. We assumed that challenge and threat perceptions would moderate the tested relationships. Furthermore, we assumed that left- and right-wing ideologies would moderate the relationships in a similar way as challenge and threat perceptions would. We used data from the European Social Survey (ESS), round 7 and 8, from 2014 ( $N=3045$ ) and from 2016 ( $N=2852$ ) and conducted several moderation analyses. Our findings did not give substantial support to our assumptions as most of the moderation effects were either non-significant or very weak.

Keywords:

Human values, challenge and threat perceptions, political ideology, immigration, climate change, Germany

PsycINFO Codes:

2960 Political Processes & Political Issues

3000 Social Psychology

3020 Group & Interpersonal Processes

3040 Social Perception & Cognition

## Resumo

A imigração e as mudanças climáticas são a causa de intensos debates entre a sociedade alemã. De uma perspectiva sócio-psicológica, é crucial entender quais os fatores que moldam e influenciam as opiniões e atitudes em relação a estes assuntos. Propomos os valores humanos desenvolvidos por Schwartz (1992) como bons determinantes de atitudes em relação à imigração e às mudanças climáticas. O presente estudo, assim como as percepções de desafio e ameaça da imigração ou das mudanças climáticas, influenciaram a relação entre os valores humanos, ou seja, conservação e autotranscendência e atitudes em relação à imigração ou mudanças climáticas, bem como as atitudes em relação à confiança institucional e social. Presumimos que as percepções de desafio e ameaça moderariam os relacionamentos testados. Além disso, presume-se que as ideologias de esquerda e de direita moderariam os relacionamentos de maneira semelhante às percepções de desafio e ameaça. Utilizando dados do European Social Survey (ESS), rounds 7 e 8, de 2014 ( $N = 3045$ ) e de 2016 ( $N = 2852$ ) e conduzimos várias análises de moderação. As descobertas não deram suporte substancial às suposições, já que a maioria dos efeitos de moderação não foram significativos ou foram muito fracos.

### Palavras-chave:

Valores humanos, percepções de desafio e ameaça, ideologias políticas, imigração, mudanças climáticas, Alemanha

### Códigos PsycINFO:

2960 Processos Políticos & Questões Políticas

3000 Psicologia Social

3020 Grupos & Processos Interpersonais

3040 Percepção Social & Cognição

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## Introduction

The topics of immigration and climate change are ubiquitous and frequently the cause of heated debates among the German public. It is very likely that one will be confronted with either of these two topics when consulting the German media. These topics divide the public into a variety of different parties, however, two parties are very prominent with respect to either topic. It seems as if there are those who tend to support policies in favor of immigration and those who strictly oppose it, and in regard to climate change the picture looks somewhat similar; there are those who are concerned about climate change and support policies trying to mitigate its impact and those who oppose any kind of policies trying to reduce climate change.

For decades Germany has been one the most popular destination for immigrants in Europe and according to Mosel et al. (2019) Germany has a long tradition of providing shelter to immigrants in need. In recent years more skepticism about the potential consequences of mass immigration has prevailed. Since 2014 immigration has been consistently perceived as one the most important topics in Germany (Gerhards et al., 2016). This circumstance is not surprisingly considering how the curve of asylum requests has significantly risen since the Arab Spring in 2010, and even more so with the beginning of the war in Syria in 2011, and a growing number of immigrants coming from sub-Saharan Africa (Mansour-Ille et al., 2019). The debate was further fueled by the so-called refugee crisis in the summer of 2015 which enabled the anti-immigration party Alternative für Deutschland (AfD, Alternative for Germany) to gain more popularity (Funk, 2016).

While the political left in Germany tends to support immigration, people with a conservative or right-wing ideology are likely to oppose it (Schnaudt & Weinhardt, 2017). By looking at the numbers of immigration to Germany over the last 10 years, one could argue that the Merkel administration has fostered an immigration friendly political agenda, especially from the perspective of the political right. Since 2014 the number of immigrants has not dropped below 1.4 million (Zuwanderungsstatistik 1991 – 2019, n.d.). In the rhetoric of the right, it has been a common strategy to harshly criticize the Merkel administration and to point towards the potential dangers of immigration. The political left, however, tends to be in favor of pro-immigrational policies (Hamann & Karakayali, 2016).

Even before the so-called “Fridays for Future” movement led by the teenage climate activist Greta Thunberg in 2018 arose, the medial attention given to whole topic of climate change was high. In 2011 Schäfer et. al already came to the conclusion that the medial attention given to climate change has constantly gone up since 1997. It now has a very

prominent place in the public debates in Germany, and the polarization around the topic becomes clear by looking at the case of Thunberg. The political right downplays the impact, spreads hate and ridicules Thunberg, while liberals and leftists support the whole movement behind Thunberg and counter the arguments of the right (Hofer, 2020). Research has shown that the political left generally seems to be more concerned about climate change and supportive of policies trying to mitigate its impact than the political right is (McCright et al., 2016). Not only is the political right in Germany less supportive of policies against climate change, they even tend to oppose these policies (Hillje, 2019; Forchtner, 2015).

The perception of immigration and climate change arguably depends on the values hold by an individual. From a socio psychological perspective, the relationships between the human values as developed by Schwartz (1992) and attitudes towards immigrants and climate change have been scrutinized before. To our knowledge far less attention has been given to the conditions under which human values contribute to a deeper understanding of immigration and climate change. What is new about the present research is that it wants to add the existing literature by examining how challenge and threat perceptions impact attitudes towards immigration and climate change. The perception of a challenge usually occurs when an individual feels to have the resources and abilities to cope with a given situation. The feeling of a threat on the other hand is likely to occur when an individual doubts to possess the resources or abilities to cope with the demands (Blascovich&Tomaka, 1996). We also want to see if and how these challenge and threat perceptions influence institutional and social trust in Germany. Considering the societal and political situation in Germany in recent years, we assume that left- and right-wing ideologies impact the relationships between the human values and attitudes towards immigration or climate change in similar way as challenge and threat perceptions do. In regard to immigration we expect that threat perceptions and a right-wing ideology on the one hand, and challenge perceptions and a left-wing ideology on the other hand have similar impacts on the tested outcome measures. As for climate change, our expectations are vice versa, meaning that threat perceptions and a left-wing ideology as well as challenge perceptions and a right-wing ideology should yield similar results.

In the following we outline a theoretical framework and review the existing literature regarding our topics of interest. We start by introducing the general theoretical concept of Schwartz' human values, the differences between challenge and threat perceptions, and the differences between left- and right-wing ideologies in regard to their values and worldviews. This is followed by how each of these three theoretical approaches can be used in order to predict attitudes towards immigration, climate change, and institutional and social trust. If

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possible, we try to give examples of relevant German studies. Where the existing literature is ambiguously we give arguments as to why we believe what is likely to apply to the specific German context.

## Chapter I – Literature Review

### The Human Values of Conservation and Self-Transcendence

When trying to explain actions, attitudes or opinions of individuals or groups, one has to consider values and their underlying principles (Schwartz, 1992). According to Schwartz “values are affect laden beliefs that refer to a person’s desirable goals and guide the selection or evaluation of actions, policies, people and events” (Schwartz, 2003, p. 297). Values are abstract principles which are usually considered to remain relatively stable over a lifetime and oftentimes serve as one of the main independent variables across different studies in social sciences on behavior and attitudes (Rokeach, 1973). It is crucial to delineate a clear distinction between values and attitudes as these two concepts falsely tend to be used synonymously (Davidov et al., 2008). Unlike values, attitudes are situational, rather volatile, and they only occur in combination with specific objects. Attitudes represent the sum of certain beliefs in regard to a specific object and while one can have almost as many attitudes as there are different objects, the number of values one holds is limited (Fishbein & Ajzen, 1975).

Over the years, social scientists have come up with the following distinct characteristics of values. (1) Values are beliefs which are closely linked to affect. The magnitude of the evoked emotion depends on the relative importance of a value in a given situation. (2) Values are motivational constructs and can define what people strive for. (3) Values transcend specific actions and situations and can be important and valid across different contexts. (4) Values are applied as criteria for selecting or evaluating certain actions, people, policies and events. People will (un)consciously judge in accordance with their values. (5) Values are ordered by relative importance meaning that an individual is likely to form a hierarchy and to prioritize certain values (Schwartz 2003, 2006, 2007).

Schwartz (1992) has developed a framework to measure those values, “human values” as he calls them. Schwartz’ claim that those values can be found cross-culturally was validated in numerous studies (e.g. Schwartz, 1992, 2006; Schwartz et al., 2001, Davidov et al., 2009). The framework consists of ten different value orientations composing a structure of four overarching higher order values types, which are relevant both on a societal and individual level. Benevolence and universalism compose the higher order value type of self-transcendence; security, conformity and tradition make up conservation; hedonism, achievement and power compose self-enhancement, and finally self-direction, and stimulation compose openness to change (Schwartz 1992, 2003, 2006, 2007). The reason for this specific structure is due to the dynamic between the different values. It derives from the fact that

pursuing one value might conflict with the pursuit of another one, whereas some other values can be congruent with one another (Schwartz 2003, 2006).

As defined by Schwartz (1992), the four different value relations compose two different higher order value dimensions. Conservation and openness to change form one higher order value dimension and self-transcendence and self-enhancement form the other one. However, before formulating a hypothesis one should consider the specific characteristics of an attitude, situation or a behavior and the context in which they occur rather than just applying the dimensions unconsciously (Devos et al., 2002).

For the purpose of this study we will focus on the higher order value types of self-transcendence and conservation, although these are conceptually unrelated, at least as defined by Schwartz(1992, 2006). The basis for the justification of the choice of these two higher value types will become clear in the theoretical framework provided later on.

As already mentioned, self-transcendence is composed of sub-value universalism and benevolence. Universalism represents tolerance, appreciation of interindividual differences, caring about and understanding of others as well as a personal emphasis on the protection of people and nature. Benevolence represents a deep kind of engagement and caring for people with whom one frequently interacts. The higher order value type of conservation consists of tradition, conformity, and security. Individuals who value tradition have a strong tendency to respect and follow cultural and religious customs. An individual that refrains from violating social norms and that seeks not draw attention is likely to be conformist. Security represents the wish to live in a safe and stable environment with others (Schwartz, 2003, 2006, 2007).

### **The Difference between Challenge and Threat Perceptions**

Just like it is worthwhile to consider values as described above, it can be insightful to analyze whether a situation is perceived as challenging or threatening as this might influence attitudes, beliefs, or opinions hold by those individuals or groups who see themselves confronted with a challenge or a threat. Individuals and societies continually face demanding situations in which their values are at stake. The degree to which a situation is perceived as either challenging or threatening is likely to have important indications as to how individuals, groups, or societies will respond to a given situation.

The biopsychological model of arousal regulation outlines an approach for distinguishing between challenge and threat. If an individual perceives a situation as personally relevant and believes in having the resources to meet, or even to exceed the demands, the individual is very likely to feel challenged. A situation will be perceived as a

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threat on the other hand, if it is self-relevant and the individual has a low expectancy of being able to cope with the demands (Blascovich&Tomaka, 1996).

Generally, one usually perceives a threat in anticipation of a harmful situation or an attack on one's personal well-being without having the ability to respond adequately. Negative emotions up to severe anxiety and negative effects one's self-esteem or self-identity can be the consequence (Rapee & Heimberg, 1997; Skinner & Brewer, 2002; Smith & Lazarus, 1990; Smith, 1991). The perception of a challenge usually occurs when an individual believes in her/his ability to cope with a given situation and further sees opportunities for success, personal growth or learning. Challenge perceptions can go along with positive emotions or excitement (Lazarus & Folkmann, 2002; Smith & Lazarus, 1990; Smith, 1991). According to Skinner and Brewer (2002) individuals who feel challenged, in contrast to individuals who feel threatened, will experience lower levels of stress, higher positive emotions, and higher expectancies to succeed as well as to cope with a given situation. Put in simple word, one could say the arousal of a challenge or a threat depends on an individual's belief in being able to cope with a given situation.

### **Political Ideology**

When people vote they will choose parties that are in line with their beliefs and values (Capara et al., 2006). Typically, people place themselves and others as either "left", "right", or somewhere in between those poles on the continuum (Kroh, 2007). According to Jost et al. (2003) people with a right-wing ideology usually seek to reduce fear, anxiety, and uncertainty. Despite that they tend to be change-avoidant and they approve inequality as an inevitable societal condition. Wilson (1973) sees a strong tendency to seek security and to prefer a traditional way of living on the side of people with a right-wing ideology. However, in some cases people holding a right-wing ideology want change, but their desired change is usually retrograde with the aim to return to old cultural customs and values (Jost et al., 2003). People holding a left-wing ideology on the contrary typically embrace change and are inclined to reject most forms of inequality (Thorisdottir et al., 2007). Overall, people who vote for left-wing parties value harmony, equality and freedom of choice to a greater extent than people voting for right-wing parties who usually cherish national security, traditions and social order. Rightists seek to remain the status quo and are likely to punish those who are threatening it (Devos et al., 2002).

Previous research on the relationship between human values and political orientation largely came to the conclusion that people who assign themselves to the political right-wing

will identify with the higher order value type of conservation while people who vote for left-wing parties will sympathize with values of self-transcendence and openness to change (Devos et al., 2002; Barnea & Schwartz, 1998; Schwartz et al., 2010). According to Schwartz et al. (2010) the human values have greater explanatory power than political ideology when it comes to voting, attitudes and beliefs towards certain topics such as immigration. Their conclusions regarding the political left and right are comparable to the ones of aforementioned scholars; that is, values held by the political right are often rooted in fear of change, threat and uncertainty, as well as the will to protect oneself and to prevent loss. People on the right of the political spectrum are usually concerned with the welfare of the own ingroup while they lack this kind of concern for the outgroup. In contrast to that, people of the political left tend to be concerned with the welfare of others, focus on the potential benefits that come along with change, and are less afraid of states of uncertainty.

### **Immigration**

#### **Human Values**

Regarding the understanding of attitudes towards immigration, a number of different scholars have emphasized the importance of human values as developed by Schwartz. A considerable amount of research has found that self-transcendence values are related to pro-immigrant sentiments while conservation values seem to be related to anti-immigrant sentiments (Davidov et al., 2008; Davidov et al., 2014; Davidov & Meuleman, 2012; Ponizovskiy, 2016; Sagiv & Schwartz, 1995). Generally, the existing literature suggests that only self-transcendence and conservation are good predictors of attitudes towards immigration while the relationship with the other two higher order value types of openness to change and self-enhancement is not as clear (Davidov et al., 2008).

These findings are not surprising if one considers what the two higher order value types of conservation and self-transcendence as previously described imply. Individuals scoring high on self-transcendence are concerned about the welfare of others, embrace interindividual differences and are protective of others; thus, immigrants who have left their country in search for a better life are likely to be welcomed as they represent a good opportunity to live up those values. On the contrary, individuals holding conservation values are very likely to react differently to the arrival of strangers from another country and culture. Individuals with conservation values have the desire to maintain their beliefs and cultural practices, and do not wish to be disturbed nor do they want a violation of their cultural unity and their shared understanding of how things should be. To them immigrants impose a threat



in the sense that they might introduce new cultural customs, disturb the existing social order, and might even challenge existing beliefs. As a consequence, they are likely to oppose immigration.

Within the German context, a study by Iser and Schmidt (2005) supported that self-transcendence is related to pro-immigrational sentiments while conservatism is related to anti-immigrational sentiments. As for this study, we assume to reach similar results as the ones by Iser and Schmidt.

### **Challenge and Threat Perceptions**

We could not find any literature directly assessing whether it makes a difference to perceive immigration as a threat or a challenge. However, a large part of the existing literature points towards the following; that is, the perception of threat imposed by immigrants is crucial for understanding negative and exclusionary attitudes, such as prejudice (e.g. Pereira et al., 2010; Semynov et al., 2004; Stephan et al., 1999; Stephan et al., 2005, 2009). There is no need for an actual threat to be present; the mere perception of a threat, whether legitimate or not, is sufficient to trigger negative sentiments towards immigrants (Stephan & Stephan, 1996). The ingroups' perception is essential for shaping attitudes towards the outgroup (Stephan & Stephan, 2000). In their Intergroup Threat Theory Stephan and Stephan (2000) emphasize the importance of four different kinds of threat that can have explanatory power regarding attitudes towards immigration: realistic threats, symbolic threats, negative stereotyping, and intergroup anxiety. A revised version of the Intergroup Threat Theory by Stephan and Renfro (2002) only contained realistic and symbolic threats since according to Renfro and Stephan these are the most crucial ones when trying to understand attitudes towards immigration. In this study we only worked with the concepts of realistic and symbolic threats.

Realistic threats can arise from the competition for resources and the aspiration to gain political and economic power (Stephan and Renfro, 2002). The perception of competition for resources with the outgroup or political influence can lead to prejudice and discrimination. Symbolic threats on the other hand are not about competition for resources but about perceived differences regarding cultural values and beliefs (Stephan and Renfro, 2002). An outgroup of immigrants is likely to have diverging worldviews from the dominating culture of the host society. If the immigrants' worldviews are incompatible with the dominating values and beliefs of the host society, members of the host society might respond by forming negative attitudes towards the immigrants (Croucher, 2013).

The degree to which one feels the exposure to a realistic and/or a symbolic threat should impact the overall perception of immigration. In Germany the topic of immigration is almost too immanent to be neglected, so, if one acknowledges the influx of immigrants as a societal fact but does not feel threatened, he/ she will arguably perceive immigration as a challenge. This argument is crucial in regard to the way how we operationalized challenge and threat perceptions in the case of this study.

### **Political Ideology**

The existing scientific literature on how political ideology affects immigration sentiments is not clear-cut. The majority of studies seems to indicate that especially people with conservative or right-wing political ideologies see immigration rather critically and are inclined to oppose it. This is especially true for supporters of the extreme political right (Herreros&Criado, 2009; Raijman et al., 2003; Semyonov et al., 2006, 2008; Van Der Burg, 2000). Edo et al. (2019) found that a large influx of immigrants leads to support of the political far-right, while at the same time the general support for the far-left significantly decreases. However, Edo et al. further found that if immigrants are highly skilled and well educated even the far-right can be in favor of immigration.

When it comes the political left, different studies have come to very mixed results. Generally the political left is more in favor of redistributing resources and wealth than the political right is (Klimm, 2019). Thus, one might assume that the political left is more inclined to endorse immigration at least up to a certain degree. According to Herreros and Criado (2009) people with a left-wing ideology are much more likely to see the potential benefits of immigration than people on the right. However, some studies suggest that anti-immigration sentiments might as well be hold by supporters of the political left, especially when immigration is a frequently discussed topic in the public debate and elections are approaching (Bohman, 2011; Alonso & Fonseca, 2011).

What becomes clear from most of the existing literature is that right-wing rather than left-wing ideologies are responsible for negative sentiments and rejection of immigration. In regard to Germany, most of the reviewed literature implies that people with a right-wing ideology are more likely to show anti-immigrant sentiments than leftists (e.g. Allen&Knight-Finley, 2019; Clark & Legge, 1997; Otto & Steinhardt, 2017; Pettigrew et al., 2007; Raijman et al., 2003).

## **Climate Change**

### **Human Values**

Regarding the topic of climate change and its relationship with human values, the existing literature points towards different directions. Generally, one would expect that individuals with an emphasis on self-transcendence values sincerely care about the environment, thus, they should acknowledge the existence of climate change and engage in politics trying to prevent a further change of climate. A considerable amount of research points exactly towards that direction. Self-transcendence seems to be positively correlated with climate change engagement and the support of pro-environmental policies and behaviors. Furthermore, self-transcendence seems to be negatively correlated with climate change skepticism (Boumann et al. 2018, Corner et al. 2014, Dietz et al., 2007; Prati et al., 2017; Lucas, 2018). As for the higher order value relation of conservation the picture looks different. In most cases in which conservation was considered as a predictor of attitudes towards climate change, it was generally positively correlated with climate change skepticism and negatively with pro-environmental policies and behaviors (Lucas 2018, Poortinga et. al, 2011, Schultz & Zelezny, 1999). However, Dietz et. al (2007) found a weak but positive relationship between the support of climate change policies and conservation.

Other than that a considerable number of other studies did not test conservation and used the higher order value type of self-enhancement instead. According to these studies self-enhancement has negative effects on problem awareness of climate change and pro-environmental behaviors (Howell & Allen, 2017; Nordlund & Garvill, 2002; Schoenefeld & McCauley, 2015). Some of the studies that tested both conservation and self-enhancement came to the conclusion that both values are related to similar attitudes regarding climate change, such as climate change skepticism and a tendency to oppose policies trying to attenuate the impact of climate change (Lucas,2018; Stern & Dietz, 1994). A study by Swim and Becker (2012) implies that in the case of Germany self-transcendence values might be good predictors of pro-environmental behaviors.

### **Challenge and Threat Perceptions**

Literature directly assessing the difference in effect between perceiving climate change as a challenge or as a threat is relatively scarce, non-existent respectively, at least according to our review. A considerable amount of literature scrutinizes to what extent risk perceptions play a role (e.g Brewer et al., 2019; Frondel et. al, 2017; Reser & Swim, 2011; O'Connor et al., 1999). In general, the risk perception and the knowledge of and about

climate change are good indicators to what extent individuals will perceive climate change as a threat and if they will support government actions trying to reduce climate change (Frondelet et al., 2017; Langford, 2002; O'Connor et al., 1999). According to Frondelet et al. (2017) Germans who perceive climate change as a risk are more likely to support government actions against the impact of climate change.

