The Impact of Perceived Relative Deprivation and Emotions on Populism

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By

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In the memory of my beloved parents,

Lidia Yarilova and Ivan Lytkin

Executive Summary

The thesis revisits the relationship between perceptions of relative deprivation and populism. In contrast to existing literature, it is argued that emotions play a crucial role in activating populist support among people facing instances of relative deprivation. So far, research on emotions and populism has been predominantly devoted to the role of anger and fear. The thesis offers a systematic account of emotional reactions which are caused by instances of relative deprivation and which may affect populist outcomes. Appraisal theories of emotions are used to predict which emotions people facing instances of relative deprivation are likely to feel, how these emotions may affect populist outcomes, and how personality traits may affect the way people react to situations of relative deprivation.

To answer the research questions, firstly, three experimental studies were conducted in the UK in 2019 and 2020. The studies test for a causal relationship between the perceptions of relative deprivation, emotions, and populism, employing three different contexts: economic injustice, cultural threat, and existential threat caused by the coronavirus pandemic. In addition, it is tested how people with different political views may react to instances of relative deprivation. Second, data of the ESS study, Round 9 (2018-2021) is used to test whether the association between perceptions of relative deprivation and populist voting is universal among 23 European countries. Third, data of the LISSS-panel representative of the Netherlands, which was conducted before the second wave of the coronavirus pandemic, is used to revisit whether concerns about COVID-19 and emotional reactions relate to preference for the populist right.

In the thesis, it is shown that negative affect plays a key role in the activation of populist support among people facing instances of relative deprivation, whereas the direct effect of perceptions of relative deprivation on populism is weak to non-existent. People facing an instance of relative deprivation are likely to adopt a populist mindset due to

emotional reactions only in case the message containing an instance of relative deprivation is congruent with their views. In different contexts, different emotions mediated the relationship between perceptions of relative deprivation and populist outcomes, but emotions were highly correlated and different negative emotions enhanced populist outcomes. Furthermore, different components of populist attitudes, which account for the acceptance of populist ideas, were differently affected by perceptions of relative deprivation and emotions. At the end of the thesis, a design for a subsequent study is proposed, which digs into the role of selected emotional appraisals and tests how particular personality characteristics affect these appraisals. The thesis is concluded with implications for theory, methods, policy implications, and directions for future research.

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List of Abbreviations

UK – United Kingdom

US – United States

EU – European Union

ESS – European Social Survey

EVS – European Values Study

LISS – Longitudinal Internet studies for the Social Sciences

PRD – perceptions of relative deprivation

PRD – perceptions of relative deprivation

EcRD – perceptions of economic relative deprivation

ORD – perceptions of occupational relative deprivation

EdRD – perceptions of educational relative deprivation

GDP PPP – Gross Domestic Product

PFCP – problem-focused coping potential (appraisal)

EFCP – emotion-focused coping potential (appraisal)

OLS – Ordinary least squares

GLS – Generalized least squares

SAM – the Self-Assessment Manikin (measure of emotions)

WHO – the World Health Organization

COVID-19 – a highly contagious coronavirus disease caused by the SARS-CoV-2 virus and called by the WHO a pandemic

AfD – Alternative für Deutschland

UKIP – United Kingdom Independence Party

PvD – Forum voor Democratie

PVV – Partij voor de Vrijheid

Brexit – Referenduum on the EU membership in the UK in 2016

CHAPTER 1. GENERAL INTRODUCTION

1. General Introduction: Addressing the role of perceptions of relative deprivation and emotions in inducing populist support

1.1. Populist support increasing

Populism has become one of the major problems in political and social life. It resulted in many national and international crises around the world. One of the key events caused by populism was Brexit in 2016 (e.g., Inglehart & Norris, 2017), when the scarce majority of UK citizens voted to leave the European Union. The rise of populism resulted in the election of Trump as president of the USA. Another prominent example was the Capitol attack in the USA on January 6, 2021, when the supporters of Trump wanted him to remain in power after he lost the elections.

Populist support is reflected in electoral results. In the world, from 1991 to 2020, the number of populists in power increased five times: only four countries were ruled by populist leaders in 1991, and 19 were ruled by populists at the beginning of 2020 (Kyle & Meyer, 2020). In Europe, in 2000, 8.5% of people voted populist, whereas in 2017, the share of populist votes was 24.1%; the number of populist parties doubled from 33 in 2000 to 63 in 2017, while the number of countries with populist participation in government increased from seven in 2000 to 14 in 2017 (Eiermann, Mounk, & Gultchin, 2017). During the COVID-19 pandemic, populist support has somewhat decreased (Foa, 2022). However, this decrease predominantly occurred in South and North America, and populism remained strong in Europe (Meyer, 2023).

Populism creates multiple threats to society. It endangers social diversity by claiming that populists directly represent the will of the people and by excluding outgroups, such as migrants and refugees (Abts & Rummens, 2007). It destroys the system of checks and balances within democracies and degrades political norms (Meyer, 2023). Populists aim at limiting the rights of their political opponents, they question the protection of minorities (such

as migrants and refugees), try to abolish affirmative policies, and cause violence (Kyle &

Meyer, 2020).

The rise of populism has been linked to different causes, such as globalization (Kriesi et al.,

2006; Manow, 2021, 2018), the economic crisis of 2008 and the refugee crisis of 2015 (e.g.,

Lehmann & Zehnter, 2022; Rhodes-Purdy, Navarre, & Utych, 2021), growing economic

inequality and labor market precarity (Gidron & Hall, 2017; Inglehart & Norris, 2016, 2017)

or value change and reaction to it (Inglehart & Norris, 2016, 2017, Norris & Ingelart, 2019).

Efforts have been made to find what a typical populist voter is like in terms of socio-

demographic variables (e.g., Rooduijn, 2018; Sipma, Lubbers, & Spierings, 2022), values

(Inglehart & Norris, 2016, 2017, Norris & Inglehart, 2019), personality traits (Bakker,

Rooduijn, & Schumacher, 2016), in regard to justice sensitivity beliefs (Rothmund et al.,

2020), external (Geurkink et al., 2021) and internal political efficacy (Rico et al., 2020;

Magni, 2017), different attitudes such as trust in political institutions (e.g., Geurkink et al.,

2021; Algan et al., 2017; Akkerman, Zaslove, & Spruyt, 2017), collective narcissism

(Marchlewska et al., 2018; Manunta et al., 2022), anomie (Spruyt, Keppens, & Van

Droogenbroeck, 2016; Manunta et al., 2022), or emotions (Salmela & von Scheve, 2017,

2018).

A number of authors tested whether economic disadvantage in objective terms could activate

the populist outlook: belonging to the working class (Sipma et al., 2022), lower income and

education levels (Hawkins, Riding, & Mudde, 2012; Inglehart & Norris, 2016), being

unemployed in precarious and unskilled jobs (Rooduijn, 2018; Inglehart & Norris, 2016).

These assumptions found only partial empirical support, especially, when those voting for the

populist left and populist right were compared (Rooduijn, 2018; Sipma et al., 2022, but cf.,

e.g., Algan et al., 2017 on unemployment). A number of authors, including Pettigrew (2017),

Elchardus and Spruyt (2016), and Urbanska and Guimond (2018), suggested that not the

objective but the subjective deprivation – perceptions that an individual or the ingroup is

disadvantaged compared to another individual or outgroup due to a process that is perceived as unjust – can explain populist support.

In the PhD thesis, I focus on the role of perceptions of relative deprivation as one of possible explanations of populism. Even though the role of perceptions of relative deprivation has been addressed in a number of contributions (e.g., Urbanska & Guimond, 2018; Spruyt et al., 2016; Elchardus and Spruyt, 2016; Lüders et al., 2021), our theoretical understanding of whether perceptions of relative deprivation enhance populist outcomes, how this process functions, and its empirical testing is still insufficient. Here, I assume that emotions play a key role in driving populist support among deprived people. In contrast to existing literature, I concentrate on different layers of emotional experience and address larger emotional scales than anger and fear. I suggest that people experience instances of relative deprivation differently given their ideology, while their appraisals may be affected by self-efficacy beliefs and justice sensitivity beliefs.

In the sections to follow, I introduce the key concepts and theories used in the thesis, the research gap and contribution of this PhD thesis, followed by the research objectives. I then give an overview of the separate chapters. I conclude by presenting the research methodology of the thesis: case and data selection, method, and measures.

1.2. Key concepts and theories

1.2.1. Populism

Together with the rise of populist support, research on populism and the usage of the concept of populism in mass media have significantly increased (Kriesi, 2018). Populism is defined as an ideology, political strategy, strategy of political communication, and "project of political renewal" (Kriesi, 2018, p. 6). In the thesis, I follow the ideational approach to populism. According to it, populism is defined through a "unique set of ideas" (Hawkins & Rovira Kaltwasser, 2018) and is seen as an ideology without "'the same level of intellectual refinement and consistency' as, for example, socialism and liberalism" (Mudde, 2004, p.

544). The most well-known definition of populism within this approach was formulated by Mudde[1]:

> I define populism as an ideology that considers the society to be ultimately separated into two homogenous and antagonistic groups, 'the pure people' versus 'the corrupt elite', and which argues that politics should be an expression of the volonté générale (general will) of the people (2004, p. 543).

Mudde (2004) argues that populism is opposed to elitism and pluralism. Both populism and elitism hold a Manichean opposition between the elites and the people: populism claims that politics should follow the will of the morally superior people, while elitism holds morally superior elites for legitimate governors. While pluralism considers the society to be a "heterogeneous collection of groups and individuals with often fundamentally different views and wishes" (Mudde, 2004, p. 544), populism views both the people and the elites as homogeneous. Mudde (2004) stressed the key importance of the category of 'the people' for populism: the category of 'the elites' is created through the opposition to 'the people'. Mudde & Rovira Kaltwasser (2013) argued that in order to be defined as populist, all the constituent parts of the populism core should be present: the pure people, the corrupt elites, and the popular will of the people (see also Hawkins & Rovira Kaltwasser, 2018). Still, the interpretations of what the core of populism consists of are different, even within the ideational approach to populism. Hawkins and Rovira Kaltwasser (2018) advocated that the core of populism consists of "a Manichean and moral cosmology,… the proclamation of 'the people' as a homogenous and virtuous community, and … the depiction of 'the elite' as a corrupt and self-serving entity" (p. 3). Other authors include somewhat different concepts, just to name a few: sovereignty of the people, the opposition of people to the elite, and the Manichean division between the good people and the bad elites (Akkerman, Mudde, &

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[1] Several authors proposed similar definitions to those of Mudde (for an overview, see Kriesi, 2018, p.6).