Socio-cultural factors (e.g. values, worldviews, or political ideology) that are prevalent in a society or a specific group seem to have the greatest impact on climate change attitudes (Brewer et al., 2019; Malka et al., 2009; Menny et al., 2011; van der Linden, 2015). Further, a conclusion that can be drawn upon the reviewed studies is that threat appraisals and coping appraisals play an important role in the evaluation of climate change. Threat appraisals refer to the degree to which resources might be affected by climate change or to what extent needed resources to counter climate change are available. Coping appraisals on the other hand refer to an individual's felt ability to respond to the threat of climate change accordingly; among other things the coping appraisal depends on the belief in self-efficacy or response efficacy (Reser & Swim, 2011; van der Linden, 2014; 2015).

Although the reviewed literature does not directly address the question whether it makes a difference to perceive climate change as a challenge or a threat, we can assume that, given an individual believes in climate change, a threat is likely to be perceived if an individual does not believe in his/her own or the society's capabilities and resources to cope with climate change whereas a challenge is likely to be perceived if there is trust in the existing resources and capabilities enabling to cope with climate change.

### **Political Ideology**

There are strong ties between climate change beliefs and political ideologies (Johnson, 2017). Climate change deniers and skeptics are mostly found among people who give their vote to parties on the right of the political spectrum (Clements, 2012; Corner, 2012; Guber, 2012; Longo & Baker, 2014; McCright et al., 2014; Poortinga et al. 2011). Corner (2012) claims that it is especially the political right which tends to justify the use of climate change unfriendly fossil fuels such as shale gas.

On the other hand, people who endorse pro-environmental policies and policies that acknowledge climate change as a scientific fact are likely to be found on the left of the political spectrum, furthermore, leftists are less likely to be in denial of climate change (Hamilton & Saito, 2014; McCright et al., 2015; Marquart-Pyatt et al., 2014; Neumayer,

2004). Metag et al. (2017) found that climate change skeptics in Germany are likely to be found on the right.

However, a study by Smiley (2016) came to mixed results, while in Houston only right-wing supporters were in denial of climate change, in Copenhagen supporters of both the left and right were almost equally skeptical about climate change and were inclined to deny it. Based on this study one could argue that the political ideology is not necessarily a reliable indicator for climate change attitudes.

### **Institutional and Social Trust**

#### **Human Values**

Institutional trust usually refers to the general level of trust an individual or a group has towards a public institution or system (e.g. parliament, police, legal system). In order to have trust in an institution, an individual needs to believe in the competency of an institution, further it needs to feel that the institution is reliable and pursues what it is meant to do (Devos et al., 2002). The existing literature suggests that the higher order value types of openness to change, conservation, and the self-transcendence are the best predictors of institutional trust. People who score high on conservation are usually inclined to have greater trust in institutions whereas people who score high on openness to change and/or universalism usually see public institutions rather critically and are more mistrustful (Schwartz, 1992; Devos et al., 2002). In contrast to these findings is a study by Vyroost et al. (2007) who found that self-transcendence was the best predictor of trust and positive attitudes towards public institutions. Furthermore, Morselli et al. (2012) found very mixed results in their analysis of three different data sets regarding the relationship between human values and institutional trust. In two of the analyzed data sets they found the strongest relationship between conservation and institutional trust, followed by a strong relationship between openness to change and institutional trust as well as a strong relationship between the self-transcendence sub-value of universalism and institutional trust, indicating that there is a relationship between self-transcendence and institutional trust at least to some degree.

Overall, the existing literature regarding the relationship between human values and institutional trust is rather ambiguous. Considering the German context, we assume people with conservation values will mistrust public institutions while people with self-transcendence values will trust in public institutions. We base this assumption on the circumstance that from the perspective of someone with conservation values public institutions such as the German government or the legal system have administered an immigration friendly political agenda in

recent years, which in turn might have led to the support from people with self-transcendence values.

Social trust can be defined as the “the willingness to trust others, even total strangers, without the expectation that they will immediately reciprocate that trust or favour” (Beilman&Lilleoja, 2015, p. 19). People with high social trust tend to trust outgroups members more easily, while people with low social trust usually do not (Herreros & Criado, 2009; Rustenbach, 2010). Further, people who generally trust others will likely help or cooperate with strangers, despite of having no proof of their trustworthiness (Yamagishi & Yamagishi, 1994). Social Trust seems to be related to general societal norms as well as to socio-economic factors such as income (Putnam, 2002). Possibly, social trust is not necessarily an individual characteristic, but a characteristic of the society in which either more or less social trust is prevalent (Beilman&Lilleoja, 2015;Newton, 2004). Previous studies have found a positive relationship between self-transcendence and social trust; individuals who score high on self-transcendence will tend to trust others more easily (Meulemann, 2009; Vyrost et al. 2007). Individuals holding conservation values usually will tend to show opposite effects, that is, they will tend to be mistrustful and skeptical towards others (Schwartz, 2007; Vyrost et al. 2007).

### **Challenge and Threat Perceptions**

We could not find any literature directly assessing how the perception of a challenge or a threat affects social or institutional trust. Some of the existing literature examines how crises influence social as well as institutional trust. The results are very mixed; while some studies found that crises generally negatively affect institutional and social trust (e.g. Zizumbo-Colunga et al., 2010), others found that just social trust increased or remained relatively stable while institutional trust decreased (e.g. Ervasti et al., 2018; Growiec et al., 2012; Habibov & Afandi, 2015).

Arguably, institutional or social crises can be perceived as either a challenge or a threat depending on the extent to which individuals have trust towards the capacities of institutions and the society.

### **Political Ideology**

When it comes to political orientation and social trust, the existing literature suggests that right-wing ideologies are negatively correlated with social trust, meaning that people holding right-wing orientations are more mistrustful towards others (Berning & Ziller, 2017;

Rydgren, 2009). According to Van Oorschot et al. (2006) people on the left of the political spectrum tend to trust others more easily. However, findings by Inglehart (1987) have demonstrated that both the political extreme right as well as the extreme left tend to show lower levels of social trust. In contrast to those findings of Inglehart are the ones by Krouwel et al. (2017) who were not able to find any relationship between political ideology and social trust.

Regarding political orientation and institutional trust the existing literature indicates that an individual's trust in institutions largely varies from country to country, and further depends on whether the government in charge is in line with one's own political beliefs and values ( e.g. Miller, 1974; Newton, 1999).

### **Present Study**

The present study aims to address the question whether the factors which can potentially explain attitudes towards immigration and climate change as well as towards government actions tackling these issues, might also explain or have an impact on institutional and social trust, at least to some degree. As for this study, we try to analyze if and to what extent the human values of conservation and self-transcendence can serve as predictors of the mentioned topics. We also want to assess how the perception of a challenge or a threat of either immigration or climate change, affects the strength of the relationship between the two human values and the tested variables or constructs regarding attitudes towards immigration and climate change. A precondition is obviously that individuals acknowledge the existence of immigration and climate change. Furthermore, we believe that political ideology should affect the tested relationships in a similar way as the challenge and threat perceptions.

In light of the provided theoretical framework and the overall implications of the existing literature as well as in consideration of the specific social and political situation in Germany, we came up the following model (Figure1 & 2) and hypotheses.

Figure 1.  
*Theoretical Model for Immigration*

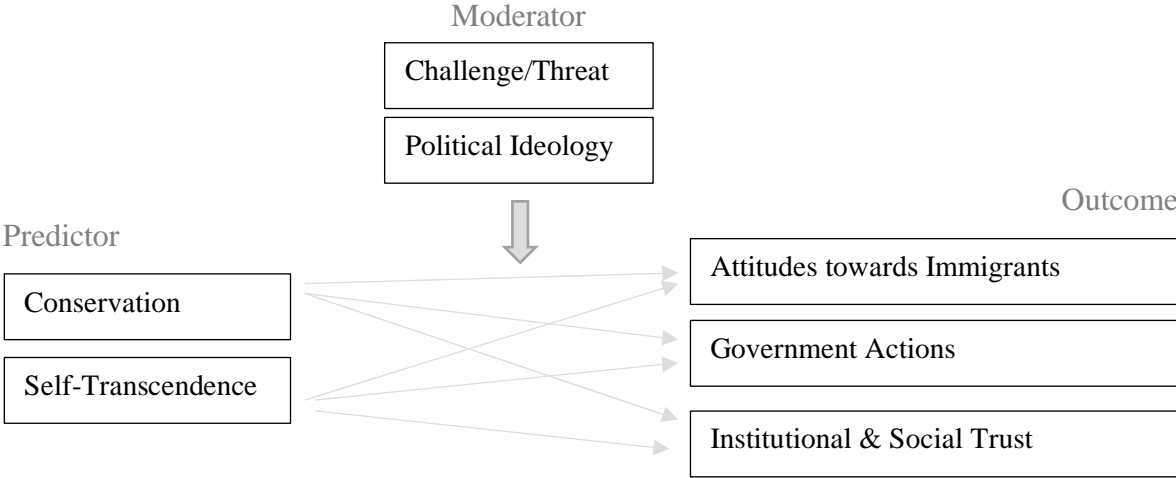
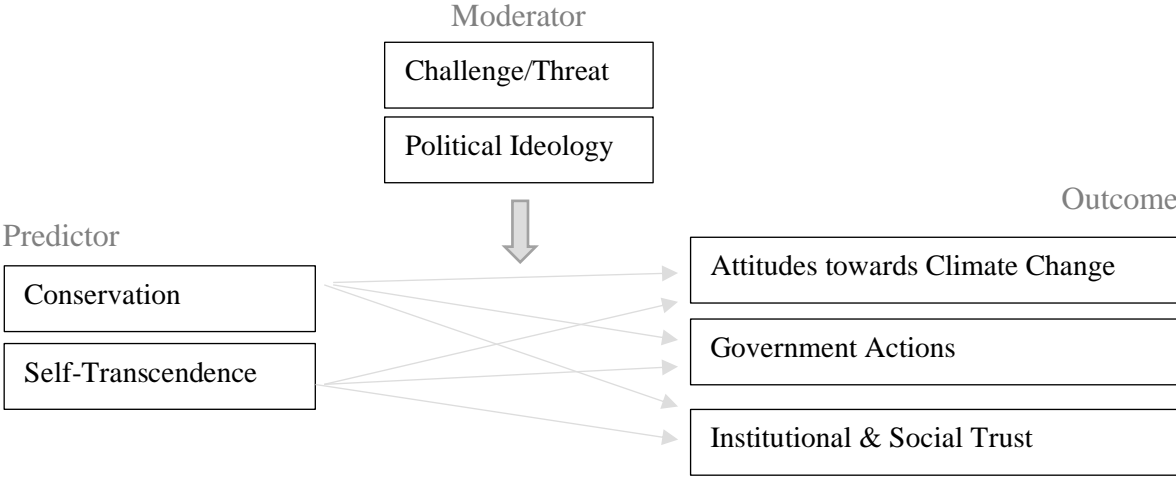


Figure 2.  
*Theoretical Model for Climate Change*



**Hypotheses**

H1: Conservation is negatively associated with institutional and social trust(H1a), it is positively associated with negative sentiments regarding immigrants(H1b), further it is negatively associated with government actions in favor of immigrants(H1c). All of these relationships are stronger the more a threat is perceived and the more an individual holds a right-wing ideology(H1d).



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H2: Self-Transcendence is positively associated with institutional and social trust(H2a), it is negatively associated with negative sentiments regarding immigrants(H2b), further it is positively associated with government actions in favor of immigrants(H2c). All of these relationships are stronger the more a challenge is perceived and the more an individual holds a left-wing ideology(H2d).

H3: Conservation is negatively associated with concerns about climate change(H3a), further it is negatively associated with government actions tackling climate change(H3b). All of these relationships will be stronger the more a challenge is perceived and the more an individual holds a right-wing ideology(H3c).

H4: Self-transcendence is positively associated with concerns about climate change(H4a), further it is positively associated with government actions tackling climate change(H4b). All of these relationships are stronger the more a threat is perceived and the more an individual holds a left-wing ideology(H4c).

## Chapter II – Method

### Data

For our analysis we used data from the European Social Survey (ESS) from round 7, collected in 2014, and from round 8, collected in 2016. We focused exclusively on data from Germany. The used variables and concepts of round 7 stem from the sub-sections of politics, media and social trust, human values, and immigration, and of round 8 from the sub-sections of politics, media and social trust, human values, and climate change. For both rounds the data were collected via one hour-long face-to-face interviews. The ESS surveys were based on random probability sampling with a minimum target response rate of 70% (ESS 7 Documentation Report, 2014; ESS 8 Documentation Report, 2016). In round 7 3045 people with a mean age of 50.29 years participated ( $SD=18.42$ ; 49.3% female), and in round 8 2852 people with a mean age of 48.56 years participated ( $SD=18.50$ ; 47.1% female).

In order to facilitate the interpretation of the data we recoded some variables, so that high values usually represented a high level of identification or agreement with a variable or concept.

### Measures

#### Outcome Measures used from Round 7 and 8

The concepts of social and institutional trust were used in the analyses of both surveys. Institutional trust had a Cronbach's alpha of 0.776 in round 7 and 0.774 in round 8, both of which are acceptable values that indicate a sufficient degree of reliability (Taber, 2017). Institutional trust was originally composed of seven different items. In the case of this study we only used the three items measuring trust in parliament, trust in the legal systems, and trust in the police, all of which were measured on an 11-point Likert scales (0="No Trust at all" to 10="Complete Trust"). The reason for the choice of these three variables was that they represent probably the most crucial and constant institutions in any constitutional democracy. According to Newton (2001) trust in institutions is more fundamental than trust in constantly changing governments or politicians; trust in the European Parliament and the United Nations does not directly concern German institutions. This is why we have dismissed the other four variables that originally composed institutional trust in the ESS surveys.

Social trust was the mean rating of the three associated items "Most people can be trusted or you can't be too careful", "Most people try to take advantage of you, or try to be fair" and "Most of the time people helpful or mostly looking out for themselves". The Cronbach's of round 7 was 0.692 and 0.712 for round 8, once again indicating a sufficient

degree of reliability. Each item was rated on an 11-point Likert scale and coded in a way that higher numbers indicate a higher degree of social trust (e.g. 0="You can't be too careful" to 10="Most people can be trusted").

### **Outcome Measures used from Round 7**

The concepts of "Opposition towards immigration" and "Qualification for entry/exclusion" served as proxies for attitudes towards immigration. Opposition towards immigration aimed to measure to what extent people from different ethnicities, countries and economic situations should be allowed to immigrate to Germany, and it also intended to assess to what extent immigration was perceived as beneficial or disadvantageous. The complex was composed of the mean rating of nine different items (Cronbach's alpha: *0.876*). Eight of the items were measured on 4-point Likert scales (e.g. 1="Allow many to come and live here" to 4="Allow none"). The variable "Immigrants make country worse or better place to live" was measured on an 11-point Likert scale (0="Worse place to live" to 10="Better place to live"), which had to be reverse coded in order to include it into the complex of opposition towards immigration. Furthermore, we used the standardized versions of each of the nine variables to create the composite score of opposition towards immigration.

Qualification for entry/exclusion asked about the qualities an immigrant should possess in order to be allowed in, such as working skills, languages skills, commitment to the way of life of the new host society or skin color. Six different items composed qualification for entry/exclusion (Cronbach's alpha: *0.751*), and each of them was measured on an 11-point Likert scale (0="Extremely unimportant" to 10="Extremely important").

We used the variable "Laws against discrimination in workplace" which was measured on an 11-point Likert scale (0="Extremely bad" to 10="Extremely good") as a proxy for government actions in regard to immigration.

### **Outcome Measure used from Round 8**

In order to examine attitudes towards climate change we used the concept of "Energy supply" which attempted to measure concerns about the use of fossil fuels, and the concept of "Pro-environmental personal norms" which assessed to what extent individuals felt personally responsible to reduce climate change. Further, we used the concept of "Non-activist behaviors" which referred to actions that could potentially be taken by the government in order to mitigate the impact of climate change.

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Energy supply was composed of one item (“How worried, too dependent on fossil fuels”) measured on a 5-point Likert scale (1=“Not at all worried” to 5=“Extremely worried”). Pro-environmental personal norms were made up by the item “To what extent feel personal responsibility to reduce climate change” which was measured on an 11-point Likert scale ranging from 0=“Not at all” to 10=“A great deal”. Non-activist behaviors had a Cronbach’s alpha of 0.598 which is not ideal but still acceptable (Taber, 2017; Ursachi et al., 2015). It was the mean rating of the three associated items “Favour increase taxes on fossil fuels to reduce climate change”, “Favour subsidise renewable energy to reduce climate change”, and “Favour ban sale of least energy efficient household appliances to reduce climate change” all of which were measured on 5-point Likert scales (1=“Strongly against” to 5=“Strongly in favour”) and were reverse coded so that higher numbers imply a higher degree of support for non-activist behaviors.

### **Predictors used from Round 7 and 8**

We used the Schwartz’ higher order value type of conservation (Cronbach’s alpha:  $ESS7=0.695$ ;  $ESS8=0.700$ ) which was composed of security (e.g. variable “Important to live in secure and safe surroundings”), conformity (e.g. variable “Important to do what is told and follow rules”), and tradition (e.g. variable “Important to follow traditions and customs”). The second Schwartz’ higher order value type we used was self-transcendence which was composed of universalism (e.g. “Important to understand different people”) and benevolence (e.g. “Important to help people and care for others well-being”). The Cronbach’s alpha for self-transcendence of the ESS Round 7 was  $0.608$  and for Round 8 it was  $0.637$ . Both conservation and self-transcendence were measured on six-point Likert scales (1=“Very much like me” to 6=“Not like me at all”) which we reverse coded in order for higher numbers to represent a higher degree of identification with conservation, or self-transcendence values respectively.

### **Moderators used from Round 7 and 8**

In order to assess political ideology we used the variable “Placement on left right scale” (0=“Left” to 10=“Right”) which is a common practice in social sciences (Schwartz et al., 2010). It was conceptually used as a moderator in both ESS round 7 and 8.

### **Moderators used from Round 7**

Realistic threat (Cronbach's alpha: 0.756) was composed of the four items "Immigration bad or good for country's economy", "Immigrants take jobs away in country or create new jobs", "Taxes and services: immigrants take out more than they put in or less", and "Immigrants make country's crime problems worse or better". Each of those items was rated on an 11-point Likert scale (e.g. 0="Bad for the economy" to 10="Good for the economy") and was reverse coded so that higher numbers indicate a higher level of threat perception.

Symbolic threat (Cronbach's alpha: 0.686) was composed of the two items "Religious beliefs and practices undermined or enriched by immigrants" and "Country's cultural life undermined or enriched by immigrants" which were rated on an 11-point Likert scales (e.g. 0="Religious beliefs and practices undermined" to 10="Religious beliefs and practices enriched"). Just like for realistic threat the items were reverse coded so that once again higher numbers indicate a higher level of threat perception.

The survey did not contain any variable directly examining the difference between perceiving immigration as a threat or a challenge. In order to operationalize a challenge and a threat condition we used realistic threat and symbolic threat and cut out all people from the variable "Of every 100 people in country how many born outside country" estimating that three or less of their fellow citizens were born outside of the country. The idea behind that was to ensure that people who presumably did not acknowledge the existence of immigration were no longer present in the sample. Arguably, people who acknowledged an influx of immigrants larger than three per 100 people, but at the same time did not score high on realistic threat nor on symbolic threat would feel challenged in face of immigration. Both realistic and symbolic threat conceptually served as moderators.

### **Moderator used from Round 8**

We used the variable "How worried about climate change are you" (1="Not at all worried" to 5="Extremely worried") as a moderator. We eliminated all people not believing in climate change from the variable "Do you think the world's climate is changing", which were represented by the values 3="Probably not changing" and 4="Definitely not changing", and only kept the values 1 ("Definitely changing") and 2 ("Probably changing"), thus, climate change deniers should no longer be found in our sample. Since there was no specific question asking whether climate change was considered as a threat or a challenge, we chose this way of operationalizing a challenge/threat condition. The rationale for this was that people who believed in climate change and who were very worried would perceive climate change as a

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threat whereas people who believed in climate change but who were not worried would perceive it as a challenge.

### **Statistical Analysis**

All of our statistical analyses were performed via the use of IBM SPSS (Version 25). We conducted several linear regression analyses. The goal was to assess if the aforementioned challenge/threat variables as well as the variable used for political ideology moderated the relationship between the Schwartz' values of conservation and self-transcendence on the one hand and the tested outcome measures the other hand.

The model building process was performed as follows. In Model 1 we always included two independent variables in order to examine the relationships with the outcome measures. The independent variables used in Model 1 were either conservation or self-transcendence and one of the challenge/threat variables or the variable used for political ideology. In Model 2 we added an interaction variable consisting of the two independent variables used in Model 1. By doing so we aimed to account for potential moderation effects significantly improving the explanatory power of Model 1. We ran 50 different moderation models in total, but only further analyzed those which explained at least 5% of the total variance of the respective outcome measure, as we believed anything below 5% of explained variance explained too little in order to be good considered as a good predictor in the case of our study. For the purpose of interpreting the moderation effects we plotted the interaction effects using the so-called "Model 1" of Andrew Hayes' PROCESS macro (2019). Plotting interaction effects is a commonly used method for the interpretation of the results of a moderation analysis (Regorz, A. 2020). PROCESS enabled us to have a look at simple slopes at different levels (16<sup>th</sup>, 50<sup>th</sup> and 84<sup>th</sup> percentiles); given that the conditional effect of the respective simple slope was significant the general tendency could be interpreted.