Zaslove, 2014), people-centrism, anti-elitism, and unrestricted popular sovereignty (Kriesi, 2018), anti-elitism, popular sovereignty, and homogeneity of the people (Schulz et al., 2018). While the opposition between the elites and the people is included in all of these definitions of the populism core, some view homogeneity as a separate component of populism, while other scholars view is as an implicit characteristic of the category of "the people" (e.g., Hawkins & Rovira Kaltwasser, 2018). While some stress the importance of popular sovereignty (e.g., Mudde, 2004; Schulz et al., 2018), others do not include it in the populism core and its operationalization (Castanho Silva et al., 2020).

Two additional important aspects in relation to the concept of populism should be mentioned. First, since the core of populism has a chameleonic character (Mudde & Rovira Kaltwasser, 2013), it can be combined with other so-called "host" ideologies, which can be, for instance, left or right-wing (Mudde, 2004, Mudde & Rovira Kaltwasser, 2013). Which ideological shape populism takes depends on the grievances existing in a society (Hawkins & Rovira Kaltwasser, 2018).

Second, populism includes a normative distinction between the vicious elites and the virtue people (e.g., Mudde, 2004). As Müller (2016) writes:

> Populism … is a particular moralistic imagination of politics, a way of perceiving the political world that sets a morally pure and fully unified but … ultimately fictional – people against elite who are deemed corrupt or in some other way morally inferior (pp. 19-20).

Populists view their competitors as a part of the immoral elite. People are portrayed as innocent and hardworking and are opposed to the elites, who only work in their interests or parasite on the work of others (Müller, 2016).

It is important to note that the ideational approach, which accounts for the chameleonic character of populism, is beneficial for several reasons. It travels well across different ideologies (Akkerman et al., 2014) and allows researchers to identify subtypes of populism

based on how the key categories of populism, "the people" and "the elites", are defined (Mudde & Rovira Kaltwasser, 2013). The concept of populism also travels well across geographical regions (Akkerman et al., 2014) and has been applied in empirical research in different societies (Mudde & Rovira Kaltwasser, 2013). It is especially beneficial when studying populist attitudes. In contrast, the approach of populism as a political strategy works better for populists from Latin America and not Europe, whereas the approach to populism as a discursive style implies that different political actors may employ populist rhetoric, so it does not allow to capture the populist core (Huber & Schimpf, 2016).

Host ideology of populism. Different authors present different classifications of populist parties based on their host ideology. Mudde and Rovira Kaltwasser (2013) differentiate between *inclusionary* and *exclusionary* populism based on the material (distribution of resources such as welfare and jobs), political (who should participate in politics and be represented), and symbolic dimensions (who is included in the category of 'the good people' and who is excluded from 'the virtue people' and linked to 'the vicious elite'). They suggest that in Europe, populism is predominantly exclusionary to non-native populations on the sociocultural dimension, whereas in Latin America, it is predominantly inclusive to the poor on the socioeconomic dimension. Mudde and Rovira Kaltwasser (2011) list three characteristics differentiating between the left and right-wing populism: (1) left-wing populism is predominantly inclusionary, while right-wing populism is exclusionary, (2) left-wing populism concentrates on socio-economic problems, such as egalitarianism, and right-wing populism is focused on ethnic identity, (3) the populist component plays a primary role for the populist left but not for the populist right. Upon a discourse analysis of radical left and radical right parties contrasted to incumbents on the political left and right in the UK, March (2017) found empirical support only for the first two characteristics. Host ideology (being on the political left or on the right) was more important than the populist components in explaining left- and right-wing populism. On the contrary, the populist component played a

higher role for the populist right. March (2017) explains the finding by the fact that Mudde

and Rovira Kaltwasser (2011) studied left-wing populism in Latin America, where the

populist component plays a more important role than in Europe.

Moreover, it was suggested that left-wing populism attacks ruling elites, while right-wing

populism attacks elites and out-groups (Judis, 2016, as cited in March 2017). It is crucial at

the conceptual level to differentiate between populism and nativism: while for populism the

outgroup consists of elites, for nativism these are migrants or other minorities (see Rooduijn,

2019; Mudde, 2004).

Right-wing populism addresses cultural issues (e.g., Vachudova, 2021; Kriesi et al., 2006).

According to Mudde (2007; see also Wondreys & Mudde, 2022) right-wing populism consists

of nativism, authoritarianism, and populism. While Mudde's (2004) definition of populism

was already presented (as anti-elitism, anti-pluralism, and dominance of the popular will of

the people), other terms need explanation. Nativism stands for a 'xenophobic form of

nationalism, which wants states to be inhabited exclusively by "natives" and considers "non-

natives" or "aliens" as a threat to the nation state' (Wondreys & Mudde, 2022, p. 87).

Authoritarianism advocates that the strong state should control the society (Mudde, 2007;

Wondreys & Mudde, 2022). Right-wing populism strives for a "congruence of the political

unit (the state) and the cultural unit (the nation)" (Rooduijn et al., 2017, p. 538). In their

discourse, populist right parties view the elites, which support immigration, multiculturalism,

integration, the rights of LGBTQ+, and promote progressive social values, as enemies

(Vachudova, 2021).