### Chapter III – Results

#### Regression Analyses

##### **Immigration: Conservation, Self-Transcendence and Challenge/Threat**

Contrary to our hypothesis (*H1a*) conservation was not negatively associated with institutional trust ( $\beta=.092$ ,  $t(5.238)$ ,  $p<.001$ ) and non-significantly associated with social trust ( $\beta=-.028$ ,  $t(-1.551)$ ,  $p=.120$ ). As expected, and in line with our hypothesis (*H1b*) conservation was positively related to attitudes against immigration (Opposition towards immigration:  $\beta=.167$ ,  $t(12.248)$ ,  $p<.001$ ; Qualification for entry/exclusion:  $\beta=.309$ ,  $t(17.912)$ ,  $p<.001$ ) and negatively related with government actions fostering equality within society (Laws against discrimination in workplace:  $\beta=-.061$ ,  $t(-3.230)$ ,  $p<.001$ ), supporting hypothesis (*H1c*). Interaction effects between realistic threat and conservation were only significant for the models with institutional trust ( $\beta=-.244$ ,  $t(-2.841)$ ,  $p=.005$ ) and qualification for entry/exclusion ( $\beta=-.296$ ,  $t(-3.505)$ ,  $p<.001$ ), other than that they were non-significant, thus not fully lending support to our hypothesis (*H1d*). Further, the plotted interaction effect between realistic threat and conservation indicates that realistic threat did not moderate the relationship between conservation and institutional trust in the sense that the more of a threat was present the more institutional trust would decrease (see Table 1). The simple slope of the conditional effect representing threat was non-significant, however, the simple slope representing the challenge conditions was significant. The direction of the relationship between conservation and institutional trust became stronger the more of a challenge was perceived.

The second significant interaction effect between conservation and realistic threat for qualification for entry/exclusion was in line with our expectations. The higher the perception of a threat, the more conservative individuals seemed to demand immigrants to possess certain qualities (see Table 4). This partially supports our hypothesis (*H1d*).

Regarding self-transcendence values, the results show that these were non-significantly associated with institutional trust ( $\beta=.024$ ,  $t(1.362)$ ,  $p=.173$ ) and only positively related to social trust ( $\beta=.102$ ,  $t(5.708)$ ,  $p<.001$ ), negatively associated with attitudes towards immigration (Opposition towards immigration:  $\beta=-.139$ ,  $t(-10.119)$ ,  $p<.001$ ; Qualification for entry/exclusion:  $\beta=-.066$ ,  $t(-6.634)$ ,  $p<.001$ ) and positively associated with government actions in favor of immigration ( $\beta=.063$ ,  $t(3.360)$ ,  $p<.001$ ), hence, these results only support our hypotheses *H2b* and *H2c*, but not *H2a*. The plotted interaction effect between self-transcendence and realistic threat for institutional trust (see Table 2) implies that the more of a threat was perceived the stronger the relationship between self-transcendence and institutional

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trust became, which is contrary to what we expected (*H2d*). As for the same interaction effect for social trust ( $\beta = -.160$ ,  $t(-2.362)$ ,  $p = .018$ ), it seemed that the direction of relationship between self-transcendence and social trust became stronger in the perception of a challenge which partially supports our hypothesis *H2d* (see Table 3).

Generally, all of the four significant interaction effects were very weak and only added in between .1% and .3% of explanatory power in comparison to Model 1. Further, realistic threat, our operationalization of challenge/threat perceptions, seemed to explain more of the variance than conservation or self-transcendence did. Apart from one exception realistic threat was most strongly associated with all of the outcome measures; it showed the strongest relationship with opposition towards immigration ( $\beta = .660$ ,  $t(48.133)$ ,  $p < .001$ ); trying to interpret this, this could mean the stronger one feels a threat the more one is inclined to oppose immigration. The explained variance in Model 1 of realistic threat and conservation, or self-transcendence respectively, for opposition towards immigration was at about 50%, which was the highest value of all tested models. Regarding the relationships between realistic threat and qualification for entry/exclusion, we can assume that people who felt threatened would apply higher standards for admitting immigrants. The direction of the relationships between realistic threat and institutional trust, or social trust respectively, suggested that people who perceived immigration as a challenge rather than a threat would show greater amounts of social and institutional trust. As for government actions the relationship between realistic threat and the variable “Laws against discrimination in workplace”, our proxy for government actions, indicates that people tended to favor those actions if they felt challenged rather than threatened.

The results when symbolic threat was used in order to operationalize challenge/threat perceptions were very similar to the ones when realistic threat was used and can almost be interpreted in the same way. Symbolic threat and not conservation nor self-transcendence was most strongly related to all of the outcome measures. Symbolic threat and conservation, or self-transcendence respectively, seemed to have the greatest explanatory power for opposition towards immigration; about 45% of the variance can be explained through these variables. The significance and the direction of the relationships between symbolic threat and the outcome variables were almost identical to the ones when realistic threat was used, thus, can be interpreted in a similar way.

Regarding the interaction effects, there was a difference though. This time only interaction effects with conservation were significant. There were three significant interaction



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effects for institutional trust, opposition towards immigration, and qualification for entry and exclusion.

The interaction effect between symbolic threat and conservation for institutional trust ( $\beta = -.262$ ,  $t(-3.009)$ ,  $p = .003$ ) can be interpreted just like the one when realistic instead of symbolic threat was used; once again the conditional effect representing the threat condition was non-significant, thus not supporting our hypothesis *H1d* (see Table 5).

The same interaction effect for opposition towards immigration ( $\beta = -.177$ ,  $t(-2.587)$ ,  $p = .010$ ) implies that the direction of the relationship between conservation and opposition towards immigration was stronger the severer the perception of a threat was (see Table 6). A similar effect can be observed for qualification for entry/exclusion ( $\beta = -.373$ ,  $t(-4.599)$ ,  $p = .000$ ), meaning that the direction of the relationship between conservation and qualification for entry/ exclusion was stronger in presence of a threat (see Table 7). The former two interaction effects partially lend support to our hypotheses (*H1d*). However, none of the observed interaction effects added more than .5% to the explained variance in comparison to Model 1.

### **Immigration: Conservation, Self-Transcendence and Political Ideology**

The used predictor variables of conservation, self-transcendence, and political ideology did not seem to have a lot of explanatory power when it came to the outcome measures, institutional trust, social trust, and “Laws against discrimination in workplace”. In none of these models the explained variance exceeded 2%.

However, conservation, self-transcendence, and political ideology seemed to explain a bit more in regard to opposition towards immigration and qualification for entry/exclusion. As for opposition towards immigration, conservation ( $\beta = .267$ ,  $t(14.664)$ ,  $p < .001$ ) and political ideology ( $\beta = .186$ ,  $t(10.212)$ ,  $p < .001$ ) explain about 12% of the variance in Model 1, and about 13% of the variance with the interaction between conservation and political ideology ( $\beta = .359$ ,  $t(5.489)$ ,  $p < .001$ ) in Model 2 (see Table 8). The plotted interaction effect indicates that the direction of the relationship between conservation and opposition towards immigration became stronger the more an individual was politically right, which is in line with our hypothesis (*H1d*).

In regard to qualification for entry/exclusion, conservation ( $\beta = .327$ ,  $t(18.478)$ ,  $p < .001$ ) and political ideology ( $\beta = .200$ ,  $t(11.305)$ ,  $p < .001$ ) and the interaction effect of these two variables ( $\beta = .251$ ,  $t(3.930)$ ,  $p < .001$ ), the results indicate that the relationship between conservation and qualification for entry/exclusion was stronger the more an individual held a

right-wing ideology (see Table 9). When self-transcendence instead of conservation was used the interaction effect ( $\beta = -.181$ ,  $t(-2.399)$ ,  $p = .019$ ) indicates that the negative direction of the relationship between self-transcendence and qualification for entry/exclusion became stronger the more an individual held a left-wing ideology (see Table 10). These two interaction effects partially support our hypothesis (*H2d*).

Once again, all of the interaction effects in Model 2 were very weak and did not add more than 1% to the explained variance. Further, the directions of the relationships between political ideology and opposition towards immigration, and qualification for entry or exclusion respectively, suggest that the more an individual held a right-wing ideology, the more likely he/she opposed immigration and had higher demands regarding the qualifications of an immigrant.

### **Climate Change: Conservation, Self-Transcendence and Challenge/Threat**

Contrary to our hypothesis conservation was non-significantly associated with energy supply ( $\beta = .035$ ,  $t(1.844)$ ,  $p = .065$ ) and only negatively associated with pro-environmental personal norms ( $\beta = -.062$ ;  $t(-3.603)$ ;  $p < .001$ ), thus not fully supporting to our assumption in regard to concerns about climate change (*H3a*). However, conservation was negatively associated with government actions trying to mitigate the impact of climate change (Non-activist behaviors:  $\beta = -.091$ ;  $t(-4.939)$ ;  $p < .001$ ) which supports our partial hypothesis (*H3b*).

The direction of the relationships between self-transcendence and the outcome measures are in line with our hypotheses *H4a* and *H4b*; that is, self-transcendence was positively associated with concerns about climate change represented by the outcome variables of energy supply ( $\beta = .072$ ;  $t(3.668)$ ;  $p < .001$ ) and pro-environmental personal norms ( $\beta = .146$ ;  $t(8.296)$ ;  $p < .001$ ) as well as positively associated with government actions against climate change (Non-activist behaviors:  $\beta = .127$ ;  $t(6.700)$ ;  $p < .001$ ).

The explained variance of the outcome variables institutional trust, social trust, and energy supply was below our cut-off point of 5% for all models suggesting that neither conservation, self-transcendence nor our operationalization of climate change challenge or threat perception (variable “How worried about climate change”) were good predictors. As for non-activist behaviors and pro-environmental personal norms the relationships in Model 1 suggest that our operationalization of the perception of climate change as a challenge or threat was the best predictor; it was positively and most strongly associated with both. Trying to interpret this it could mean that the more an individual perceived climate change as a threat the more he/she supported government actions against climate change and felt more

personally responsible to reduce it. The interaction effects for non-activist behavior and pro-environmental personal norms were non-significant.

The only notable interaction effect was the one between conservation and the operationalization for challenge/threat for non-activist behavior (see Table 11). The explained variance increased by .5% from 9.4% in Model 1 to 9.9% in Model 2. The plot indicates that the relationship between conservation and non-activist behavior was stronger the more climate change was perceived as a challenge, which is partial support for our hypothesis (*H3c*). We could not find any support for our hypothesis (*H4c*) that the relationships between self-transcendence and climate change attitudes or government actions became stronger the more a threat was perceived or the more an individual held a left-wing ideology.

#### **Climate Change: Conservation, Self-Transcendence and Political Ideology**

The only notable effects here were the ones of self-transcendence and political ideology for pro-environmental personal norms; in Model 1 about 7% of the variance could be explained through these two predictors. The direction of the relationships indicates that the higher one scored on self-transcendence ( $\beta=.231$ ;  $t(12.074)$ ;  $p<.001$ ) the more he/she felt personally responsible to reduce climate change. As for political ideology ( $\beta=-.098$ ;  $t(-5.097)$ ;  $p<.001$ ), it seems as if the more one held a left-wing ideology, the more he/she would be concerned about reducing the impact of climate change. The interaction effect between self-transcendence and political ideology ( $\beta=.179$ ;  $t(2.205)$ ;  $p=.028$ ) only added .1% to the explained variance of Model 2 (see Table 12). The plotted interaction effect implies that the relationship between pro-environmental personal norms and self-transcendence became slightly stronger the more one held a left-wing ideology, partially lending support to our hypothesis (*H4c*).

None of the other tested models delivered at least 5% of explained variance, thus, we dismissed all of those models in accordance with our cut-off point of 5%.

**Tables of Significant Moderation Effects**

Table 1.

*Predicting Institutional Trust*

Predictor	$\beta$	SE	<i>t</i>	<i>p</i>
RealisticThreat (RT)	-.577	.072	-9.732	.000
Conservation (CON)	-.056	.134	-1.021	.000
RTxCON	-.244	.025	-2.841	.005

Note. Fit for model  $R^2 = .169$ , Adjusted  $R^2 = .168$ ,  $F(1, 2818) = 8.07$ ,  $p = .005$ ,  $R^2$  Change = .001

Table 2.

*Predicting Institutional Trust*

Predictor	$\beta$	SE	<i>t</i>	<i>p</i>
RealisticThreat (RT)	-.277	.069	-4.787	.000
Self-Transcendence (ST)	-.056	.173	-1.021	.012
RTxST	.143	.034	2.156	.031

Note. Fit for model  $R^2 = .161$ , Adjusted  $R^2 = .160$ ,  $F(1, 2818) = 4.65$ ,  $p = .031$ ,  $R^2$  Change = .001

Table 3.

*Predicting Social Trust*

Predictor	$\beta$	SE	<i>t</i>	<i>p</i>
RealisticThreat (RT)	-.463	.058	-9.732	.000
Self-Transcendence (ST)	-.007	.145	-.140	.888
RTxST	-.160	.029	-2.366	.018

Note. Fit for model  $R^2 = .134$ , Adjusted  $R^2 = .134$ ,  $F(1, 2818) = 5.59$ ,  $p = .018$ ,  $R^2$  Change = .002

Table 4.

*Predicting Qualification for entry/exclusion*

Predictor	$\beta$	SE	<i>t</i>	<i>p</i>
RealisticThreat (RT)	.066	.059	1.226	.260
Conservation (CON)	.129	.110	2.383	.017
RTxCON	-.296	.021	-3.505	.000

Note. Fit for model  $R^2 = .194$ , Adjusted  $R^2 = .197$ ,  $F(1, 2818) = 12.28$ ,  $p = .005$ ,  $R^2$  Change = .003

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Table 5.  
*Predicting Institutional Trust*

Predictor	$\beta$	SE	$t$	$p$
SymbolicThreat (ST)	-.529	.061	-8.622	.000
Conservation (CON)	-.066	.131	-1.522	.221
STxCON	-.262	.021	-2.841	.003

Note. Fit for model  $R^2 = .122$ , Adjusted  $R^2 = .121$ ,  $F(1, 2814) = 9.05$ ,  $p = .003$ ,  $R^2$  Change = .003

Table 6.  
*Predicting Opposition Towards Immigration*

Predictor	$\beta$	SE	$t$	$p$
SymbolicThreat (RT)	.501	.019	10.372	.000
Conservation (CON)	.060	.041	1.423	.155
STxCON	-.177	.007	-2.587	.010

Note. Fit for model  $R^2 = .454$ , Adjusted  $R^2 = .455$ ,  $F(1, 2813) = 6.69$ ,  $p = .010$ ,  $R^2$  Change = .001

Table 7.  
*Predicting Qualification for entry/exclusion*

Predictor	$\beta$	SE	$t$	$p$
SymbolicThreat (RT)	.073	.040	1.432	.202
Conservation (CON)	.074	.102	1.209	.138
STxCON	-.373	.016	-4.599	.000

Note. Fit for model  $R^2 = .236$ , Adjusted  $R^2 = .235$ ,  $F(1, 2813) = 21.15$ ,  $p = .000$ ,  $R^2$  Change = .005

Table 8.  
*Predicting Opposition Towards Immigration*

Predictor	$\beta$	SE	$t$	$p$
Lrsacle(LR)	-.126	.024	-2.188	.034
Conservation (CON)	.474	.040	11.334	.000
LRxCON	.359	.008	5.489	.000

Note. Fit for model  $R^2 = .132$ , Adjusted  $R^2 = .131$ ,  $F(1, 2723) = 30.13$ ,  $p = .000$ ,  $R^2$  Change = .010; Lrsacle= Placement on left- right-scale

Table 9.  
*Predicting Qualification for entry/exclusion*

Predictor	$\beta$	SE	$t$	$p$
Lrsacle(LR)	-.018	.050	-.309	.758
Conservation (CON)	.472	.083	11.572	.000
LRxCON	.251	.018	3.930	.000

Note. Fit for model  $R^2 = .163$ , Adjusted  $R^2 = .172$ ,  $F(1, 2723) = 15.44$ ,  $p = .000$ ,  $R^2$  Change = .004; Lrsacle= Placement on left- right-scale

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Table 10.  
*Predicting Qualification for entry/exclusion*

Predictor	$\beta$	SE	<i>t</i>	<i>p</i>
Lrsacle(LR)	.379	.053	6.969	.000
Self-Transcendence (ST)	.180	.133	4.052	.000
LRxST	-.181	.027	-2.399	.019

Note. Fit for model  $R^2 = .073$ , Adjusted  $R^2 = .072$ ,  $F(1, 2723) = 5.47$ ,  $p = .019$ ,  $R^2$  Change = .001

Table 11.  
*Predicting Non-Activist Behaviors*

Predictor	$\beta$	SE	<i>t</i>	<i>p</i>
Wrclmch (WC)	-.052	.072	-.827	.408
Conservation (CON)	.200	.134	2.685	.008
WCxCON	-.388	.025	-3.989	.000

Note. Fit for model  $R^2 = .100$ , Adjusted  $R^2 = .099$ ,  $F(1, 2670) = 15.91$ ,  $p = .000$ .,  $R^2$  Change = .005; Wrclmch=How worried about climate change

Table 12.  
*Predicting Pro-Environmental Personal Norms*

Predictor	$\beta$	SE	<i>t</i>	<i>p</i>
Lrsacle(LR)	-.228	.069	-3.670	.000
Self-Transcendence (ST)	.327	.130	6.892	.000
LRxST	.179	.050	2.205	.028

Note. Fit for model  $R^2 = .072$ , Adjusted  $R^2 = .071$ ,  $F(1, 2605) = 4.861$ ,  $p = .028$ .,  $R^2$  Change = .002;

## Chapter IV – Discussion

The topics of immigration and climate change are central topics in the public discourse in Germany and have great societal as well as political implications. From a socio-psychological perspective, it is interesting to consider if and what kind of impact on different opinions potential perceptions of these two topics might have. The current study attempted to analyze how perceiving immigration and climate change as either a challenge or threat affected the relationship between the human values of conservation or self-transcendence and some attitudes not only towards immigration and climate change, but also towards institutional and social trust.

Over the years, several studies have linked the Schwartz' higher order values of self-transcendence and conservation to attitudes concerning immigration, climate change, institutional, or social trust. The relationships are seldomly unambiguous as the previous outline demonstrated. To our knowledge, fewer studies have scrutinized the circumstances and their potential influence on human values (e.g. Araújo et al., 2020; Davidov et al., 2014; Ramos et al., 2016). So far, only the moderating role of threat perceptions on the relationship between human values and immigration has been assessed (Araújo et al., 2020; Ramos et al., 2016). What is new about the present study is that it intended to add to the existing literature by examining to what extent the perception of immigration, or climate change respectively, as either a challenge or a threat moderated the relationship between conservation, or self-transcendence respectively, and attitudes towards immigrants, or climate change respectively. We also wanted to examine if perceiving immigration as either a challenge or a threat affected the relationship between the two human values and institutional or social trust. Further, we assumed that left- and right-wing ideologies would moderate the relationship between the two human values and the tested outcome measures in a similar way as challenge and threat perceptions would.

After the statistical analysis, we have to state that none of our hypotheses were fully supported, and if at all supported, only partially. Although the significant interaction effects in Model 2 never added more than 1% to the explained variance in comparison to Model 1, we try deliver possible interpretations as to how the relationships were moderated.

### Immigration

#### Conservation, Self-Transcendence and Attitudes towards Immigration

Regarding our first hypothesis, it was only supported that conservation is positively associated with anti-immigrant sentiments (*H1b*) and negatively associated with government

actions in favor of immigrants (*H1c*). In other words, this could mean people holding conservation values were likely to oppose immigration as whole. From the perspective of someone holding conservation values immigrants are a potential threat as they might interfere with own traditions or the need for conformity; opposition towards immigrants might be the consequence. In that sense our results supported aforementioned findings (e.g. Davidov et al., 2014; Davidov & Meuleman, 2012; Ponizovskiy, 2016).

Contrary to our hypothesis (*H1a*), conservation was positively associated with institutional trust, giving support to findings by Devos et al. (2002) and Schwartz (1992), and it was non-significantly associated with social trust. In light of the political situation in Germany as described above, we supposed people holding conservation values would be rather mistrustful towards public institutions and the society. The data was collected in 2014 and the influx of immigration had already increased significantly compared to previous years (Mansour-Ille et al., 2019). However, the so-called immigration crisis with all its public attention triggered by the arrival of large groups of immigrants only occurred in late summer of 2015 (Karakayali, 2018). Possibly, the trust in institutions and the society by people with conservation values only started to erode afterwards. Our findings from the ESS Round 8, which was collected in 2016, point towards that assumption. Here conservation was negatively associated with both institutional and social trust indicating that people with conservation values might mistrust public institutions and the society in Germany.

As for our second Hypothesis, only the partial hypothesis *H2b* and *H2c* were supported which can be interpreted as if people holding self-transcendence values were inclined to be in favor of immigration; previous studies have reached similar conclusions (e.g. Davidov et al., 2014; Davidov & Meuleman, 2012; Ponizovskiy, 2016). Self-transcendence was non-significantly associated with institutional trust, thus not supporting hypothesis *H2a*. Although there was partial support for our hypothesis *H2a*, that is, self-transcendence was positively associated with social trust. This supports the findings of previous studies which have found that people with self-transcendence values tend to trust other more easily (Meulemann, 2009; Vyrost et al. 2007). The direction of the relationship between self-transcendence and institutional or social trust found in ESS Round 8 were the same, and the effect sizes were similar, hence, in Germany no notable change occurred from ESS Round 7 to Round 8.



### **The Moderating Role of Challenge/Threat and Political Ideology**

The moderating role of our operationalization of perceiving immigration as either a challenge or a threat as well as the moderation effects of political ideology were non-significant in most of the cases. Only 10 of 30 interaction effects were statistically significant. Despite that the directions of the relationships were only as assumed in 7 cases, thus, not lending full support to our hypotheses *H1d* and *H2d*.

We assumed that the negative direction of the relationship between conservation and institutional trust would become stronger in presence of a threat imposed by immigration. However, the direction of the relationship was contrary to what we expected, meaning that people scoring high on conservation tended to trust public institutions, such as the police or the parliament, and they did so even more in presence of a challenge; the threat condition was non-significant. This is contrary to our hypothesis *H1d*, giving support to previous findings that have linked conservation to greater institutional trust (Schwartz, 1992; Devos et al., 2002). The relationship between conservation and institutional trust has changed from 2014 to 2016 as the results from ESS round 8 indicate; conservation was negatively associated with institutional trust. Unfortunately, we could not assess how an immigration challenge or threat condition would have moderated this relationship as the ESS round 8 did not contain the sub-section of immigration.

Nonetheless, the other significant interaction effects with conservation and either the challenge/threat operationalization or political ideology were as we assumed. The direction of the relationship between conservation and negative or exclusionary attitudes towards immigration became stronger the higher the perception of a threat or the more one placed him- or herself on the right of the political spectrum. The perception of immigration as a threat seemed to moderate the relationship in the sense that people with conservation values were even more likely to oppose immigration if they perceived them as a potential threat. As already mentioned, people with conservation values seek security, want to maintain their cultural customs and prefer if people fit into the existing societal order (Schwartz, 2007). From that point of view, it seems probable that they oppose immigration even more in presence of a threat. Furthermore, we found some support for our assumption that the perception of immigration as threat and a right-wing ideology moderated the relationship between conservation and anti-immigrant sentiments in a similar way. This could mean that a right-wing ideology can be used as a proxy for the perception of immigration as a threat, at least in this particular case. Considering that in the German context it is especially the right-

wing parties and their voters who fear immigration, these findings make sense (Hamann & Karakayali, 2016).

A difference that has to be mentioned is that the interaction effect between conservation and the challenge/threat operationalizations for the concept of opposition towards immigration was only significant for symbolic but not for realistic threat. Since the ESS data offered to use both realistic and symbolic threat we made use of the opportunity to assess if there was a difference. Although the interaction effect only added .1% to the explained variance in comparison to Model 1, the effect indicates that opposition towards immigration slightly increased the more someone with conservation values felt threatened, which is in line with our assumption. However, it is difficult to explain why the interaction effect was non-significant when realistic threat was used.

With regard to self-transcendence, the significant interaction effects were only partially in line with our assumptions. Interestingly, the relationship between self-transcendence and institutional trust seemed to become slightly stronger the more people perceived immigration as a threat. This could indicate that individuals scoring high on self-transcendence showed more trust towards public institutions in presence of a threat imposed by immigrants, however, it does not necessarily mean they would not do so in the presence of a challenge since the challenge condition was non-significant in this sample.

As for social trust, it seemed as if the perception of a challenge moderated the relationship between self-transcendence and social trust in the sense that social trust of individuals holding self-transcendence values slightly increased if they perceived immigration as a challenge. This gives partial support to our hypothesis *H2d*. Since according to Schwartz (2007) people with self-transcendence values tend to have trust in others, it seems to make sense that this trust is not going to decrease by perceiving immigration as a challenge rather than a threat.

We assumed that a left-wing ideology would moderate the relationships between self-transcendence and the outcome measures just like the perception of immigration as a challenge would. This was not the case because the interaction effect between self-transcendence and the challenge/threat operationalization moderated different relationships than the interaction effects between self-transcendence and political ideology did. The only significant interaction effect between self-transcendence and political ideology for qualification for entry/exclusion indicates that people with self-transcendence values had even lower demands regarding the qualifications of immigrants the further on the left of the political spectrum they were. In other words, they were more likely to accept immigrants

regardless of their qualifications and skills. This seems plausible in light of the political situation in Germany in which liberals and leftist tend to be supportive of pro-immigrational policies (Schnaudt & Weinhardt, 2017).

### **Climate Change**

#### **Conservation, Self-Transcendence and Attitudes towards Climate Change**

In regard to our assumption concerning the perception of climate change as either a challenge or a threat and possible impacts on the relationships between conservation, or self-transcendence respectively, the results imply the following.

There were no notable effects in regard to the interaction effects for institutional and social trust. Either the effects were non-significant or they did not explain more than about 2% of the variance, which we considered as too low for having explanatory power in regard to institutional and social trust. Thus, the interaction effects between conservation, or self-transcendence respectively, and the perception of climate change as challenge or threat or political ideology cannot be considered as good predictors of attitudes towards institutional and social trust, at least in this study.

Hypothesis 3 was only partially confirmed. Conservation was non-significantly associated with energy supply but negatively associated with pro-environmental personal norms which were our proxies for attitudes towards climate change. This only lends partial support to hypothesis *H3a*. People holding conservation values are generally less inclined to support pro-environmental policies and behavior as previous studies have demonstrated (Lucas 2018, Poortinga et. al, 2011, Schultz & Zelezny, 1999), which was further supported by our findings in regard to hypothesis *H3b*; conservation was negatively associated with non-activist behaviors, such as subsidizing renewable energies.

The assumption (*H3c*) that the direction of relationships between conservation and climate change attitudes would be stronger the more climate change was perceived as a challenge or the more an individual had a right-wing ideology was not supported, apart from one exception. Only for non-activist behaviors, our proxy for government actions, it seemed that the already low support further decreased if individuals with conservation values perceived climate change as a challenge. Individuals holding conservation values are already less likely to be concerned about climate change (Lucas 2018, Poortinga et. al, 2011, Schultz & Zelezny, 1999). So, it seems plausible that their concern is not going to increase if they perceived climate change as a manageable task.

Regarding Hypothesis 4, we can record that self-transcendence was positively associated with concerns about climate change and government actions trying to mitigate the effect of climate change, thus, supporting our hypothesis *H4a* and *H4b*. Once again, this seems plausible in light of the provided theoretical framework as individuals holding self-transcendence values are likely to feel personally responsible to reduce climate change and tend to be supportive of pro-environmental policies (Boumann et al. 2018, Corner et al. 2014, Dietz et al., 2007; Prati et al., 2018; Lucas, 2018). Our hypothesis *H4c* that all of these relationships would be stronger if climate change was perceived as a threat or if an individual held a left-wing ideology was hardly supported. The only condition in which a left-wing ideology had a slight moderation effect was for the relationship between self-transcendence and pro-environmental personal norms. Self-transcendent individuals seemed to feel more responsibility to reduce climate change the further on the left of the political spectrum they were which was as we expected and in line with previous findings (Hamilton & Saito, 2014; McCright et al., 2016; Marquart-Pyatt et al., 2014; Neumayer, 2004).

### **Limitations and Future Research**

The present study has a variety of limitations in regard to its results and their generalizability as well as its method. One of the most apparent limitations is that the present study focused exclusively on Germany meaning the results are probably not applicable to other countries or regions. Further, the interaction effects of Model 2 never added more than 1% to the explained variance of Model 1, thus, implying that there were no strong moderation effects.

Another limitation is the currentness of the data. The data concerning immigration from the ESS Round 7 were collected in 2014 and the data concerning climate change were from the ESS Round 8, collected in 2016. Immigration as well as climate change were already very crucial topics in the public discourse back then. However, with the immigration crisis of 2015 and the rise of the “Fridays for Future” movement in 2018, these two topics have received arguably even more attention. For future research, it could be interesting to see if attitudes towards immigration and climate change have shifted in Germany, and how Schwartz’ human values might be able to contribute to a better understanding.

Regarding the method, there are several points of criticism. Firstly, the ESS data did not include any variables specifically assessing the difference between challenge and threat states. As described in the method section, we had to operationalize them ourselves by cutting out all the participants that either did not seem to believe that immigrants enter the country or

that denied climate change as whole. By doing so, we argued that people who assumably believed in both immigration and climate change but did not perceive either of these two topics as a threat would feel challenged. Our reasoning behind this was that the impact on the German society of both of these topics is too severe for people to not to notice or to assume that they will not be affected. Future research might want to focus on why people believe they or the society they live can or cannot cope with immigration or climate change. Rather than just asking if one feels threatened or not in face of immigration or climate change, future research should specifically assess to what extent people feel to have the resources to cope with the demands of immigration and climate change. In accordance with the ideas of Blascovich and Tomaka (1996), people should feel challenged if they feel they have the resources to cope with a given situation and threatened if they do not. Once this difference has been examined, future research could apply it on how the different challenge and threat perceptions influence the relationship between human values and immigration or climate change.

Secondly, the comparability of the way we operationalized the challenge/threat perceptions of immigration and climate change is very limited. As for immigration, we used the two well established and validated concepts of realistic and symbolic threat, while for the operationalization of the perception of climate change as either a challenge or a threat we only used one variable (“How worried about climate change”). Another point of criticism is that the variable “How worried about climate change”, only asks about the extent to which one feels worried. Feeling worried is arguably something else than feeling threatened.

### **Conclusion**

To sum it up, the findings of this study indicate the following. The higher order value type of conservation was generally associated with negative attitudes towards immigrants and less engagement regarding the reduction of climate change while it seemed to be vice versa for the higher order value type of self-transcendence. This gives further support to findings of other scholars and proofs the seemingly well-established relationship between the two human values and immigration or climate change. Furthermore, this implies how crucial it is to understand values in order to take suitable social and political actions accounting for the different perceptions and needs of people with different values and ideologies. As for institutional and social trust, the relationships were either non-significant or too weak in order for conservation and self-transcendence to be considered as good predictors, at least in the case of this study.

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

With respect to the main goal of this study which was to examine possible moderation effects of the different challenge/threat perceptions and left- and right-wing ideologies, the results are insufficient to prove that the used variables are suitable moderators, at least in case of this study. The most interesting finding was probably that the perception of immigration as threat and right-wing ideologies showed similar moderation effects in regard to attitudes towards immigrants. However, we can conclude that further research on the impact of challenge and threat perceptions of immigration and climate change will be necessary in order to gain a deeper understanding.

**References**

- Allen, T. J., & Knight-Finley, M. (2019). Immigration Policy and Left-Right Politics in Western Europe. *The Palgrave Handbook of Ethnicity*, 347–361. [https://doi.org/10.1007/978-981-13-2898-5\\_149](https://doi.org/10.1007/978-981-13-2898-5_149)
- Alonso, S., & Fonseca, S. C. (2011). Immigration, Left and Right. *Party Politics*, 18(6), 865–884. <https://doi.org/10.1177/1354068810393265>
- Araújo, R. C. R., Bobowik, M., Vilar, R., Liu, J. H., Gil de Zuñiga, H., Kus-Harbord, L., ... Gouveia, V. V. (2020). Human values and ideological beliefs as predictors of attitudes toward immigrants across 20 countries: The country-level moderating role of threat. *European Journal of Social Psychology*, 50(3), 534–546. <https://doi.org/10.1002/ejsp.2635>
- Barnea, M. F., & Schwartz, S. H. (1998). Values and Voting. *Political Psychology*, 19(1), 17–40. <https://doi.org/10.1111/0162-895x.00090>
- Beilmann, M., & Lilleoja, L. (2015). Social Trust and Value Similarity: The Relationship between Social Trust and Human Values in Europe. *Studies of Transition States and Societies*, 7(2), 19–30.
- Berning, C. C., & Ziller, C. (2017). Social trust and radical right-wing populist party preferences. *Acta Politica*, 52(2), 198–217. <https://doi.org/10.1057/ap.2015.28>
- Blascovich, J., & Tomaka, J. (1996). The Biopsychosocial Model of Arousal Regulation. *Advances in Experimental Social Psychology*, 28, 1–51.
- Bohman, A. (2011). Articulated antipathies: Political influence on anti-immigrant attitudes. *International Journal of Comparative Sociology*, 52(6), 457–477. <https://doi.org/10.1177/0020715211428182>
- Bouman, T., Steg, L., & Kiers, H. A. L. (2018). Measuring Values in Environmental Research: A Test of an Environmental Portrait Value Questionnaire. *Frontiers in Psychology*, 9, 1–15. <https://doi.org/10.3389/fpsyg.2018.00564>
- Clark, J. A., & Legge, J. S. (1997). Economics, Racism, and Attitudes toward Immigration in the New Germany. *Political Research Quarterly*, 50(4), 901–907. <https://doi.org/10.2307/448992>
- Clements, B. (2012). Exploring public opinion on the issue of climate change in Britain. *British Politics*, 7(2), 183–202. <https://doi.org/10.1057/bp.2012.1>
- Corner, A. (2012). A new conversation with the centre-right about climate change: Values, frames and narratives. Retrieved from <http://www.truevaluemetrics.org/DBpdfs/Issues/ClimateChange/COIN/COIN-A-new-conversation-with-the-centre-right-about-climate-change.pdf>

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- Corner, A., Markowitz, E., & Pidgeon, N. (2014). Public engagement with climate change: the role of human values. *Wiley Interdisciplinary Reviews: Climate Change*, 5(3), 411–422. <https://doi.org/10.1002/wcc.269>
- Croucher, S. M. (2013). Integrated Threat Theory and Acceptance of Immigrant Assimilation: An Analysis of Muslim Immigration in Western Europe. *Communication Monographs*, 80(1), 46–62. <https://doi.org/10.1080/03637751.2012.739704>
- Davidov, E., & Meuleman, B. (2012). Explaining Attitudes Towards Immigration Policies in European Countries: The Role of Human Values. *Journal of Ethnic and Migration Studies*, 38(5), 757–775. <https://doi.org/10.1080/1369183x.2012.667985>
- Davidov, E., Meuleman, B., Billiet, J., & Schmidt, P. (2008). Values and Support for Immigration: A Cross-Country Comparison. *European Sociological Review*, 24(5), 583–599. <https://doi.org/10.1093/esr/jcn020>
- Davidov, E., Meulemann, B., Schwartz, S. H., & Schmidt, P. (2014). Individual values, cultural embeddedness, and anti-immigration sentiments: Explaining differences in the effect of values on attitudes toward immigration across Europe. *KZfSS Kölner Zeitschrift Für Soziologie Und Sozialpsychologie*, 66(S1), 263–285. <https://doi.org/10.1007/s11577-014-0274-5>
- Davidov, E., Schmidt, P., & Schwartz, S. H. (2008). Bringing Values Back In: The Adequacy of the European Social Survey to Measure Values in 20 Countries. *Public Opinion Quarterly*, 72(3), 420–445. <https://doi.org/10.1093/poq/nfn035>
- Devos, T., Spini, D., & Schwartz, S. H. (2002). Conflicts among human values and trust in institutions. *British Journal of Social Psychology*, 41(4), 481–494. <https://doi.org/10.1348/014466602321149849>
- Dietz, T., Dan, A., & Shwom, R. (2007). Support for Climate Change Policy: Social Psychological and Social Structural Influences\*. *Rural Sociology*, 72(2), 185–214. <https://doi.org/10.1526/003601107781170026>
- Edo, A., Giesing, Y., Öztunc, J., & Poutvaara, P. (2019). Immigration and electoral support for the far-left and the far-right. *European Economic Review*, 115, 99–143. <https://doi.org/10.1016/j.euroecorev.2019.03.001>
- Ervasti, H., Kouvo, A., & Venetoklis, T. (2018). Social and Institutional Trust in Times of Crisis: Greece, 2002–2011. *Social Indicators Research*, 141(3), 1207–1231. <https://doi.org/10.1007/s11205-018-1862-y>
- ESS 7 DOCUMENTATION REPORT. (2014). Retrieved from [http://www.europeansocialsurvey.org/docs/round7/survey/ESS7\\_data\\_documentation\\_report\\_e03\\_2.pdf](http://www.europeansocialsurvey.org/docs/round7/survey/ESS7_data_documentation_report_e03_2.pdf)



## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- ESS8 DOCUMENTATION REPORT. (2016). Retrieved from [https://www.europeansocialsurvey.org/docs/round8/survey/ESS8\\_data\\_documentation\\_report\\_e02\\_1.pdf](https://www.europeansocialsurvey.org/docs/round8/survey/ESS8_data_documentation_report_e02_1.pdf)
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research (Addison-Wesley series in social psychology)*. Boston, MA: Addison-Wesley.
- Forchtner, B. (2015). Extrem rechte Parteien im Klimawandel: Ein (kurzer) Blick auf die Schweiz, Österreich und Deutschland. Retrieved from <http://www.naturschutzhoefe.de/fileadmin/BfN/service/Dokumente/skripten/skript394.pdf#page=129>
- Frondel, M., Simora, M., & Sommer, S. (2017). Risk Perception of Climate Change: Empirical Evidence for Germany. *Ecological Economics*, 137, 173–183. <https://doi.org/10.1016/j.ecolecon.2017.02.019>
- Funk, N. (2016). A spectre in Germany: refugees, a ‘welcome culture’ and an ‘integration politics.’ *Journal of Global Ethics*, 12(3), 289–299. <https://doi.org/10.1080/17449626.2016.1252785>
- Gerhards, J., Hans, S., & Schupp, J. (2016). The Barometer of Public Opinion on Refugees: German public opinion on admitting refugees. *DIW Economic Bulletin*, 6, 243–249.
- Growiec, K., Vilhelmsdóttir, S., & Cairns, D. (2012). Social Capital and the Financial Crisis: The Case of Iceland. Retrieved from [https://www.researchgate.net/publication/268130454\\_Social\\_capital\\_and\\_the\\_financial\\_crisis\\_The\\_case\\_of\\_Iceland](https://www.researchgate.net/publication/268130454_Social_capital_and_the_financial_crisis_The_case_of_Iceland)
- Guber, D. L. (2012). A Cooling Climate for Change? Party Polarization and the Politics of Global Warming. *American Behavioral Scientist*, 57(1), 93–115. <https://doi.org/10.1177/0002764212463361>
- Habibov, N., & Afandi, E. (2015). Pre- and Post-crisis Life-Satisfaction and Social Trust in Transitional Countries: An Initial Assessment. *Social Indicators Research*, 121(2), 503–524. <https://doi.org/10.1007/s11205-014-0640-8>
- Hamann, U., & Karakayali, S. (2016). Practicing Willkommenskultur: Migration and Solidarity in Germany. *Intersections*, 2(4), 70–86. <https://doi.org/10.17356/ieejsp.v2i4.296>
- Hamilton, L. C., & Saito, K. (2014). A four-party view of US environmental concern. *Environmental Politics*, 24(2), 212–227. <https://doi.org/10.1080/09644016.2014.976485>
- Hayes, A. F. (2019). The Process Macro for SPSS, SAS, and R (Version 3.4). Retrieved from <http://processmacro.org/index.html>

- Herreros, F., & Criado, H. (2009). Social Trust, Social Capital and Perceptions of Immigration. *Political Studies*, 57(2), 337–355. <https://doi.org/10.1111/j.1467-9248.2008.00738.x>
- Hillje, J. (2019). Wider die Spaltung beim Klimaschutz! Retrieved from <https://www.zeit.de/politik/deutschland/2019-10/afd-anti-klimaschutz-populismus-polarisierung/komplettansicht>
- Hofer, S. (2020). „Fridays for Future“ als Tropfen auf dem heißen Stein. *Klimawandel in Der Wirtschaft*, 111–114. [https://doi.org/10.1007/978-3-662-60395-6\\_11](https://doi.org/10.1007/978-3-662-60395-6_11)
- Howell, R., & Allen, S. (2017). People and Planet: Values, Motivations and Formative Influences of Individuals Acting to Mitigate Climate Change. *Environmental Values*, 26(2), 131–155. <https://doi.org/10.3197/096327117x14847335385436>
- Inglehart, R. (1987). Extremist political position and perceptions of conspiracy: Even paranoids have real enemies. In C. F. Graumann & S. Moscovici (Eds.), *Changing conceptions of conspiracy* (1st ed., pp. 231–244). New York City, NY: Springer.
- Johnson, D. R. (2017). Bridging the political divide: Highlighting explanatory power mitigates biased evaluation of climate arguments. *Journal of Environmental Psychology*, 51, 248–255. <https://doi.org/10.1016/j.jenvp.2017.04.008>
- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, 129(3), 339–375. <https://doi.org/10.1037/0033-2909.129.3.339>
- Karakayali, S. (2018). The Flüchtlingskrise in Germany: Crisis of the Refugees, by the Refugees, for the Refugees. *Sociology*, 52(3), 606–611. <https://doi.org/10.1177/0038038518760224>
- Klimm, F. (2019). Suspicious success – Cheating, inequality acceptance, and political preferences. *European Economic Review*, 117, 36–55. <https://doi.org/10.1016/j.euroecorev.2019.04.008>
- Kroh, M. (2007). Measuring Left-Right Political Orientation: The Choice of Response Format. *Public Opinion Quarterly*, 71(2), 204–220. <https://doi.org/10.1093/poq/nfm009>
- Krouwel, A., Kutiyanski, Y., van Prooijen, J.-W., Martinsson, J., & Markstedt, E. (2017). Does extreme political ideology predict conspiracy beliefs, economic evaluations and political trust? Evidence from Sweden. *Journal of Social and Political Psychology*, 5(2), 435–462. <https://doi.org/10.5964/jspp.v5i2.745>
- Langford, I. H. (2002). An Existential Approach to Risk Perception. *Risk Analysis*, 22(1), 101–120. <https://doi.org/10.1111/0272-4332.t01-1-00009>

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- Lazarus, R. S., & Folkman, S. (1984). *Stress, Appraisal, and Coping* (1st ed.). New York City, NY: Springer Publishing Company.
- Longo, S. B., & Baker, J. O. (2014). Economy “Versus” Environment: The Influence of Economic Ideology and Political Identity on Perceived Threat of Eco-Catastrophe. *The Sociological Quarterly*, 55(2), 341–365. <https://doi.org/10.1111/tsq.12052>
- Lucas, C. H. (2018). Concerning values: what underlies public polarisation about climate change? *Geographical Research*, 56(3), 298–310. <https://doi.org/10.1111/1745-5871.12284>
- Malka, A., Krosnick, J. A., & Langer, G. (2009). The Association of Knowledge with Concern About Global Warming: Trusted Information Sources Shape Public Thinking. *Risk Analysis*, 29(5), 633–647. <https://doi.org/10.1111/j.1539-6924.2009.01220.x>
- Mansour-Ille, D., Haysom, S., Ille, S., & Hagen-Zanker, J. (2019). Germany as an immigration country: from denial to integration. *Research Report, World Commission on Development.*, 1.
- Marquart-Pyatt, S. T., McCright, A. M., Dietz, T., & Dunlap, R. E. (2014). Politics eclipses climate extremes for climate change perceptions. *Global Environmental Change*, 29, 246–257. <https://doi.org/10.1016/j.gloenvcha.2014.10.004>
- McCright, A. M., Dunlap, R. E., & Marquart-Pyatt, S. T. (2015). Political ideology and views about climate change in the European Union. *Environmental Politics*, 25(2), 338–358. <https://doi.org/10.1080/09644016.2015.1090371>
- McCright, A. M., Dunlap, R. E., & Xiao, C. (2014). Increasing Influence of Party Identification on Perceived Scientific Agreement and Support for Government Action on Climate Change in the United States, 2006–12. *Weather, Climate, and Society*, 6(2), 194–201. <https://doi.org/10.1175/wcas-d-13-00058.1>
- Menny, C., Osberghaus, D., Pohl, M., & Werner, U. (2011). General Knowledge about Climate Change, Factors Influencing Risk Perception and Willingness to Insure. *SSRN Electronic Journal*, 27–48. <https://doi.org/10.2139/ssrn.1960516>
- Meulemann, H. (2009). Self-Concern, Self-Transcendence, and Well-Being. *European Sociological Review*, 26(4), 385–399. <https://doi.org/10.1093/esr/jcp027>
- Miller, A. H. (1974). Political Issues and Trust in Government: 1964–1970. *American Political Science Review*, 68(3), 951–972. <https://doi.org/10.2307/1959140>
- Morselli, D., Spini, D., & Devos, T. (2012). Human Values and Trust in Institutions across Countries: A Multilevel Test of Schwartz’s Hypothesis of Structural Equivalence. *Survey Research Methods*, 6, 49–60.