Left-wing populism addresses socio-economic issues (e.g., Vachudova, 2021; Kriesi et al.,

2006). It claims that the political elite neglects the interests of the people in favor of business

elites (Otjes & Louwerse, 2015) and global capitalism (Vachudova, 2021). Radical left

parties[2] "reject the underlying socio-economic structures, values, and practices of contemporary capitalism…, advocate 'root and branch' transformation of capitalism in order to take power from existing political and economic elites" (March & Rommerskirchen, 2015, p. 41). They are left because they (1) focus on economic inequalities as foundations of political and social arrangements and advocate for social and economic rights, (2) the anti-capitalist component plays a more important role in their rhetoric than the anti-establishment component, (3) they have an international character and network, and attribute the existing social and political problems to global causes (March, 2011, p. 8-9, March & Rommerskirchen, 2015). Populists on the left aim at the promotion of people's rights and well-being in the face of neoliberal economics and inequality. They not only score high on green, alternative, and libertarian values but also want to include minorities, such as ethnic minorities, migrants, and refugees, in the society (Vachudova, 2021).

However, there are also other left-wing and right-wing populist parties. Rooduijn et al. (2019) differentiated between the far left, far right, and Eurosceptic populist parties. Zulianello (2020) proposed the concept of "valence" parties, which predominantly focus "on non-positional issues such as the fight against corruption, increased transparency, democratic reform and moral integrity, while emphasizing anti-establishment motives" (Zulianello, 2020, p. 329). Vachudova (2021) argued that populist parties in the center are rare, and it is contested whether they are populist (p. 475).

1.2.1.1. Societal grievances, populist support, and populist attitudes

According to Kriesi et al. (2006), the increase in globalization enhanced economic, cultural, and political competitions, creating the groups of "loser" and "winners" of globalization. The *winners* of globalization are entrepreneurs, qualified workers, and cosmopolitan citizens,

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[2] Radical and populist parties are not always equivalent to each other. March (2017) treated populist left parties as subtypes of radical left parties (p. 284). Rooduijn et al. (2017) wrote that radical right and radical left parties are often populist (see p. 537, p. 539). Still, Rooduijn et al. (2019) differentiated between populist and radical right parties in their classification. On the contrary, Otjes and Louwerse (2015) treated radical and populist parties as the same (p.62).

while the *losers* are those working in state-protected sectors, unqualified workers, and people with a strong national identity. According to Kriesi et al. (2006), the new political cleavage of integration and demarcation, caused by globalization, is embedded in the economic and cultural political dimensions. Populist parties oppose integration and address the grievances of modernization losers: populist left parties address the grievances on the economic dimension (such as economic liberalization), while populist right parties address the grievances on the cultural dimension (such as migration, the economic and social competition it causes, as well as the threat to the national identity). Despite of the high popularity[3] and certain explanatory power of the hypothesis about "losers of globalization" (e.g., Teney, Lacewell, & De Wilde, 2014; Spruyt et al., 2016; Rooduijn, 2018; Santana & Rama, 2018), it could not account for contextual variations of populist parties in Europe (Manow, 2021), while the economic issues were found to be of importance not only for the populist left but also for the populist right (e.g., Gidron & Hall, 2017; Bernhard & Kriesi, 2019).

Manow (2021) suggested that populist parties in Europe address not only economic competition and cultural aspects but also access to welfare. Manow classified populism in Europe based on two questions: whether problems of political economy are caused by movements of capital and goods, or movements of labor across countries, and whether labor migrants (coming for jobs) or forced migrants (asylum seekers) create tension in a society. In *Northern political economies* (e.g., Sweden or Germany), forced migration, but not economic openness, is problematic. Since the welfare system is open to migrants, citizens protest against the competition for welfare with them, which results in support for right-wing populism. *Liberal/Western political economies* (e.g., UK, USA, or Canada) are open to the global economy and to labor migrants. Since citizens compete with migrants for jobs, right-

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[3] With more than 2000 citations on Google Scholar, as of 30.06.2023. Even more cited (2500 citations) was the book with a chapter devoted to the integration-demarcation cleavage: Kriesi, H; Grande, E; Lachat, R; Dolezal, M; Bornschier, Simon; Frey, T (2008). *West European politics in the age of globalization*. Cambridge, UK: Cambridge University Press.

wing populism has become widespread in these countries. *Southern political economies* (e.g., Greece, Italy, and Spain) are vulnerable to the openness of the economy and economic crises. Their welfare system is not strong and is inaccessible to migrants, while the legal labor market is closed to migrants. That makes left-wing populism attractive. The recent success of right-wing parties in southern economies, Manow attributed to "secondary migration", when migrants, instead of going to the northern political economies, remained in southern European countries. Lastly, in *Central and Eastern political economies* (e.g., Poland, Hungary, and Romania), political protest is not caused by economic or cultural strains but by large economic transformations that these countries underwent. This results in an increase in left- and right-wing populism (Manow, 2021).

There are some communalities between the supporters of populist left and populist right parties: they have a similar socio-economic background and share the same economic vulnerabilities but have a different level of education (higher level of education of populist left supporters) and hold different ideological views (Rooduijn et al., 2017). For the populist right voters, cultural concerns outweigh the economic ones, while for the populist left, economic concerns outweigh the cultural ones (Sipma et al., 2022). Rooduijn et al. (2017) found that for radical left voters, of particular importance are equality and its promotion, as well as altruist values. For populist right supporters, none of these values were of importance. While both radical right and radical left voters were concerned about the European Union, populist left voters shared cosmopolitan values, while voters for the populist right demonstrated a nativist worldview (Rooduijn et al., 2017).

While people may have different grievances, these grievances do not explain why people turn to populists instead of incumbent politicians. There is an agreement within the ideational approach to populism that people support populists foremost because they hold populist attitudes.

CHAPTER 1. GENERAL INTRODUCTION

Populist attitudes are defined as citizens' support for the core ideas of populism (Schulz et al., 2020). Hawkins and Rovira Kaltwasser (2018) wrote that the ideational approach to populism does not directly translate into acts but refers to "ideas, actions, and agents, with the understanding that the latter only count as populist if they come packed in populist ideas" (Hawkins & Rovira Kaltwasser, 2018, p. 5). They view populist attitudes as an agreement with "populist statements about the nature of the people, the elite, and the fundamental conflict between them" (Hawkins & Rovira Kaltwasser, 2018, p. 7). Populist attitudes serve as a disposition or a latent demand that is activated by a context or through framing. Only if there are politicians who embody populist ideas, coordinate actions, and hold the same views as the people, populist attitudes may result in voting behavior (Hawkins & Rovira Kaltwasser, 2018).

There is empirical evidence that populist attitudes translate into populist support (van Hauwaert & van Kessel, 2018; Akkerman et al., 2014; but cf. Stanley, 2011). However, the association between different indicators of populism – such as populist attitudes, voting intentions for populist parties, and identification with populist parties – is not always straightforward. Van Hauwaert and van Kessel (2018) used data from nine European countries and found that agreement with populist attitudes was particularly high among supporters of populist parties and that populist attitudes predicted support for populist left and right parties. Moreover, populist attitudes could make people support populist parties even if the party positions on other issues did not match the views of the voters. However, people holding more extreme positions on economic and cultural issues were less likely to support populist parties (van Hauwaert & van Kessel, 2018). Akkerman et al. (2014) found that despite a significant correlation between populist attitudes and voting intention for populist left and populist right parties in the Netherlands, voters of populist left parties endorsed pluralist attitudes, while supporters of the populist right opposed pluralism. Castahno Silva et al. (2020) showed in a cross-country study that different populist scales could predict

identification with populist parties differently and demonstrated that majority of populist attitudes scales failed to predict support for populist parties in government. They suggested that the majority of scales of populist attitudes can better capture anti-establishment attitudes.

1.2.1.2. Populism and democracy

Populism is, as already mentioned, a threat to democracy, which is already embedded in its core. First, the category of the people, which is a part of the populism core, is fictional since in reality, societies are not monolithic but pluralistic (Kriesi, 2018; Müller, 2016). This fictitious image of "people-as-one" is typical not only for populism but also for totalitarianism (Abts & Rummens, 2007). This category is formulated in such a way that it is illiberal, since it excludes those who do not belong to the people (Kriesi, 2018). Populists present 'the people' as the majority of society and exclude their political opponents as not belonging to the people; when in power, populists delegitimize the opposition by treating it as enemies of the people (Müller, 2016). The populist right uses exclusive rhetoric and actions in relation to outgroups and, when in power, may adopt policies excluding particular social groups from political and symbolic representation, welfare benefits, and jobs (Huber & Schimpf, 2016; Mudde & Rovira Kaltwasser, 2013).

Second, the category of popular sovereignty, which is a part of the populist core, is problematic. The source of popular sovereignty is predetermined by belongingness to the ingroup of 'the people' (Kriesi, 2018). Müller (2016) notes that the popular representation endorsed by populists is different from the general will in terms of Rousseau (cf., Mudde, 2004): popular sovereignty comes not from the majority of the citizens but from Volksgeist, defined as a "conception of democracy in which "substance," "spirit," or, put more straightforwardly, "true identity" decides, and not the larger number [of people]" (Müller, 2016, p. 29). This threatens democracy, given that populist leaders do not need to justify their decisions and can attribute their failures to the will of the people (Müller, 2016). Populists acclaim the will of the people without aiming to provide the people with empowerment or

make them actively participate in politics (Abts & Rummens, 2007). In contrast, in a democracy, the will of the people should be mediated and should be constantly constructed through deliberative processes (Abts & Rummens, 2007). Populism calls for direct representation and is against intermediaries between the people and the authorities, which is again a threat to liberal democracy (Kriesi, 2018). Particularly, populist right parties use democratic backsliding (defined as the erosion of any democratic political institutions) in order to gain power (Vachudova, 2021). The populist claim for direct democracy is targeted against checks and balances, which are vital for a liberal democracy; instead, they make the hegemonic unity the source of the sovereign will (Kriesi, 2018).

Third, the anti-elitist component may also be problematic for democratic societies. While in new democracies, anti-establishment attitudes endorsed by the populist right may undermine the stability of the political system, in established democracies they may challenge the legitimacy of institutions (Huber & Schimpf, 2016).