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- Mosel, I., Smart, C., Foresti, M., Hennessy, G., & Leach, A. (2019). Öffentliche Diskurse und Einstellungen zu Flüchtlingen und anderen Migranten Länderprofil Deutschland. Retrieved from [https://www.odi.org/sites/odi.org.uk/files/resource-documents/germany\\_country\\_profile\\_german\\_translation.pdf](https://www.odi.org/sites/odi.org.uk/files/resource-documents/germany_country_profile_german_translation.pdf)
- Neumayer, E. (2004). The environment, left-wing political orientation and ecological economics. *Ecological Economics*, 51(3–4), 167–175. <https://doi.org/10.1016/j.ecolecon.2004.06.006>
- Newton, K. (1999). Social and political trust in established democracies. In P. Norris (Ed.), *Critical citizens: Global support for democratic governance* (1st ed., pp. 169–187). Oxford, UK: Oxford University Press.
- Newton, K. (2001). Trust, Social Capital, Civil Society, and Democracy. *International Political Science Review*, 22(2), 201–214. <https://doi.org/10.1177/0192512101222004>
- Newton, K. (2004a). Social trust: individual and cross-national approaches. *Portugese Journal of Social Sciences*, 3(1), 15–35. <https://doi.org/10.1386/pjss.3.1.15/0>
- Newton, K. (2004b). Social trust: individual and cross-national approaches. *Portugese Journal of Social Sciences*, 3(1), 15–35. <https://doi.org/10.1386/pjss.3.1.15/0>
- Nordlund, A. M., & Garvill, J. (2002). Value Structures behind Proenvironmental Behavior. *Environment and Behavior*, 34(6), 740–756. <https://doi.org/10.1177/001391602237244>
- O'Connor, R. E., Bard, R. J., & Fisher, A. (1999). Risk Perceptions, General Environmental Beliefs, and Willingness to Address Climate Change. *Risk Analysis*, 19(3), 461–471. <https://doi.org/10.1111/j.1539-6924.1999.tb00421.x>
- Otto, A. H., & Steinhardt, M. F. (2017). The Relationship between Immigration and the Success of Far-Right Political Parties in Germany. Retrieved from <https://www.ifo.de/DocDL/dice-report-2017-4-otto-steinhardt-december.pdf>
- Pereira, C., Vala, J., & Costa-Lopes, R. (2010). From prejudice to discrimination: The legitimizing role of perceived threat in discrimination against immigrants. *European Journal of Social Psychology*, 40(7), 1231–1250. <https://doi.org/10.1002/ejsp.718>
- Pettigrew, T. F., Wagner, U., & Christ, O. (2007). Who opposes Immigration? Comparing German with North America Findings. *Du Bois Review: Social Science Research on Race*, 4(1), 19–39. <https://doi.org/10.1017/s1742058x07070038>
- Ponizovskiy, V. A. (2016). Values and Attitudes towards Immigrants: Cross-Cultural Differences across 25 Countries. *Психология. Журнал Высшей Школы Экономики*, 13(2), 256–272. <https://doi.org/10.17323/1813-8918-2016-2-256-272>
- Poortinga, W., Spence, A., Whitmarsh, L., Capstick, S., & Pidgeon, N. F. (2011). Uncertain climate: An investigation into public scepticism about anthropogenic climate change.

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- Global Environmental Change*, 21(3), 1015–1024.  
<https://doi.org/10.1016/j.gloenvcha.2011.03.001>
- Prati, G., Pietrantoni, L., & Albanesi, C. (2017). Human values and beliefs and concern about climate change: a Bayesian longitudinal analysis. *Quality & Quantity*, 52(4), 1613–1625. <https://doi.org/10.1007/s11135-017-0538-z>
- Putnam, R. D. (2002). *Democracies in Flux: The Evolution of Social Capital in Contemporary Society* (Illustrated ed.). New York City, NY: Oxford University Press.
- Raijman, R., Semyonov, M., & Schmidt, P. (2003). Do Foreigners Deserve Rights? Determinants of Public Views Towards Foreigners in Germany and Israel. *European Sociological Review*, 19(4), 379–392. <https://doi.org/10.1093/esr/19.4.379>
- Ramos, A., Pereira, C. R., & Vala, J. (2016). Economic crisis, human values and attitudes towards immigrants. In *Values, economic crisis and democracy* (pp. 104–137). London, UK: Routledge.
- Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy*, 35(8), 741–756.  
[https://doi.org/10.1016/s0005-7967\(97\)00022-3](https://doi.org/10.1016/s0005-7967(97)00022-3)
- Regorz, A. (2020). Moderatoranalyse. Retrieved from [http://www.regorz-statistik.de/inhalte/tutorial\\_moderator\\_grundlagen.html](http://www.regorz-statistik.de/inhalte/tutorial_moderator_grundlagen.html)
- Reser, J. P., & Swim, J. K. (2011). Adapting to and coping with the threat and impacts of climate change. *American Psychologist*, 66(4), 277–289.  
<https://doi.org/10.1037/a0023412>
- Rokeach, M. (1973). *The Nature of Human Values*. New York City, NY: Free Press.
- Rustenbach, E. (2010). Sources of Negative Attitudes toward Immigrants in Europe: A Multi-Level Analysis. *International Migration Review*, 44(1), 53–77.  
<https://doi.org/10.1111/j.1747-7379.2009.00798.x>
- Sagiv, L., & Schwartz, S. H. (1995). Value priorities and readiness for out-group social contact. *Journal of Personality and Social Psychology*, 69(3), 437–448.  
<https://doi.org/10.1037/0022-3514.69.3.437>
- Schäfer, M. S., Ivanova, A., & Schmidt, A. (2011). Globaler Klimawandel, globale Öffentlichkeit? *Studies in Communication / Media*, 0(1), 131–148.  
<https://doi.org/10.5771/2192-4007-2011-1-131>
- Schnaudt, C., & Weinhardt, M. (2017a). Schaffen wir das? Zwischen Akzeptanz und Ablehnung von Immigration in Deutschland und Europa. *Informationsdienst Soziale Indikatoren*, 57, 12–16. <https://doi.org/10.15464/isi.57.2017.12-16>

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- Schnaudt, C., & Weinhardt, M. (2017b). Schaffen wir das? Zwischen Akzeptanz und Ablehnung von Immigration in Deutschland und Europa. *Informationsdienst Soziale Indikatoren*, 57, 12–16. <https://doi.org/10.15464/isi.57.2017.12-16>
- Schoenefeld, J. J., & McCauley, M. R. (2015). Local is not always better: the impact of climate information on values, behavior and policy support. *Journal of Environmental Studies and Sciences*, 6(4), 724–732. <https://doi.org/10.1007/s13412-015-0288-y>
- Schwartz, S. H. (1992). Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries. *Advances in Experimental Social Psychology*, 1–65. [https://doi.org/10.1016/s0065-2601\(08\)60281-6](https://doi.org/10.1016/s0065-2601(08)60281-6)
- Schwartz, S. H. (2003). A Proposal for Measuring Value Orientations across Nations. Retrieved from [https://www.europeansocialsurvey.org/docs/methodology/core\\_ess\\_questionnaire/ESS\\_core\\_questionnaire\\_human\\_values.pdf](https://www.europeansocialsurvey.org/docs/methodology/core_ess_questionnaire/ESS_core_questionnaire_human_values.pdf)
- Schwartz, S. H. (2006). Les valeurs de base de la personne: Théorie, mesures et applications [Basic human values: Theory, measurement, and applications]. *Revue Française de Sociologie*, 42, 249–288.
- Schwartz, S. H. (2007). Value orientations: Measurement, antecedents and consequences across nations. Retrieved from [https://www.researchgate.net/publication/272160193\\_Value\\_orientations\\_Measurement\\_antecedents\\_and\\_consequences\\_across\\_nations](https://www.researchgate.net/publication/272160193_Value_orientations_Measurement_antecedents_and_consequences_across_nations)
- Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology*, 53(3), 550–562. <https://doi.org/10.1037/0022-3514.53.3.550>
- Schwartz, S. H., & Bilsky, W. (1990). Toward a theory of the universal content and structure of values: Extensions and cross-cultural replications. *Journal of Personality and Social Psychology*, 58(5), 878–891. <https://doi.org/10.1037/0022-3514.58.5.878>
- Schwartz, S. H., Caprara, G. V., & Vecchione, M. (2010). Basic Personal Values, Core Political Values, and Voting: A Longitudinal Analysis. *Political Psychology*, 31(3), 421–452. <https://doi.org/10.1111/j.1467-9221.2010.00764.x>
- Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the Cross-Cultural Validity of the Theory of Basic Human Values with a Different Method of Measurement. *Journal of Cross-Cultural Psychology*, 32(5), 519–542. <https://doi.org/10.1177/0022022101032005001>
- Semyonov, M., Rajzman, R., & Gorodzeisky, A. (2006). The Rise of Anti-foreigner Sentiment in European Societies, 1988-2000. *American Sociological Review*, 71(3), 426–449. <https://doi.org/10.1177/000312240607100304>

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- Semyonov, M., Rajjman, R., & Gorodzeisky, A. (2008). Foreigners' Impact on European Societies. *International Journal of Comparative Sociology*, 49(1), 5–29. <https://doi.org/10.1177/0020715207088585>
- Semyonov, M., Rajjman, R., Tov, A. Y., & Schmidt, P. (2004). Population size, perceived threat, and exclusion: a multiple-indicators analysis of attitudes toward foreigners in Germany. *Social Science Research*, 33(4), 681–701. <https://doi.org/10.1016/j.ssresearch.2003.11.003>
- Skinner, N., & Brewer, N. (2002). The dynamics of threat and challenge appraisals prior to stressful achievement events. *Journal of Personality and Social Psychology*, 83(3), 678–692. <https://doi.org/10.1037/0022-3514.83.3.678>
- Skinner, N., & Brewer, N. (2004). Adaptive Approaches to Competition: Challenge Appraisals and Positive Emotion. *Journal of Sport and Exercise Psychology*, 26(2), 283–305. <https://doi.org/10.1123/jsep.26.2.283>
- Smiley, K. T. (2016). Climate change denial, political beliefs, and cities: evidence from Copenhagen and Houston. *Environmental Sociology*, 3(1), 76–86. <https://doi.org/10.1080/23251042.2016.1236884>
- Smith, C. A. (1991). The self, appraisal, and coping. In C. R. Snyder & D. R. Forsyth (Eds.), *Handbook of Social and Clinical Psychology: The Health Perspective* (pp. 116–137). New York City, NY: Pergamon.
- Smith, C. A., & Lazarus, R. S. (1990). Emotion and Adaptation. In *Handbook of personality: Theory and research* (pp. 609–637). New York City, NY: The Guilford Press.
- Stephan, W. G. (2009). Intergroup Threat Theory. In O. Ybarra & K. Rios Morrison (Eds.), *Handbook of Prejudice, Stereotyping, and Discrimination* (pp. 43–59). New York City, NY: TD Nelson.
- Stephan, W. G., Lausanne Renfro, C., Esses, V. M., White Stephan, C., & Martin, T. (2005). The effects of feeling threatened on attitudes toward immigrants. *International Journal of Intercultural Relations*, 29(1), 1–19. <https://doi.org/10.1016/j.ijintrel.2005.04.011>
- Stephan, W. G., & Renfro, C. L. (2002). The Role of Threat in Intergroup Relations. In *From Prejudice to inter-group emotions: Differentiated reactions to social groups* (pp. 191–207). New York City, NY: Psychology Press.
- Stephan, W. G., & Stephan, C. W. (1996). Predicting prejudice. *International Journal of Intercultural Relations*, 20(3–4), 409–426. [https://doi.org/10.1016/0147-1767\(96\)00026-0](https://doi.org/10.1016/0147-1767(96)00026-0)

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- Stephan, W. G., & Stephan, C. W. (2000). An Integrated Threat Theory of Prejudice. In *Reducing Prejudice and Discrimination* (pp. 23–45). Mahwah, NJ: Lawrence Erlbaum Associates.
- Stephan, W. G., Ybarra, O., & Bachman, G. (1999). Prejudice Toward Immigrants1. *Journal of Applied Social Psychology, 29*(11), 2221–2237. <https://doi.org/10.1111/j.1559-1816.1999.tb00107.x>
- Stern, P. C., & Dietz, T. (1994). The Value Basis of Environmental Concern. *Journal of Social Issues, 50*(3), 65–84. <https://doi.org/10.1111/j.1540-4560.1994.tb02420.x>
- Swim, J. K., & Becker, J. C. (2012). Country Contexts and Individuals' Climate Change Mitigating Behaviors: A Comparison of U.S. Versus German Individuals' Efforts to Reduce Energy Use. *Journal of Social Issues, 68*(3), 571–591. <https://doi.org/10.1111/j.1540-4560.2012.01764.x>
- Taber, K. S. (2017). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education, 48*(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Thorisdottir, H., Jost, J. T., Liviatan, I., & Shrout, P. E. (2007). Psychological Needs and Values Underlying Left-Right Political Orientation: Cross-National Evidence from Eastern and Western Europe. *Public Opinion Quarterly, 71*(2), 175–203. <https://doi.org/10.1093/poq/nfm008>
- Uphill, M. A., Rossato, C. J. L., Swain, J., & O'Driscoll, J. (2019). Challenge and Threat: A Critical Review of the Literature and an Alternative Conceptualization. *Frontiers in Psychology, 10*, 1–12. <https://doi.org/10.3389/fpsyg.2019.01255>
- Ursachi, G., Horodnic, I. A., & Zait, A. (2015). How Reliable are Measurement Scales? External Factors with Indirect Influence on Reliability Estimators. *Procedia Economics and Finance, 20*, 679–686. [https://doi.org/10.1016/s2212-5671\(15\)00123-9](https://doi.org/10.1016/s2212-5671(15)00123-9)
- Van Der Burg, W., Fennema, M., & Tillie, J. (2000). Anti-immigrant Parties in Europe: Ideological or Protest Vote? *European Journal of Political Research, 37*(1), 77–102. <https://doi.org/10.1111/1475-6765.00505>
- van der Linden, S. (2014). On the relationship between personal experience, affect and risk perception: The case of climate change. *European Journal of Social Psychology, 44*(5), 430–440. <https://doi.org/10.1002/ejsp.2008>
- van der Linden, S. (2015). The social-psychological determinants of climate change risk perceptions: Towards a comprehensive model. *Journal of Environmental Psychology, 41*, 112–124. <https://doi.org/10.1016/j.jenvp.2014.11.012>



## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- van Oorschot, W., Arts, W., & Gelissen, J. (2006). Social Capital in Europe: Measurement and Social and Regional Distribution of a Multifaceted Phenomenon. *Acta Sociologica*, 49(2), 149–167. <https://doi.org/10.1177/0001699306064770>
- Vyrost, J., Kentos, M., & Fedakova, D. (2007). Values Orientations as Factors of Social Trust, Political Participation, and Life Satisfaction. *Studia Psychologica*, 49, 283–294.
- Wilson, G. (1973). *The Psychology of Conservatism*. Abingdon, UK: Routledge.
- Yamagishi, T., & Yamagishi, M. (1994). Trust and commitment in the United States and Japan. *Motivation and Emotion*, 18(2), 129–166. <https://doi.org/10.1007/bf02249397>
- Zizumbo-Colunga, D., Zechmeister, E. J., & Seligson, M. A. (2010). Social Capital and Economic Crisis in the United States. *AmericasBarometer Insights*, 43, 1–9.
- Zuwanderungsstatistik 1991 – 2019. (n.d.). Retrieved September 3, 2020, from <https://de.statista.com/statistik/daten/studie/28347/umfrage/zuwanderung-nach-deutschland/>

**Appendix A – Results of Moderation Analyses**

**Data from ESS Round 7 (Immigration)**

**IVs:** Realistic Threat, Conservation, and Self-Transcendence

**DVs:** Institutional Trust, Social Trust, Opposition towards Immigration, Qualification for entry/exclusion, Laws against discrimination in workplace

*Note:* Realistic Threat was used as operationalization of the perception of immigration as challenge or threat

- DV: InstitutionalTrust  
**Model1:** Adjusted Rsq: =.166 F(2, 2819)=282 p<.001  
 RealisticThreat ( $\beta$ =-.416; t(-23.743); p<.001)  
 Conservation ( $\beta$ =.092 ; t(5.238); p<.001)

**Model2:** Adjusted Rsq: =.168 F(1, 2818)=8,07 p=.005  
 RealisticThreat ( $\beta$ =-.577; t(-9.732); p<.001)  
 Conservation ( $\beta$ =-.056; t(-1.021); p=.307)  
 RealisticThreatxConservation ( $\beta$ =-.244; t(-2.841); p=.005)
- DV: InstitutionalTrust  
**Model1:** Adjusted Rsq: =.159 F(2, 2819)=266.8 p<.001  
 RealisticThreat ( $\beta$ =-.394; t(-22,443); p<.000)  
 Self-Transcendence ( $\beta$ =-.024 .; t(-1.362); p=.173)

**Model2:** Adjusted Rsq: =.160 F(1, 2818)=4.65 p=.031  
 RealisticThreat ( $\beta$ =-.277. ; t(-4.847); p<.001)  
 Self-Transcendence ( $\beta$ =.121 ; t(2.503); p=.012)  
 RealisticThreatxSelfTranscendence ( $\beta$ =.143 ; t(2.156) p=.031)
- DV: SocialTrust  
**Model1:** Adjusted Rsq: =.123 F(2, 2819)=198.6 p<.001  
 RealisticThreat ( $\beta$ =-.345; t(-19.194); p<.001)  
 Conservation ( $\beta$ =-.028; t(-1.551); p=.120)

**Model2:** Adjusted Rsq: =.123 F(1, 2818)=.38 p=.537  
 RealisticThreat ( $\beta$ =-.381; t(-6.251); p<.001)  
 Conservation ( $\beta$ =-.061; t(-1.082); p=.280)  
 RealisticThreatxConservation ( $\beta$ =-.054; t(-.617); p<.537)
- DV: SocialTrust  
**Model1:** Adjusted Rsq: =.132 F(2, 2819)= 215.79p<.001  
 RealisticThreat ( $\beta$ =-.332; t(-18.63); p<.001)  
 SelfTranscendence ( $\beta$ =.102; t(5.708); p<.001)

**Model2:** Adjusted Rsq: =.134 F(1, 2818)=5.6 p=.018  
 RealisticThreat ( $\beta$ =-.463; t(-7.983); p<.001)  
 SelfTranscendence ( $\beta$ =-.007; t(-.140); p=.888)  
 RealisticThreatxSelfTranscendence ( $\beta$ =-.160; t(-2.360); p=.018)

**Proxies for Attitudes towards Immigration:**

- DV: Opposition towards Immigration  
**Model1:** Adjusted Rsq: =.495 F(2, 2819)=1384.66 p<.001  
 RealisticThreat ( $\beta$ =.652; t(47.826); p<.001)  
 Conservation ( $\beta$ =.167.; t(12.248); p<.001)