In general, the populist ideology is rudimental in that it is vague and plastic and cannot per se provide answers to any political questions, which are addressed by the host ideology it is combined with (Kriesi, 2018). Other threats from populism to democracy relate to how populists act in power and in opposition. Populists in government use corruption and clientelism, in that they offer benefits and favors in exchange for political support (Müller, 2016). Populists have transformed the political landscape: they have increased political polarization, decreased the partisan attachments of the citizens to the incumbents, and made the mainstream parties move towards the extreme right (Vachudova, 2021). Populist right parties spread misinformation (Vachudova, 2021) and conspiracy theories, attack mass media, scientific experts, and intellectual elites (Inglehart & Norris, 2016). They erode political norms by expressing views that were previously under taboo and oppose political correctness (Mudde, 2004).

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During the coronavirus pandemic, the US populist president Trump and the Brazilian
president Bolsonaro neglected or minimized the threat caused by the virus (Wondreys &
Mudde, 2022) and spread misinformation about it (van der Linden, Roozenbeek, & Compton,
2020; van Aelst, 2021). In their turn, Trump supporters did not follow social distancing
necessary to stop the spread of the virus (Graham et al., 2020) and trusted misinformation
about the pandemic (Granados Samayoa et al., 2021). Foa et al. (2022) argue that populists
were less efficient in handling COVID-19: the approval of governments led by populists was
lower than that of those governed by incumbents. Bayerlein et al., (2021) found that
contamination and death tolls were higher in countries ruled by populist leaders. On the
contrary, Wondreys & Mudde (2022) suggest that there was no uniform pattern among
populist governments in handling the pandemic (see also Stavrakakis & Katsampekis, 2020)
and the majority of populist right-wing politicians in Europe acknowledged the danger of the
virus (Wondreys & Mudde, 2022).

However, populism can also serve as a corrective to democracy (Huber & Schimpf, 2016;
Abts & Rummens, 2007). It represents some groups that were previously marginalized and
excluded (Abts & Rummens, 2007); from economically disadvantaged native population to
anti-vaxxers and people endorsing conspiracy theories. Moreover, populism starts a discourse
on how a democracy should work, makes democratic and institutional problems transparent
and raises awareness about them, addresses issues that have not been present in the political
discourse, and brings diverse social groups together in the face of a common interest (Huber
& Schimpf, 2016[4]; see also Kyle & Meyer, 2020); they can increase voting and civic
participation (Vachudova, 2021).

Huber and Schimpf (2016) note that a positive role is played by populists in the opposition
but not in government; even as a governmental minority, they threaten democracy. An

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[4] While Huber and Schimpf (2016) wrote about the populist right actors, most of these effects can be also spread
to the populist left. At the same time, the role of populist left in relation to liberal democracy still remains
understudied (Huber & Schimpf, 2016).

important distinction has to be made between the populist right and populist left: the improvement of representation, increased political participation, and inclusion of minorities are brought by populist left but not populist right parties (Vachudova, 2021).

1.2.3. Perceptions of relative deprivation

Different attempts have been made to explain what the typical populist supporters are like: white males from the working class without college education (e.g., Inglehart & Norris, 2017; Gidron & Hall, 2017), "losers of globalization", such as manual workers, unemployed, people with lower education, elderly and rural area dwellers (e.g., Santana & Rama, 2018). Still, the empirical support for these hypotheses is limited. In a study of 15 different populist parties in 11 countries in Western Europe, Rooduijn (2018) did not find any objective characteristics, such as unemployment, lower income, lower class origin, or lower education, uniting populist left and right voters. Santana and Rama (2018) found that young urban unemployed citizens with lower affluence were more likely to support populist left. Manual work and education did not relate to the preference for populist left over mainstream left parties (Santana & Rama, 2018). Sipma et al. (2021) revealed that the economic insecurity (measured as temporal employment) of the working class was positively related to voting for the radical left. Objective insecurity did not affect radical right voting but the perceived job insecurity, though with a small effect, predicted voting for the populist right.

Still, it is possible that the typical populist voter cannot be captured with objective socioeconomic measures, such as income or work precarity. Instead, populist voters are united by how they perceive their personal (as an individual) or social (as a social group) situation. Gidron and Hall (2017) advocated for an important role of the subjective social status. Spruyt et al. (2016), using a Belgian sample, showed that once anomie and perceptions of relative deprivation were included as predictors for populist attitudes, the effect of socio-demographic variables on populist attitudes disappeared. Pettigrew (2017) suggests that populist support is driven not by objective deprivation but by perceived deprivation relative to what people

"expected to possess at this point in their lives and relative to what they erroneously perceive other "less deserving" groups have acquired" (p. 111). In the thesis, I revise the role of perceptions of relative deprivation in explaining populism.