**Model2:** Adjusted Rsq: =.496 F(1, 2818)=4.59 p=.068  
 RealisticThreat ( $\beta$ =.588; t(12.079); p<.001)  
 Conservation ( $\beta$ =.080; t(1.873); p=.061)  
 RealisticThreatxConservation ( $\beta$ =-.143; t(-2.144); p=.068)
- DV: Opposition towards Immigration  
**Model1:** Adjusted Rsq: =.487 F(2, 2819)=1399.85 p<.001  
 RealisticThreat ( $\beta$ =.660.; t(48.133); p<.001)  
 SelfTranscendence ( $\beta$ =-.139; t(-10.119); p<.001)

**Model2:** Adjusted Rsq: =.487 F(1, 2818)=1.56 p=.211  
 RealisticThreat ( $\beta$ =.713; t(15.977); p<.001)  
 SelfTranscendence ( $\beta$ =-.094; t(-2.491); p=.013)  
 RealisticThreatxSelfTranscendence ( $\beta$ =.065; t(1.251); p=.211)
- DV: Qualification for entry/exclusion  
**Model1:** Adjusted Rsq: =.194 F(2, 2819)=340.27 p<.001  
 RealisticThreat ( $\beta$ =.261; t(15.139); p<.001)  
 Conservation ( $\beta$ =.309; t(17.912); p<.001)

**Model2:** Adjusted Rsq: =.197 F(1, 2818)=12.3 p<.001  
 RealisticThreat ( $\beta$ =.066; t(1.126); p=.260)  
 Conservation ( $\beta$ =.129; t(2.388); p=.017)  
 RealisticThreatxConservation ( $\beta$ =-.296; t(-3.505); p<.001)
- DV: Qualification for entry/exclusion  
**Model1:** Adjusted Rsq: =.106 F(2, 2819)=168.831 p<.001  
 RealisticThreat ( $\beta$ =.309; t(17.076); p<.001)  
 SelfTranscendence ( $\beta$ =-.066; t(-6.634); p<.001)

**Model2:** Adjusted Rsq: =.107 F(1, 2818)=3.503 p=.061  
 RealisticThreat ( $\beta$ =.414; t(7.032); p<.001)  
 SelfTranscendence ( $\beta$ =.022; t(.433); p=.665)  
 RealisticThreatxSelfTranscendence ( $\beta$ =.128; t(1.872); p=.061)

**Proxy for Government Actions:**

- DV: Laws against discrimination in workplace  
**Model1:** Adjusted Rsq: =.068 F(2, 2819)= 101.75p<.001  
 RealisticThreat ( $\beta=-.245$ ; t(-13.065); p<.001)  
 Conservation ( $\beta=-.061$ ; t(-3.233); p<.001)

**Model2:** Adjusted Rsq: =.068 F(1, 2818)=.63 p=.429  
 RealisticThreat ( $\beta=-.293$ ; t(-4.588); p<.001)  
 Conservation ( $\beta=-.105$ ; t(-1.775); p=.076)  
 RealisticThreatxConservation ( $\beta=-.073$ ; t(-.791); p=.429)
- DV: Laws against discrimination in workplace  
**Model1:** Adjusted Rsq: =.068 F(2, 2819)=102.2 p<.001  
 RealisticThreat ( $\beta=-.244$ ; t(-13.062); p<.001)  
 SelfTranscendence ( $\beta=.063$ ; t(3.360); p<.001)

**Model2:** Adjusted Rsq: =.069 F(1, 2818)= .12 p=.729  
 RealisticThreat ( $\beta=-.265$ ; t(-4.354); p<.001)  
 SelfTranscendence ( $\beta=.046$ ; t(.884); p=.377)  
 RealisticThreatxSelfTranscendence ( $\beta=-.025$ ; t(-.346); p=.729)

**IVs:** Symbolic Threat, Conservation, and Self-Transcendence

**DVs:** Institutional Trust, Social Trust, Opposition towards Immigration, Qualification for entry/exclusion, Laws against discrimination in workplace

*Note:* Symbolic Threat was used as operationalization of the perception of immigration as challenge or threat

- DV: InstitutionalTrust  
**Model1:** Adjusted Rsq=.118 F(2, 2814)=189.76 p<.001  
 Conservation ( $\beta=.086$  ; t(4.765); p<.001)  
 SymbolicThreat ( $\beta=-.353$  ; t(-19.47); p<.001)

**Model2:** Adjusted Rsq=.121 F(1, 2813)=9.053 p=.003  
 Conservation ( $\beta=-.066$  ; t(-1.225); p=.221)  
 SymbolicThreat ( $\beta=-.529$  ; t(-8.622); p=.000)  
 SymbolicThreatxConservation ( $\beta=-.262$  ; t(-3.009); p=.003)
- DV: InstitutionalTrust  
**Model1:** Adjusted Rsq=.111 F(2, 2814)=177.44 p<.001  
 SymbolicThreat ( $\beta=-.330$  ; t(-18.066); p<.001)  
 SelfTranscendence ( $\beta=.017$  ; t(.907); p=.364)

**Model2:** Adjusted Rsq=. 112 F(1, 2813)=2.50 p=.114  
 SymbolicThreat ( $\beta=-.242$  ; t(-4.131); p<.001)  
 SelfTranscendence ( $\beta=.087$  ; t(1.808); p=.071)  
 SymbolicThreatx SelfTranscendence ( $\beta=.103$  ; t(1.582); p=.114)

- DV: SocialTrust  
**Model1:** Adjusted Rsq=.106 F(2, 2814)=167.77 p<.001  
 Conservation ( $\beta$ =-.027 ; t(-1.479); p=.139)  
 SymbolicThreat ( $\beta$ =-.320 ; t(-17.53); p<.001)  
  
**Model2:** Adjusted Rsq=.107 F(1, 2813)=3.516 p=.061  
 Conservation ( $\beta$ =.068 ; t(1.266); p=.206)  
 SymbolicThreat ( $\beta$ =-.209 ; t(-3.374); p<.001)  
 SymbolicThreatxConservation ( $\beta$ =.164 ; t(1.875); p<.061)
- DV: SocialTrust  
**Model1:** Adjusted Rsq=. 113F(2, 2814)=180.07 p<.001  
 SymbolicThreat ( $\beta$ =-.304 ; t(-16.636); p<.001)  
 SelfTranscendence ( $\beta$ =.090 ; t(4.918); p<.001)  
  
**Model2:** Adjusted Rsq=.113 F(1, 2813)=.391 p=.532  
 SymbolicThreat ( $\beta$ =-.339 ; t(-5.779); p<.001)  
 SelfTranscendence ( $\beta$ =.062 ; t(1.292); p=.196)  
 SymbolicThreatx SelfTranscendence ( $\beta$ =-.041 ; t(-.625); p=.532)

**Proxies for Attitudes towards Immigration:**

- DV: Opposition towards Immigration  
**Model1:** Adjusted Rsq=.454 F(2, 2814)=1173.09 p<.001  
 Conservation ( $\beta$ =.163 ; t(11.439); p<.001)  
 SymbolicThreat ( $\beta$ =.621 ; t(43.568); p<.001)  
  
**Model2:** Adjusted Rsq=.455 F(1, 2813)=6.693 p=.010  
 Conservation ( $\beta$ =.060 ; t(1.423); p=.155)  
 SymbolicThreat ( $\beta$ =.501 ; t(10.372); p<.001)  
 SymbolicThreatxConservation ( $\beta$ =-.177 ; t(-2.587); p=.010)
- DV: Opposition towards Immigration  
**Model1:** Adjusted Rsq=.440 F(2, 2814)=1106.44 p<.001  
 SymbolicThreat ( $\beta$ =.630 ; t(43.373); p<.001)  
 SelfTranscendence ( $\beta$ =-.107 ; t(-7.401); p<.001)  
  
**Model2:** Adjusted Rsq=.440 F(1, 2813)=1.405 p=.236  
 SymbolicThreat ( $\beta$ =.682 ; t(14.647); p<.001)  
 SelfTranscendence ( $\beta$ =-.066 ; t(-1.719); p=.086)  
 SymbolicThreatx SelfTranscendence ( $\beta$ =.061 ; t(1.185); p=.236)

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- DV: Qualification for entry/exclusion  
**Model1:** Adjusted Rsq=.230 F(2, 2814)=420.97 p<.001  
Conservation ( $\beta=.291$  ; t(17.216); p<.001)  
SymbolicThreat ( $\beta=.325$  ; t(19.198); p<.001)  
  
**Model2:** Adjusted Rsq=.235 F(1, 2813)=21.15 p<.001  
Conservation ( $\beta=.074$  ; t(1.483); p=.138)  
SymbolicThreat ( $\beta=.073$  ; t(1.276); p=.202)  
SymbolicThreatxConservation ( $\beta=-.373$  ; t(-4.599); p=000)
- DV: Qualification for entry/exclusion  
**Model1:** Adjusted Rsq=.150 F(2, 2814)=248.62 p<.001  
SymbolicThreat ( $\beta=.379$  ; t(21.180); p<.001)  
SelfTranscendence ( $\beta=-.032$  ; t(-1.767); p=.077)  
  
**Model2:** Adjusted Rsq=.150 F(1, 2813)=2.23 p=.136  
SymbolicThreat ( $\beta=.460$  ; t(8.024); p<.001)  
SelfTranscendence ( $\beta=.033$  ; t(.709); p=.478)  
SymbolicThreatx SelfTranscendence ( $\beta=.095$  ; t(1.492); p=.136)

### Proxy for Government Actions:

- DV: Laws against discrimination in workplace  
**Model1:** Adjusted Rsq=.084 F(2, 2742)=127.47 p<.001  
Conservation ( $\beta=-.049$  ; t(-2.645); p=.008)  
SymbolicThreat ( $\beta=.278$  ; t(14.883); p<.001)  
  
**Model2:** Adjusted Rsq=-.084 F(1, 2741)=.522 p=.470  
Conservation ( $\beta=-.087$  ; t(-1.566); p=.118)  
SymbolicThreat ( $\beta=-.322$  ; t(-5.040); p<.001)  
SymbolicThreatxConservation ( $\beta=-.065$  ; t(-.723); p=.470)
- DV: Laws against discrimination in workplace  
**Model1:** Adjusted Rsq=.083 F(2, 2742)=126 p<.001  
SymbolicThreat ( $\beta=-.278$  ; t(-14.779); p<.001)  
SelfTranscendence ( $\beta=.039$  ; t(2.070); p=.039)  
  
**Model2:** Adjusted Rsq=.083 F(1, 2741)=.639 p=.424  
SymbolicThreat ( $\beta=-.324$  ; t(-5.391); p<.001)  
SelfTranscendence ( $\beta=.002$  ; t(.048); p=.961)  
SymbolicThreatx SelfTranscendence ( $\beta=-.053$  ; t(-.799); p=.424)

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

**IVs:** Irscale (Placement on left right scale), Conservation, and Self-Transcendence

**DVs:** Institutional Trust, Social Trust, Opposition towards Immigration, Qualification for entry/exclusion, Laws against discrimination in workplace

*Note:* Irscale (Placement on left right scale) was used as operationalization of political ideology

- DV: InstitutionalTrust  
**Model1:** Adjusted Rsq=.004 F(2, 2724)=6.391, p=.002  
Irscale ( $\beta=-.067$ ;  $t(-3.467)$ ;  $p<.001$ )  
Conservation ( $\beta=.006$  ;  $t(.295)$ ;  $p=.768$ )  
  
**Model2:** Adjusted Rsq=.004 F(1, 2723)=.102 p=.749  
Irscale ( $\beta=-.048$  ;  $t(-.747)$ ;  $p=.455$ )  
Conservation ( $\beta=.019$  ;  $t(.416)$ ;  $p=.678$ )  
Irscale x Conservation ( $\beta=.022$  ;  $t(.319)$ ;  $p=.749$ )
- DV: InstitutionalTrust  
**Model1:** Adjusted Rsq=.014 F(2, 2724)=20.388 p<.001  
Irscale ( $\beta=-.081$  ;  $t(-4.226)$ ;  $p<.001$ )  
SelfTranscendence ( $\beta=.101$  ;  $t(5.287)$ ;  $p<.001$ )  
  
**Model2:** Adjusted Rsq=.015 F(1, 2723)=2.821 p=.093  
Irscale ( $\beta=-.182$ ;  $t(-2.886)$ ;  $p=.004$ )  
SelfTranscendence ( $\beta=.032$  ;  $t(.691)$ ;  $p=.490$ )  
Irscale x SelfTranscendence ( $\beta=-.134$  ;  $t(-1.680)$ ;  $p=.093$ )
- DV: SoicalTrust  
**Model1:** Adjusted Rsq=.008 F(2, 2724)=11.939 p<.001  
Irscale ( $\beta=.021$  ;  $t(1.092)$ ;  $p=.275$ )  
Conservation ( $\beta=-.087$  ;  $t(-4.523)$ ;  $p<.001$ )  
  
**Model2:** Adjusted Rsq=.010 F(1, 2723)=6.256 p=.012  
Irscale ( $\beta=-.131$  ;  $t(-2.053)$ ;  $p=.040$ )  
Conservation ( $\beta=-.188$  ;  $t(-4.213)$ ;  $p<.001$ )  
Irscale x Conservation ( $\beta=-.175$  ;  $t(-2.501)$ ;  $p=.012$ )
- DV: SoicalTrust  
**Model1:** Adjusted Rsq=.023 F(2, 2724)=33.541 p<.001  
Irscale ( $\beta=.016$  ;  $t(-.828)$ ;  $p=.408$ )  
SelfTranscendence ( $\beta=.152$  ;  $t(7.975)$ ;  $p<.001$ )  
  
**Model2:** Adjusted Rsq=.024 F(1, 2723)=2.883 p=.090  
Irscale ( $\beta=-.086$  ;  $t(1.336)$ ;  $p=.172$ )  
SelfTranscendence ( $\beta=.082$  ;  $t(1.800)$ ;  $p=.072$ )  
Irscale x SelfTranscendence ( $\beta=-.134$  ;  $t(-1.698)$ ;  $p=.090$ )

**Proxies for Attitudes towards Immigration:**

- DV: Opposition towards Immigration  
**Model1:** Adjusted Rsq=.121 F(2, 2724)=189.12 p<.001  
 Irscale ( $\beta=.186$  ; t(10.212); p<.001)  
 Conservation ( $\beta=.267$  ; t(14.664); p<.001)

**Model2:** Adjusted Rsq=.131 F(1, 2723)=30.13 p<.001  
 Irscale ( $\beta=-.126$  ; t(-2.118); p=.034)  
 Conservation ( $\beta=.474$  ; t(11.334); p<.001)  
 Irscale x Conservation ( $\beta=.359$  ; t(5.489); p<.001)
- DV: Opposition towards Immigration  
**Model1:** Adjusted Rsq=.102F(2, 2724)=153.1 p<.001  
 Irscale ( $\beta=.200$  ; t(10.959); p<.001)  
 SelfTranscendence ( $\beta=-.227$  ; t(-12.383); p<.001)

**Model2:** Adjusted Rsq=.102 F(1, 2723)=.381 p=.560  
 Irscale ( $\beta=.234$  ; t(3.887); p<.001)  
 SelfTranscendence ( $\beta=-.250$  ; t(-5.718); p<.001)  
 Irscale x SelfTranscendence ( $\beta=-.044$  ; t(-.583); p=.560)
- DV: Qualification for entry/exclusion  
**Model1:** Adjusted Rsq=.168 F(2, 2724)=276.24 p<.001  
 Irscale ( $\beta=.200$  ; t(11.305); p<.001)  
 Conservation ( $\beta=.327$  ; t(-18.478); p<.001)

**Model2:** Adjusted Rsq=.172 F(1, 2723)=15.45 p<.001  
 Irscale ( $\beta=-.018$  ; t(-.309); p=.758)  
 Conservation ( $\beta=.472$  ; t(-11.572); p<.001)  
 Irscale x Conservation ( $\beta=.251$  ; t(3.930); p<.001)
- DV: Qualification for entry/exclusion  
**Model1:** Adjusted Rsq=.071 F(2, 2724)=104.9 p<.001  
 Irscale ( $\beta=.243$  ; t(13.038); p<.001)  
 SelfTranscendence ( $\beta=-.086$  ; t(4.599); p<.001)

**Model2:** Adjusted Rsq=.072 F(1, 2723)=5.47 p=.019  
 Irscale ( $\beta=.379$  ; t(6.196); p<.001)  
 SelfTranscendence ( $\beta=-.180$  ; t(4.052); p<.001)  
 Irscale x SelfTranscendence ( $\beta=-.181$  ; t(-2.339); p=.019)



**Proxy for Government Actions:**

- DV: Laws against discrimination in workplace  
**Model1:** Adjusted Rsq=.017 F(2, 2724)=24.360 p<.001  
 Irscale ( $\beta$ =.085 ; t(-4.380); p<.001)  
 Conservation ( $\beta$ =-.091 ; t(4.672); p<.001)  
  
**Model2:** Adjusted Rsq=.021 F(1, 2723)=9.944 p=.002  
 Irscale ( $\beta$ =-.108 ; t(-1.680); p=.093)  
 Conservation ( $\beta$ =-.218 ; t(-4.870); p<.001)  
 Irscale x Conservation ( $\beta$ =-.222 ; t(-3.153); p=.002)
- DV: Lwdscwp Laws against discrimination in workplace  
**Model1:** Adjusted Rsq=.018 F(2, 2724)=25.782 p<.001  
 Irscale ( $\beta$ =.087 ; t(4.496); p<.001)  
 SelfTranscendence ( $\beta$ =.096 ; t(4.464); p<.001)  
  
**Model2:** Adjusted Rsq=.018 F(1, 2723)=.553 p=.457  
 Irscale ( $\beta$ =.132 ; t(2.078); p=.038)  
 SelfTranscendence ( $\beta$ =.127 ; t(2.755); p=.006)  
 Irscale x SelfTranscendence ( $\beta$ =.060 ; t(.744); p=.457)

**Data from ESS Round 8 (Climate Change)**

**IVs:** Wrclmch (How worried about climate change), Conservation, and Self-Transcendence

**DVs:** Institutional Trust, Social Trust, Energy Supply, Pro-Environmental Personal Norms, Non-Activist Behaviors

*Note:* Wrclmch (How worried about climate change) was used as operationalization of the perception of climate change as challenge or threat

- DV: InstitutionalTrust  
**Model1:** Adjusted Rsq=.007 ; F(2, 2674)=10.252; p<.001  
 Wrclmch ( $\beta$ =.007; t(.368); p=.713)  
 Conservation ( $\beta$ =-.087; t(-4.503); p<.001)  
  
**Model2:** Adjusted Rsq=.007 ; F(1, 2673)=1.316; p=.251  
 Wrclmch ( $\beta$ =-.056; t(-.989); p=.323)  
 Conservation ( $\beta$ =.001; t(.011); p=.991)  
 wrclmchxConservation ( $\beta$ =.117; t(1.417); p=.251)
- DV: InstitutionalTrust  
**Model1:** Adjusted Rsq=.001; F(2, 2674)=1.953; p=.142  
 Wrclmch ( $\beta$ =-.001; t(-.031); p<.975)  
 Self-Transcendence ( $\beta$ =.040; t(.054); p=.055)

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

**Model2:** Adjusted Rsq=.000; F(1, 2673)=.068; p=.794  
Wrclmch ( $\beta$ =-.017; t(-.258); p=.797)  
Self-Transcendence ( $\beta$ =.058; t(.753); p=.453)  
wrclmchxSelf-Transcendence ( $\beta$ =.022; t(.261); p=.794)

- DV: SocialTrust  
**Model1:** Adjusted Rsq=.017; F(2, 2675)=23.830; p<.001  
Wrclmch ( $\beta$ =.028; t(1.480); p=.138)  
Conservation ( $\beta$ =-.129; t(-6.708); p<.000)

**Model2:** Adjusted Rsq=.019 ; F(1, 2674)=6.659; p=.008  
Wrclmch ( $\beta$ =-.137; t(-2.089); p=.037)  
Conservation ( $\beta$ =.072; t(.915); p=.361)  
wrclmchxConservation ( $\beta$ =.267; t(2.638); p=.008)

- DV: SocialTrust  
**Model1:** Adjusted Rsq=.017 ; F(2, 2676)=; p<.001  
Wrclmch ( $\beta$ =-.003; t(-.160); p=.873)  
Self-Transcendence ( $\beta$ =.134; t(6.779); p<.001)

**Model2:** Adjusted Rsq=.017 ; F(1, 2675)=; p=.589  
Wrclmch ( $\beta$ =-.036; t(-.564); p=.573)  
Self-Transcendence ( $\beta$ =.174; t(2.293); p=.022)  
wrclmchxSelf-Transcendence ( $\beta$ =.046; t(.541); p=.589)

### Proxies for Attitudes towards Climate Change:

- DV: Energy Supply  
**Model1:** Adjusted Rsq=.036 ; F(2,2639)=50.993 ; p<.001  
Wrclmch ( $\beta$ =.190; t(9.961); p<.001)  
Conservation ( $\beta$ =.035; t(1.844); p=.065)

**Model2:** Adjusted Rsq=.036 ; F(1,2638)=.078; p=.780  
Wrclmch ( $\beta$ =.173; t(2.648); p=.008)  
Conservation ( $\beta$ =.056; t(.721); p=.471)  
wrclmchxConservation ( $\beta$ =.028; t(.279); p=.780)

- DV: Energy Supply  
**Model1:** Adjusted Rsq=.040; F(2, 2676)=68.356; p<.001  
Wrclmch ( $\beta$ =.172; t(8.715); p<.001)  
Self-Transcendence ( $\beta$ =.072; t(3.668); p<.001)

**Model2:** Adjusted Rsq=.040; F(1, 2675)=; p=.637  
Wrclmch ( $\beta$ =.200 ; t(2.063); p=.039)  
Self-Transcendence ( $\beta$ =.038; t(.609); p=.616)  
wrclmchxSelf-Transcendence ( $\beta$ =-.040; t(-.473); p=.637)

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

- DV: Pro-Environmental Personal Norms  
**Model1:** Adjusted Rsq=.208; F(2, 26665)=350.620; p<.001  
Wrclmch ( $\beta$ =.451; t(-26.149); p<.001)  
Conservation ( $\beta$ =-.062; t(-3.603); p<.001)  
  
**Model2:** Adjusted Rsq=.207; F(1, 26664)=.066; p=.797  
Wrclmch ( $\beta$ =.465; t(7.846); p<.001)  
Conservation ( $\beta$ =-.080; t(-1.125); p=.261)  
wrclmchxConservation ( $\beta$ =-.024; t(-.258); p=.797)
- DV: Pro-Environmental Personal Norms  
**Model1:** Adjusted Rsq=.224; F(2, 2666)=385.723; p<.001  
Wrclmch ( $\beta$ =.415; t(23.529); p<.001)  
Self-Transcendence ( $\beta$ =.146; t(8.296); p<.001)  
  
**Model2:** Adjusted Rsq=.224; F(1, 2665)=.883; p=.348  
Wrclmch ( $\beta$ =.466; t(8.214); p<.001)  
Self-Transcendence ( $\beta$ =.085; t(1.258); p=.208)  
wrclmchxSelf-Transcendence ( $\beta$ =-.071; t(-.940); p=.348)

### Proxy for Government Actions:

- DV: Non-Activist Behaviors  
**Model1:** Adjusted Rsq=.094; F(2, 2671)=139.040; p<.001  
Wrclmch ( $\beta$ =.291; t(-15.815); p<.001)  
Conservation ( $\beta$ =-.091; t(-4.939); p<.001)  
  
**Model2:** Adjusted Rsq=.099; F(1, 2670)=15.913; p<.001  
Wrclmch ( $\beta$ =.052; t(-.827); p=.408)  
Conservation ( $\beta$ =.200; t(2.658); p=.008)  
wrclmchxConservation ( $\beta$ =.388; t(-3.3989); p<.001)
- DV: Non-Activist Behaviors  
**Model1:** Adjusted Rsq=.100; F(2, 2672)=149.82; p<.001  
Wrclmch ( $\beta$ =.261; t(-13.470); p<.001)  
Self-Transcendence ( $\beta$ =.127; t(6.700); p<.001)  
  
**Model2:** Adjusted Rsq=.100; F(1, 2671)=.001; p=.971  
Wrclmch ( $\beta$ =.263; t(-4.307); p<.001)  
Self-Transcendence ( $\beta$ =.124; t(1.715); p=.087)  
wrclmchxSelf-Transcendence ( $\beta$ =-.003; t(.037); p=.971)

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

**IVs:** Irscale (Placement on left right scale), Conservation, and Self-Transcendence

**DVs:** Institutional Trust, Social Trust, Energy Supply, Pro-Environmental Personal Norms, Non-Activist Behaviors

*Note:* Irscale (Placement on left right scale) was used as operationalization of political ideology

- DV: InstitutionalTrust

**Model1:** Adjusted Rsq=.007 F(2, 2614)=10.309 ; p<.001  
Placement on left right scale ( $\beta$ =-.086; t(-4.313); p<.001)  
Conservation ( $\beta$ =-.011; t(-.543); p=.587)

**Model2:** Adjusted Rsq=.007 F(1, 2613)=.069 ; p=.793  
Placement on left right scale ( $\beta$ =-.075; t(-1.655); p=.098)  
Conservation ( $\beta$ =-.027; t(-.416); p=.677)  
IrscalexConservation ( $\beta$ =.018; t(.263); p<.793)

- DV: InstitutionalTrust

**Model1:** Adjusted Rsq=.001 F(2, 2614)=2.130 ; p=.119  
Placement on left right scale ( $\beta$ =-.023; t(-1.148); p=.251)  
Self-Transcendence ( $\beta$ =.030; t(1.501); p=.134)

**Model2:** Adjusted Rsq=.001 F(1, 2613)=.161 ; p=.688  
Placement on left right scale ( $\beta$ =-.047; t(-.735); p=.463)  
Self-Transcendence ( $\beta$ =.048; t(.971); p=.331)  
Irscalex Self-Transcendence ( $\beta$ =.034; t(.401); p=.688)

- DV: SocialTrust

**Model1:** Adjusted Rsq=.021 F(2, 2614)=29.037 ; p<.001  
Conservation ( $\beta$ =-.115; t(-5.820); p<.001)  
Placement on left right scale ( $\beta$ =-.073; t(-3.678); p<.001)

**Model2:** Adjusted Rsq=.022 F(1, 2613)=4.091 ; p<.043  
Placement on left right scale ( $\beta$ =-.197; t(-4.372); p<.001)  
Conservation ( $\beta$ =.052; t(.800); p=.424)  
IrscalexConservation ( $\beta$ =-.140; t(-2.023); p=.043)

- DV: SocialTrust

**Model1:** Adjusted Rsq=.022 F(2, 2615)=30.625; p<.001  
Placement on left right scale ( $\beta$ =-.077; t(-3.932); p<.001)  
Self-Transcendence ( $\beta$ =.118; t(6.013); p<.001)

**Model2:** Adjusted Rsq=.022 F(1, 2614)=1.171 ; p=.279  
Placement on left right scale ( $\beta$ =-.143; t(-2.242); p=.025)  
Self-Transcendence ( $\beta$ =.166; t(3.416); p<.001)  
Irscalex Self-Transcendence ( $\beta$ =.090; t(1.082); p=.279)

**Proxies for Attitudes towards Climate Change:**

- DV: Energy Supply  
**Model1:** Adjusted Rsq=.004 F(2, 2586)=5.892 ; p=.003  
 Conservation ( $\beta$ =.038; t(1.921); p=.055)  
 Placement on left right scale ( $\beta$ =-.062; t(-3.170); p=.002)  
  
**Model2:** Adjusted Rsq=.006 F(1, 2585)=5.549 ; p=.019  
 Conservation ( $\beta$ =-.058; t(-1.271); p=.204)  
 Placement on left right scale ( $\beta$ =.083; t(1.272); p=.203)  
 IrscalexConservation ( $\beta$ =-.156; t(-2.356); p=.019)
- DV: Energy Supply  
**Model1:** Adjusted Rsq=.013 F(2, 2587)=18.545 ; p<.001  
 Placement on left right scale ( $\beta$ =-.035; t(-1.776); p=.076)  
 Self-Transcendence ( $\beta$ =.108; t(5.439); p<.001)  
  
**Model2:** Adjusted Rsq=.013 F(1, 2586)=.003 ; p=.956  
 Placement on left right scale ( $\beta$ =-.032; t(-.496); p=.620)  
 Self-Transcendence ( $\beta$ =.105; t(2.146); p=.032)  
 Irscalex Self-Transcendence ( $\beta$ =-.005; t(-.055); p=.956)
- DV: Pro-Environmental Personal Norms  
**Model1:** Adjusted Rsq=.021; F(2, 2607)=28.553; p<.001  
 Conservation ( $\beta$ =-.052; t(-2.614); p=.009)  
 Placement on left right scale ( $\beta$ =-.127; t(-6.435); p<.001)  
  
**Model2:** Adjusted Rsq=.022; F(1, 2606)=3.498; p=.062  
 Conservation ( $\beta$ =-.127; t(-2.829); p=.005)  
 Placement on left right scale ( $\beta$ =-.012; t(-.185); p=.852)  
 IrscalexConservation ( $\beta$ =-.130; t(-1.870); p=.062)
- DV: Pro-Environmental Personal Norms  
**Model1:** Adjusted Rsq=.070; F(2, 2608)=99.055; p<.001  
 Placement on left right scale ( $\beta$ =-.098; t(-5.097); p<.001)  
 Self-Transcendence ( $\beta$ =.231; t(12.074); p<.001)  
  
**Model2:** Adjusted Rsq=.071; F(1, 2605)=4.861; p=.028  
 Placement on left right scale ( $\beta$ =-.228; t(-3.670); p<.001)  
 Self-Transcendence ( $\beta$ =.327; t(6.892); p=.000)  
 Irscalex Self-Transcendence ( $\beta$ =.179; t(2.205); p=.028)

**Proxy for Government Actions:**

- DV: Non-Activist Behaviors  
**Model1:** Adjusted Rsq=.024 F(2, 2612)= 32.552; p<.001  
 Placement on left right scale ( $\beta$ =-.071; t(-3.611); p<.001)  
 Conservation ( $\beta$ =-.125; t(-6.360); p<.001)

## THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY

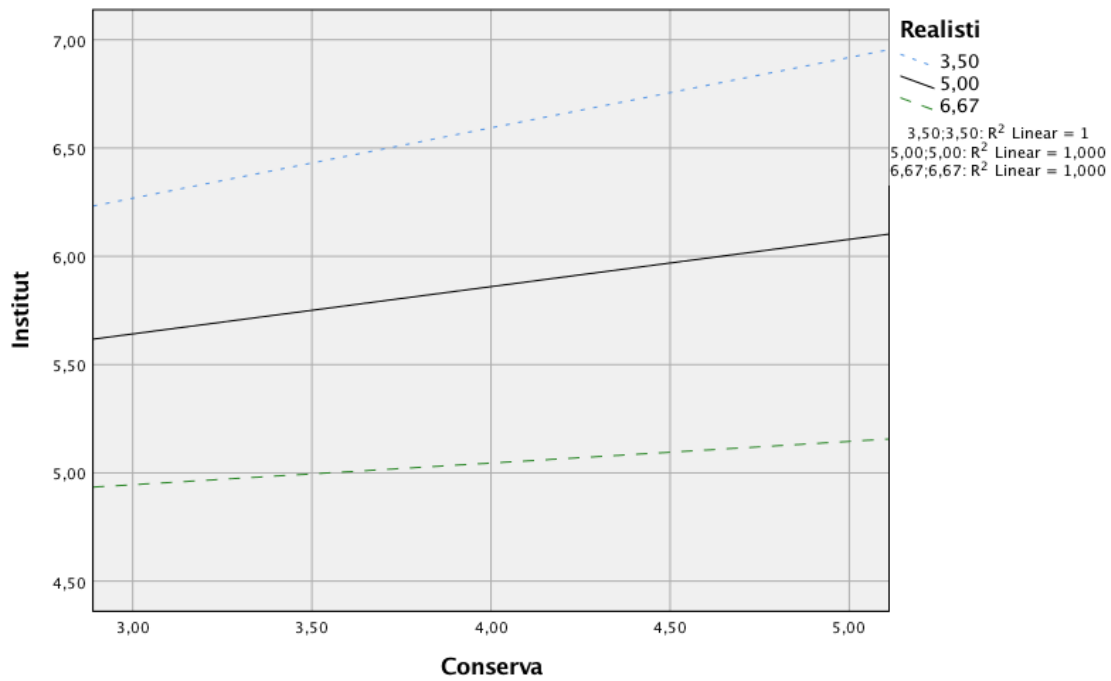
**Model2:** Adjusted Rsq=.029 F(1, 2611)=15.975 ; p<.001  
Placement on left right scale ( $\beta$ =-.232; t(-5.180); p<.001)  
Conservation ( $\beta$ =.119; t(1.854); p=.064)  
IrscalexConservation ( $\beta$ =-.276; t(-.3997); p<.001)

- DV: Non-Activist Behaviors

**Model1:** Adjusted Rsq=.049 F(2, 2613)=68.66 ; p<.001  
Placement on left right scale ( $\beta$ =-.111; t(5.758); p<.001)  
Self-Transcendence ( $\beta$ =.176; t(9.098); p<.001)

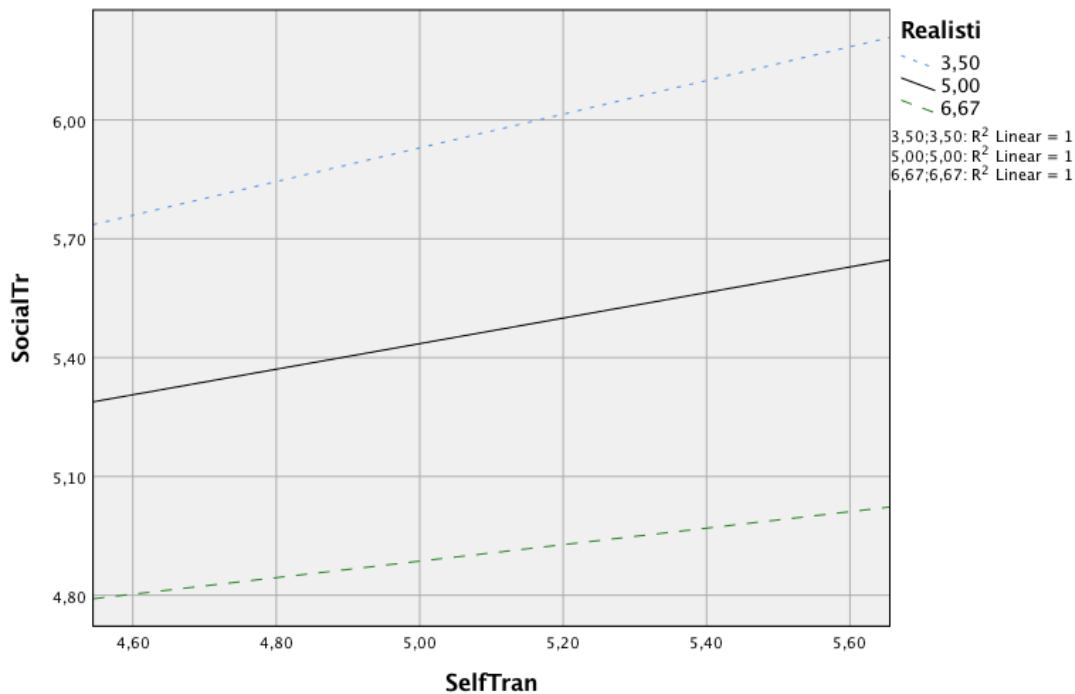
**Model2:** Adjusted Rsq=.049 F(1, 2612)=.84 ; p=.359  
Placement on left right scale ( $\beta$ =-.057; t(.904); p=.366)  
Self-Transcendence ( $\beta$ =.136; t(2.831); p=.005)  
Irscalex Self-Transcendence ( $\beta$ =-.075; t(.917); p=.359)

Appendix B – Plotted Interaction Effects



Note. Conditional effects of simple slopes for RealisticThreatxConservation for Institutional Trust.

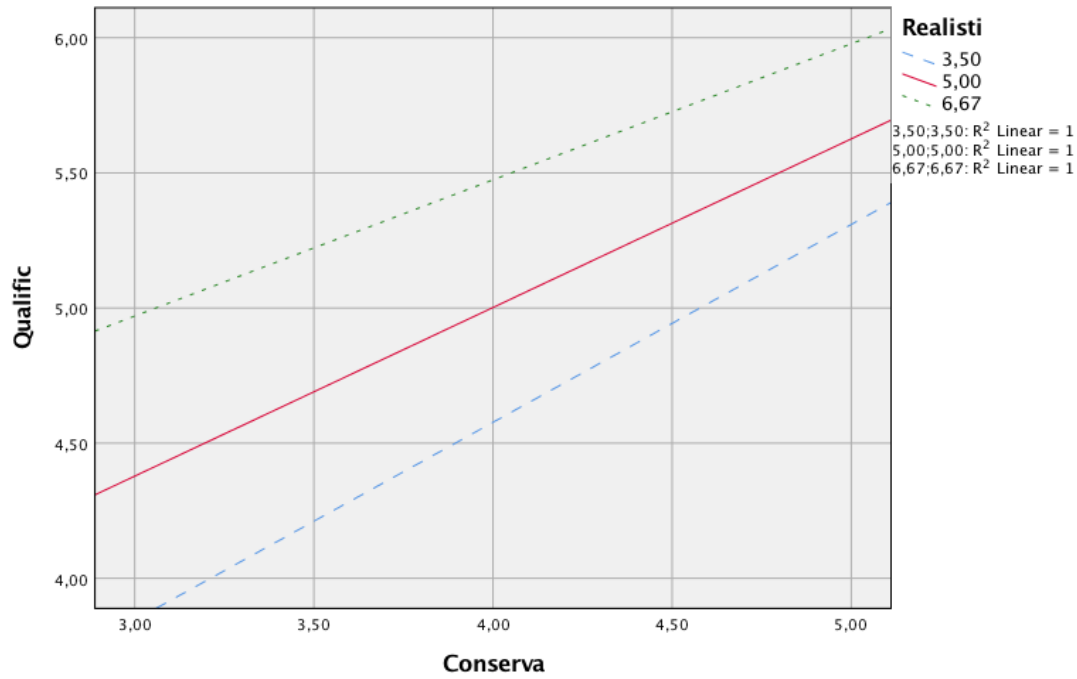
Realisti	Effect	se	t	p	LLCI	ULCI
3,5000	-,0508	,0886	-,5731	,5666	-,2246	,1230
5,0000	,0606	,0634	,9556	,3393	-,0637	,1849
6,6667	,1843	,0775	2,3773	,0175	,0323	,3364



Note. Conditional effects of simple slopes for RealisticThreatxSelfTranscendence for Social Trust

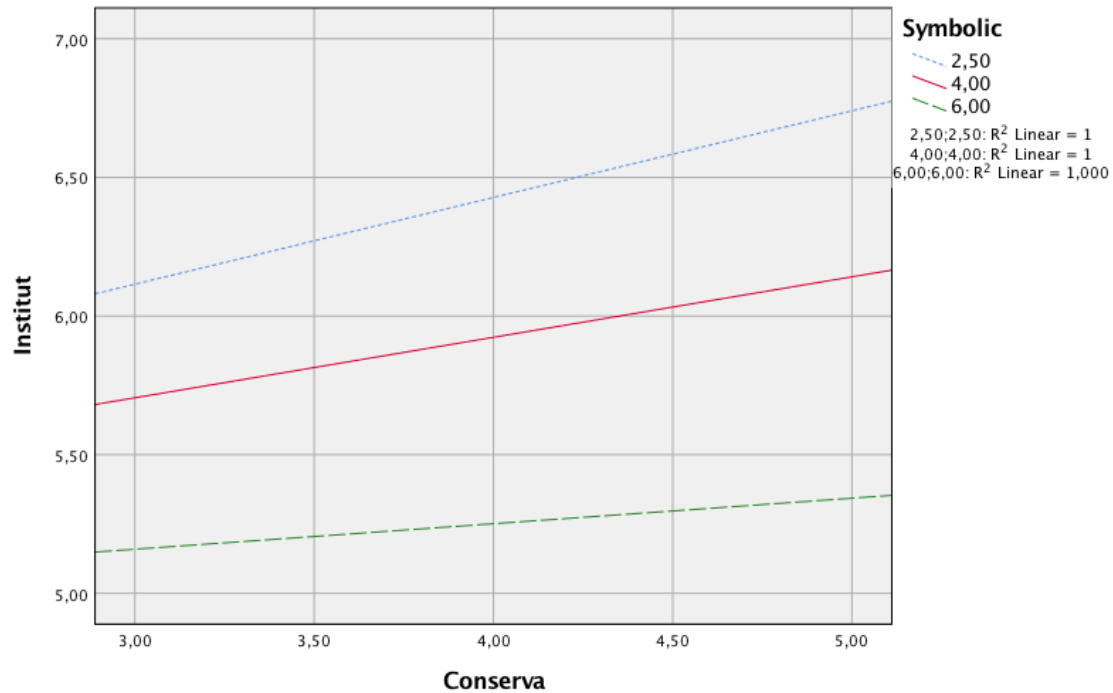
Realisti	Effect	se	t	p	LLCI	ULCI
3,5000	,4256	,0747	5,6991	,0000	,2792	,5720
5,0000	,3227	,0534	6,0444	,0000	,2180	,4273
6,6667	,2083	,0653	3,1918	,0014	,0803	,3363

# THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY



Note. Conditional effects of simple slopes for RealisticThreatxConservation for Qualification entry/exclusion.

Realisti	Effect	se	t	p	LLCI	ULCI
3,5000	,7321	,0457	16,0283	,0000	,6425	,8216
5,0000	,6239	,0351	17,7684	,0000	,5550	,6927
6,6667	,5037	,0502	10,0349	,0000	,4052	,6021

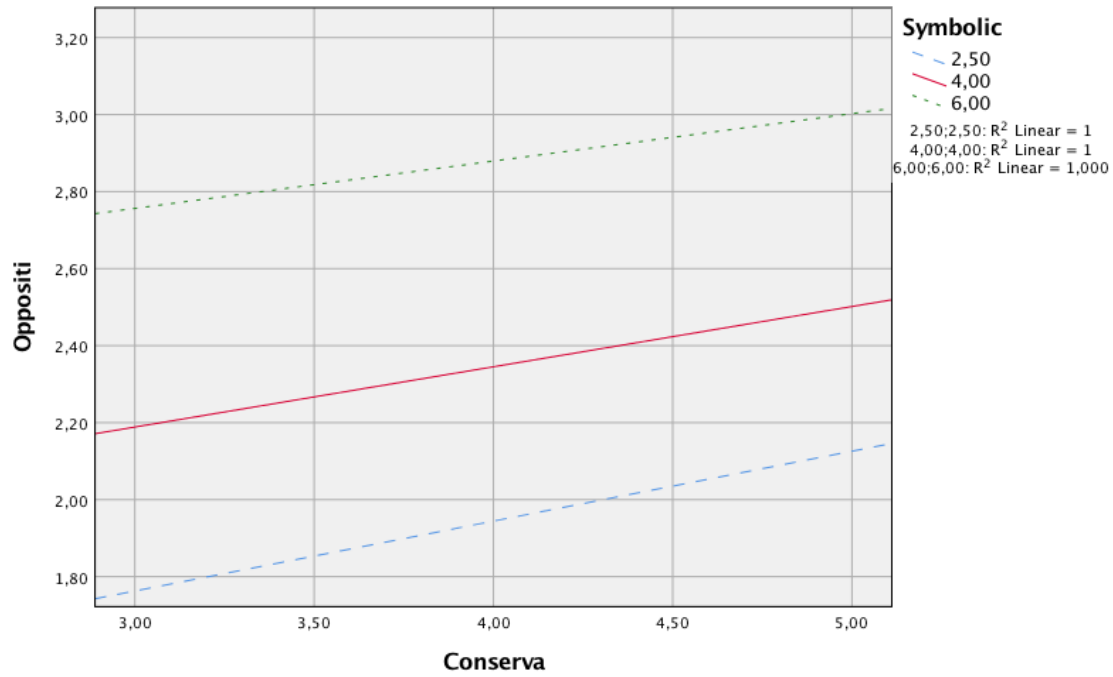


Note. Conditional effects of simple slopes for SymbolicThreatxConservation for Institutional Trust.