I use the model of relative deprivation perceptions proposed by Smith et al., (2012): individuals make social comparisons on a social dimension which is important for them; they feel themselves or their ingroup disadvantaged and feel that the process producing the disadvantaged condition is illegitimate. They do not hold themselves or the ingroup members responsible for their disadvantaged condition and perceive that the disadvantaged situation will not change without an external inference (Smith et al., 2012; Smith & Pettigrew, 2014). Perceptions of relative deprivation were found to enhance populist attitudes (Spruyt et al., 2016; Filsinger, 2023; Lüders et al., 2021; Manunta et al., 2022), voting intention for the separatist Scottish Nationalist Party (Abrams & Grant, 2012), the right-wing candidate Le Pen in the second round of presidential elections in France (Urbinska & Guimond, 2018), support for the US populist candidate Trump (Marchlewska et al., 2018), ethnic threat (Meuleman et al., 2020) and voting intention for any (left- and right-wing) populist party in France (Manunta et al., 2022).

Types of relative deprivation perceptions. Social comparisons can be performed on different dimensions, such as economic relative deprivation (Urbanska & Guimond, 2018) or occupational relative deprivation (Cena, Roccatom, & Russo, 2023). People can have different targets for social comparisons, such as citizens from the same country, migrants, or elites in power (Lüders et al., 2021). Moreover, social comparisons can be made at different levels. If a person makes social comparisons at the interpersonal level and feels that they are worse off compared to another person, they perceive *individual relative deprivation*. In cases where people compare their ingroup to a target outgroup, they perceive *group relative deprivation* (Smith et al., 2012; Urbanska & Guimond, 2018; see also Walker & Pettigrew, 1984). Perceptions of individual relative deprivation are expected to predict individual-level

outcomes, while perceptions of group relative deprivation are expected to predict group-level

outcomes (Smith et al., 2012). Additionally, as proposed by Smith et al. (2012), Manunta et

al. (2022) also studied perceptions of *temporal relative deprivation* (comparison of one's

current position with one's position in the past).

There is evidence that the perceptions of group relative deprivation better predict populist

outcomes than the perceptions of individual relative deprivation. Perceptions of group relative

deprivation predicted voting intentions for populists (Abrams & Grant, 2012; Urbinska &

Guimond, 2018), and support for the populist president Trump (Marchlewska et al., 2018).

Perceptions of group relative deprivation had a stronger positive association with populist

attitudes than perceptions of individual relative deprivation (Lüders et al., 2021). Given the

existing evidence, I do not aim to contribute to this strand of research in my PhD thesis.

While both perceptions of individual and group relative deprivation have been addressed in

populism research, no attention has been paid to the *perceptions of relative deprivation when*

third parties are disadvantaged. In this case, observers' own interests are not affected. We

encounter this type of relative deprivation perceptions more often than it may seem; we all

read newspaper articles where some individuals or social groups are portrayed as

disadvantaged compared with others, and we perceive it as unfair. I address this type of

deprivation as perceptions of *third-party relative deprivation*.

It was found that people react to injustice happening to others (Blader et al., 2013).

Individuals engage in a mentalizing process (which involves a mental representation of the

psychological state of another person) and imagine other people's emotions. The way people

perceive injustice happening to others is determined by "social emotions" – emotions that

capture the observer's (the person who observes injustice) feelings towards the target (the

person whom injustice happens to). If the observer feels such emotions as empathy towards

the target (or aligns with the target), they mirror the emotions which they expect the target to

feel. If the observer feels such emotions as "dyspathy" (indicating misalignment with the

target), they are likely to react in an opposite way to what they expect the target to feel (Blader et al., 2013).

Observing injustice translates into perceptions of relative deprivation in the following way: a person, for instance, reads in a newspaper about a disadvantaged situation happening to another person or people in comparison with an individual or an outgroup presented as less deserving. If the reader trusts the information read, the reader may perceive the situation as unfair and feel for the disadvantaged person or people. Feeling for another person can be explained by perceived similarity with the other(s), empathy the observer feels towards them, or the perception that the disadvantaged person or people are in need (e.g., Batson et al., 2005). The personal interests of the reader are not affected, but the reader is likely to perceive relative deprivation and mirror the emotional reactions of the targets.

In the thesis, I address the way people appraise a situation that causes disadvantage to a third party in comparison to another person or members of another group, and how these appraisals affect people's attitudes and behavior. If observers do not feel for disadvantaged targets, they will not perceive relative deprivation, which will not affect people's emotional reactions to instances of relative deprivation, their attitudes and behaviors.

Perceptions of relative deprivation and populism. Several explanations were proposed for how perceived relative deprivation activates populist support. These explanations can be put into three main groups. The first group supposes that people unsatisfied with their economic situation may be attracted by populist politicians who promise *to amend their disadvantaged material conditions*, which will enhance people's well-being and, via the improved economic situation, raise people's social status (Gidron & Hall, 2017). Economic issues are now also used by populist right parties; they have adopted policies previously typical of the political left, so that they also promise to provide people with jobs and social protection (Gidron & Hall, 2017; Vachudova, 2021). The first group of explanations seems especially helpful to explain why those deprived in objective terms (like working-class voters) may support

populists (but see Rooduijn, 2018). Moreover, it can explain support for left-wing parties, both populist and non-populist.