Symbolic	Effect	se	t	p	LLCI	ULCI
2,5000	,3128	,0557	5,6156	,0000	,2036	,4220
4,0000	,2182	,0441	4,9437	,0000	,1316	,3047
6,0000	,0920	,0590	1,5594	,1190	-,0237	,2078

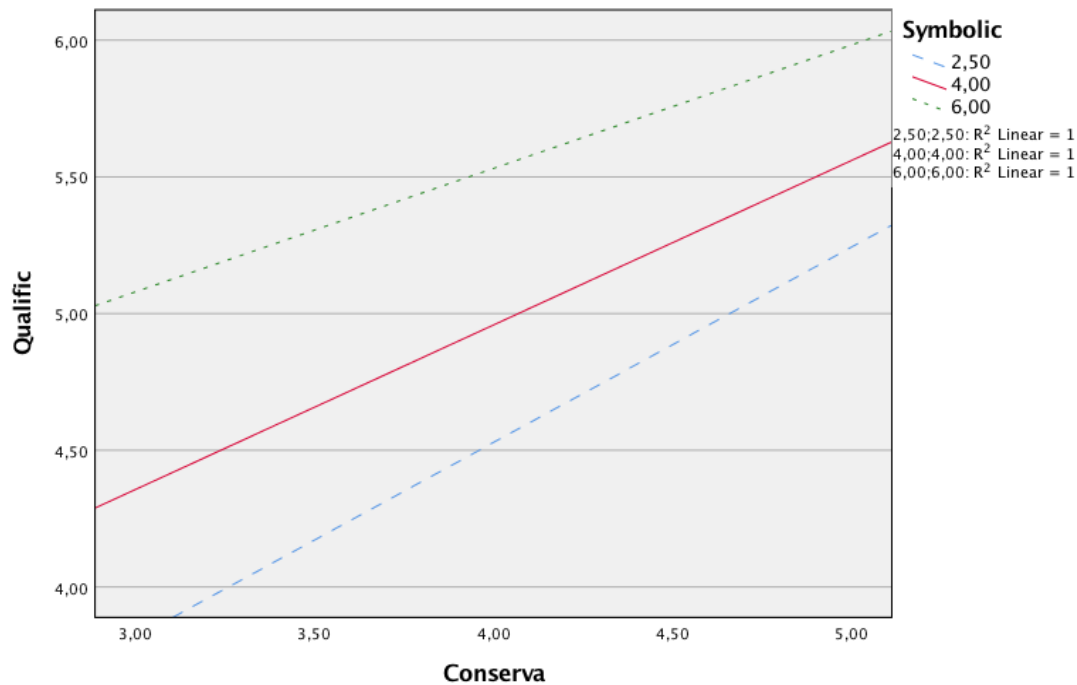


# THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY



Note. Conditional effects of simple slopes for SymbolicThreatxConservation for Opposition towards Immigrants.

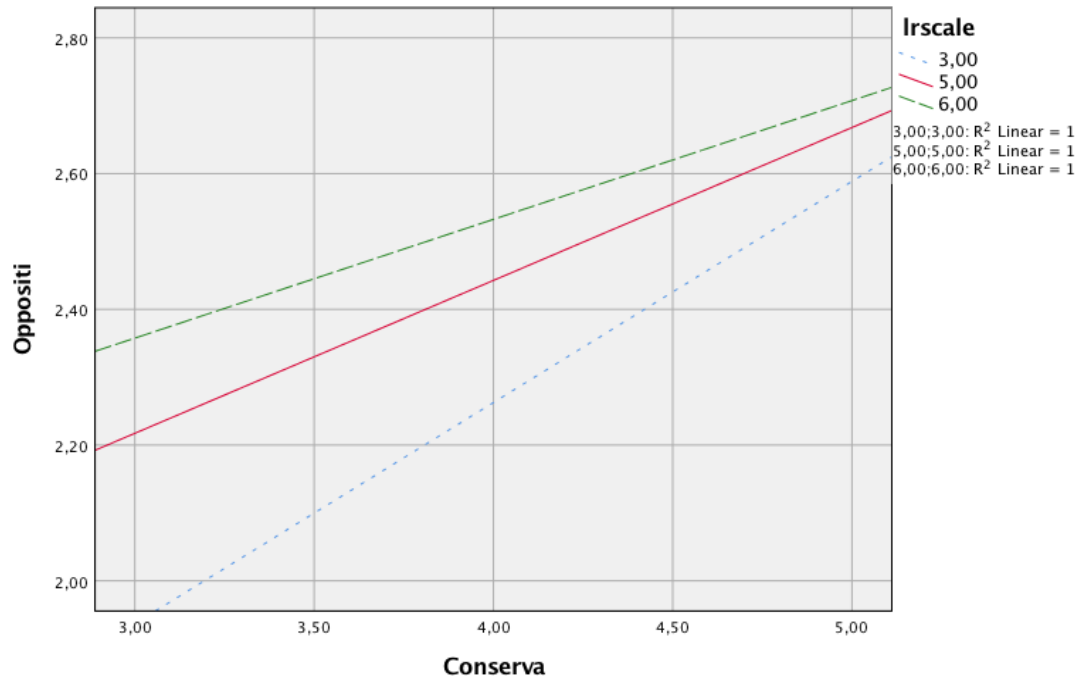
Symbolic	Effect	se	t	p	LLCI	ULCI
2,5000	,1816	,0172	10,5584	,0000	,1479	,2154
4,0000	,1565	,0136	11,4857	,0000	,1298	,1832
6,0000	,1230	,0182	6,7528	,0000	,0873	,1587



Note. Conditional effects of simple slopes for SymbolicThreatxConservation for Qualification for entry/exclusion.

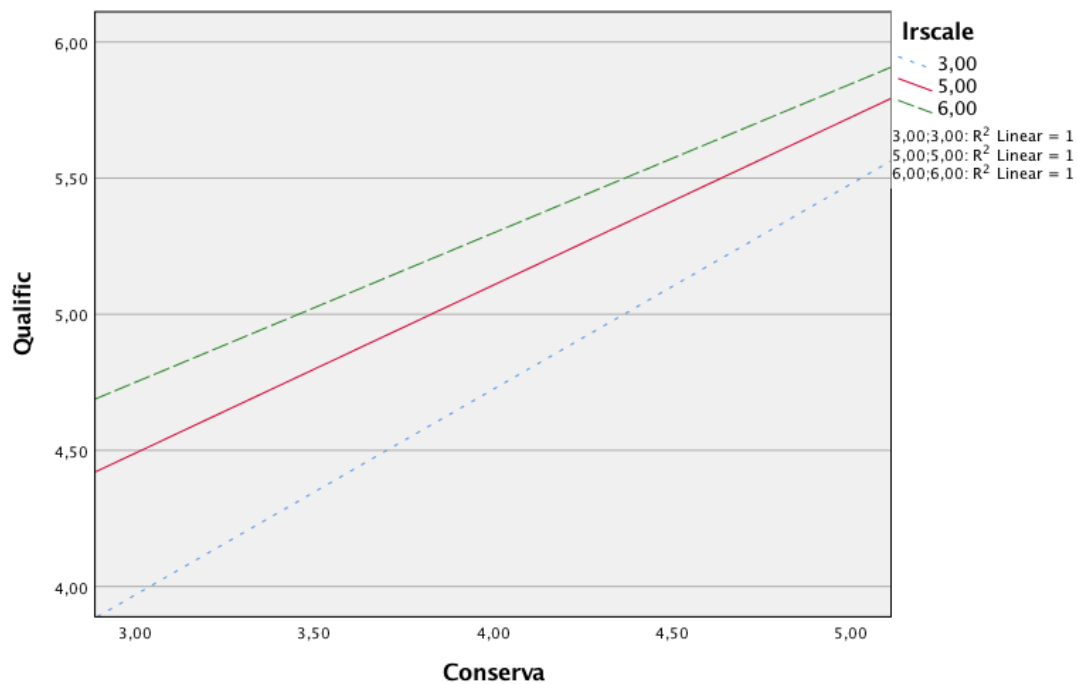
Symbolic	Effect	se	t	p	LLCI	ULCI
2,5000	,7155	,0434	16,4765	,0000	,6303	,8006
4,0000	,6026	,0344	17,5213	,0000	,5352	,6701
6,0000	,4522	,0460	9,8244	,0000	,3619	,5425

# THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY



Note. Conditional effects of simple slopes for IrscalexConservation for Opposition towards Immigrants.

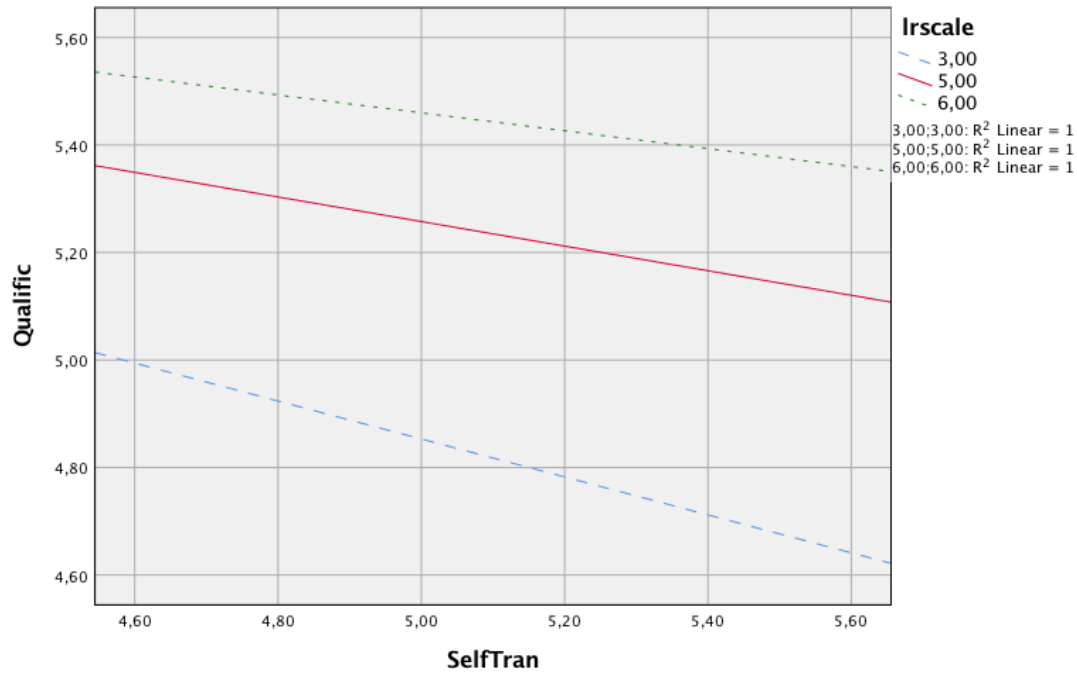
Irscale	Effect	se	t	p	LLCI	ULCI
3,0000	,3258	,0210	15,5354	,0000	,2847	,3670
5,0000	,2253	,0189	11,9161	,0000	,1882	,2624
6,0000	,1750	,0233	7,5165	,0000	,1294	,2207



Note. Conditional effects of simple slopes for IrscalexConservation for Qualification for entry/exclusion.

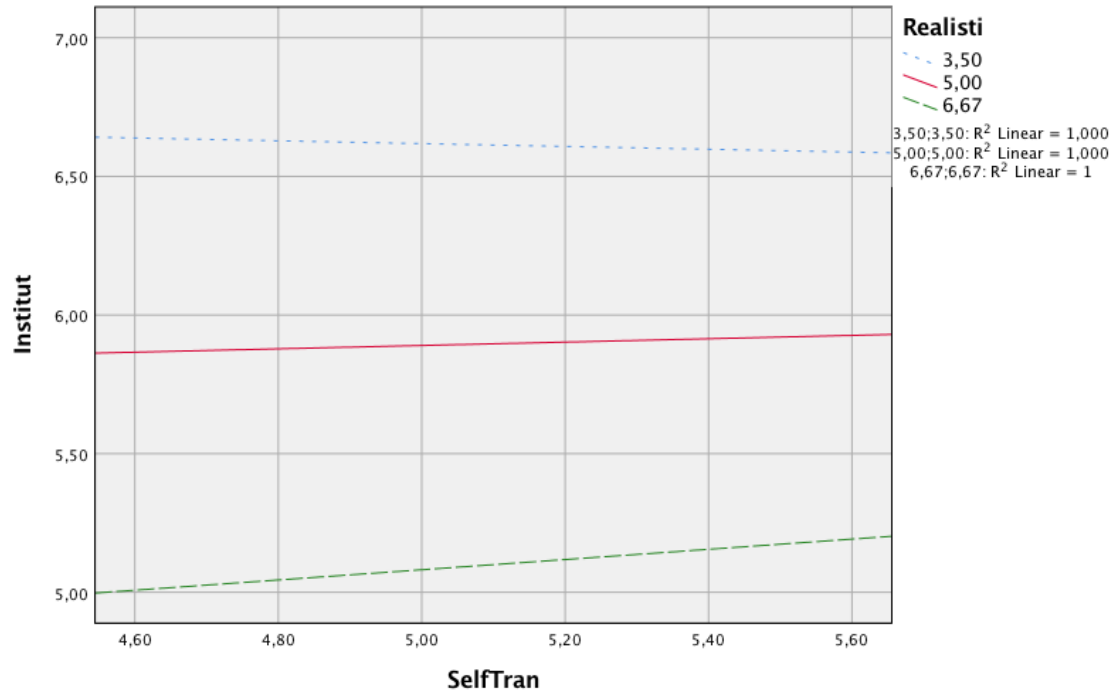
Irscale	Effect	se	t	p	LLCI	ULCI
3,0000	,7556	,0424	17,8245	,0000	,6725	,8387
5,0000	,6177	,0382	16,1655	,0000	,5428	,6927
6,0000	,5488	,0471	11,6613	,0000	,4565	,6411

# THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY



Note. Conditional effects of simple slopes for IrscalexSelfTranscendence for Qualification for entry/exclusion.

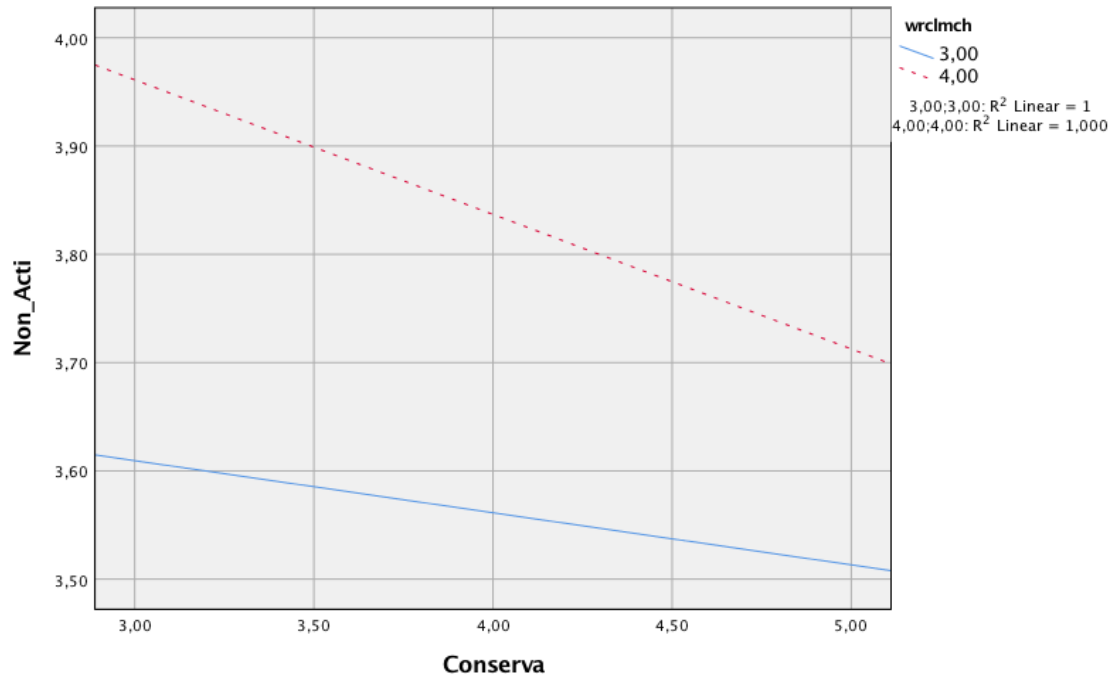
Irscale	Effect	se	t	p	LLCI	ULCI
3,0000	-,3529	,0693	-5,0918	,0000	-,4888	-,2170
5,0000	-,2288	,0570	-4,0119	,0001	-,3406	-,1170
6,0000	-,1667	,0677	-2,4604	,0139	-,2995	-,0338



Note. Conditional effects of simple slopes for RealisticThreatxSelfTranscendence for Institutional Trust.

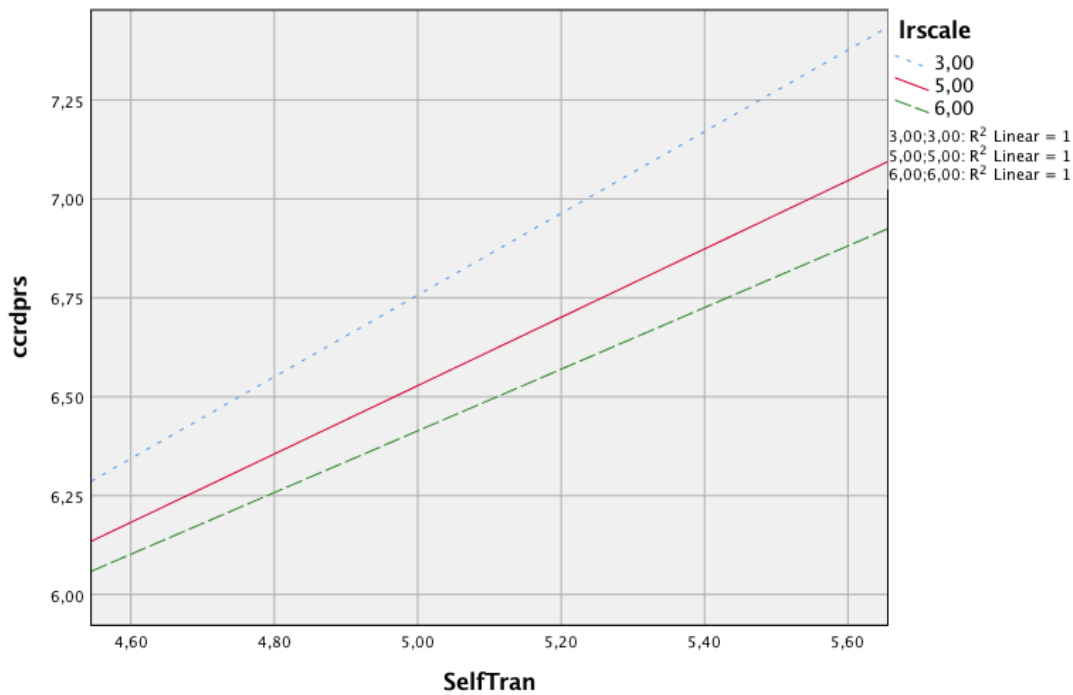
Realisti	Effect	se	t	p	LLCI	ULCI
3,5000	-,0508	,0886	-,5731	,5666	-,2246	,1230
5,0000	,0606	,0634	,9556	,3393	-,0637	,1849
6,6667	,1843	,0775	2,3773	,0175	,0323	,3364

# THE MODERATING ROLE OF CHALLENGE/THREAT AND POLITICAL IDEOLOGY



Note. Conditional effects of simple slopes for WrilmchxConservation for Non-Activist Behaviors.

wrilmch	Effect	se	t	p	LLCI	ULCI
3,0000	-,0481	,0187	-2,5772	,0100	-,0847	-,0115
3,0000	-,0481	,0187	-2,5772	,0100	-,0847	-,0115
4,0000	-,1243	,0197	-6,3199	,0000	-,1628	-,0857



Note. Conditional effects of simple slopes for LrscalexSelfTranscendence for Pro-Environmental Personal Norms.

lrscale	Effect	se	t	p	LLCI	ULCI
3,0000	1,0331	,0937	11,0208	,0000	,8493	1,2170
5,0000	,8641	,0782	11,0564	,0000	,7108	1,0173
6,0000	,7796	,0958	8,1380	,0000	,5917	,9674