The second group of explanations encloses strategies for managing negative social identities. Populist politicians may offer deprived people *an alternative dimension for social comparisons*. In accordance with the social identity approach, people strive for a positive distinctiveness when making intragroup (oneself versus another person) or intergroup (ingroup versus outgroup) comparisons; they want to feel that they (as individuals or ingroup members) are doing better than others (Hornsey, 2008). When no positive social comparison is available given the social status or economic situation of the person or the ingroup, people may search for an alternative dimension of social comparisons. Such dimensions could be offered by populist politicians: they provide people with "clear social categories along which self-categorization can unfold" (Schulz et al., 2020, p. 205). These are the "good" like-minded people, including populist politicians who are claimed to promote the interests of the people, and the malicious and corrupt outgroup of political or economic elites who act in their own interests (Schulz et al., 2020; Reinemann et al., 2016; Müller, 2016). Therefore, by adopting a populist outlook, people self-categorize with the ingroup of "the good people" who are morally superior compared to "the vicious elites", while the alternative dimension of social comparisons on morality allows populist supporters to gain a positive self-image. Following a similar logic, Marchlewska et al. (2018) suggested that perceptions of relative deprivation enhanced preference for the populist right president Trump via collective narcissism. Collective narcissism is defined as "an unrealistic belief in in-group greatness contingent on external validation" (p. 152) and corresponds to the concept of individual narcissism used at the group level. Hence, populists use national identity to compensate for the threat and disadvantage caused by experiencing relative deprivation.

As a variant of the second group of explanations, the attractiveness of populism may be explained by a symbolic *enhancement of the social status* of the ingroup that populists offer.

It involves identity politics as well, but it does not imply changing the dimension of social comparisons. Concerns about social status, defined as shared beliefs that some groups of individuals are more respected by society in comparison to others, may also motivate people to support populists (Gidron & Hall, 2017). Concerns about social status were found to cause hostility towards outgroups, especially the concerns associated with status threat (for a review, see Gidron & Hall, 2017). According to Gidron and Hall (2017), status threat is especially pronounced among white males from the working class who have lost the status of a respected social group. They face job precarity and oppose affirmative policies, which they perceive have enhanced the status of previously disadvantaged groups such as women or ethnic minorities. Populist politicians can enhance the symbolic representation of the ingroup, especially since they speak to those whose social status is threatened (Gidron & Hall, 2017). The second group of explanations is more applicable to understand the popularity of the populist right.

The third group of explanations focuses on the prominent role of disadvantaged social comparisons, which are the core of the perceptions of relative deprivation as such or as a part of populist rhetoric. Pettigrew (2017) wrote that Trump supporters in 2016 felt deprived compared to "what they perceive other "less deserving" groups have acquired" (p. 111). Filsinger (2023) suggested that perceptions of relative deprivation make the differences between the ingroup and the outgroup more salient; they make the ingroup aware of the existing discrimination. Populist attitudes serve as a coping strategy with the frustrating mental state of being deprived (see also Spruyt et al., 2016). Adopting populist attitudes makes people more prone to foster political change (Filsinger, 2023). This explanation may be applicable to different types of populism.

In addition to the described explanations of populism, several authors suggested that populists use perceptions of relative deprivation in their rhetoric to attract voters, thus making perceptions of relative deprivation more salient. Since populists address the grievances of

deprived people and claim that their concerns are not attended by "the corrupt elites", deprived people get attracted by such discourses and begin to support populists (Hameleers, Bos, de Vreese, 2018). In an experimental study, Hameleers et al. (2018) found that deprived people selected populist content more often. Urbanska and Guimond (2018) argued that right-wing populists use intergroup relations comparing the native citizens with immigrants. The ingroup is portrayed as being worse off compared to the outgroup, which is in a better position at the cost of the ingroup. These perceptions make people feel deprived. Urbanska and Guimond wrote that the right-wing populist party Front National in France pledged a preference for the French over non-citizens in the redistribution of resources. Importantly, while comparisons with the outgroup of migrants relate to nativism, blaming elites for the status quo is captured by populism (Rooduijn, 2019).

1.2.4. Emotions

From the explanations of how perceptions of relative deprivation affect populism, one can assume that deprived people make a conscious decision to support populism. On the contrary, I suggest in my thesis, that emotions play a crucial role in why people facing relative deprivation, especially when their own interests are not affected (in case of third-party relative deprivation introduced above) support populists.

Research on perceptions of relative deprivation addresses diverse emotions associated with perceptions of relative deprivation, such as anger, envy, anxiety, grievance, fear, sadness, and gratitude (Smith et al., 2012; Smith & Pettigrew, 2014; Crosby, 1976; Smith et al., 2008). Emotions are treated as mediators of the relationship between the disadvantaged upward comparisons, causing perceived relative deprivation and diverse outcomes such as people's willingness to protest or withdrawal from work responsibilities (Smith et al., 2008, Smith & Pettigrew, 2014). Smith and Pettigrew (2014) argue that upward social comparisons result in perceptions of relative deprivation only in case of an injustice-related affect.

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Multiple authors studied the role of emotions in relation to populism (e.g., Salmela & von Scheve, 2017, 2018; Demertzis, 2006; Widmann, 2021, Rico et al., 2017, 2020; Capelos et al., 2021; Rhodes-Purdy et al., 2021; Hameleers et al., 2017). Hawkins and Rovira Kaltwasser (2018) suggested that emotions serve as a frame activating populist attitudes and turning populist attitudes into political decisions and actions. They suggest that such emotions are negative and are only used to describe "the vicious elites", but not "the good people". Predominantly, the role of anger and fear was studied (Rico et al., 2017; 2020; Vasilopoulos et al., 2019, Vasilopoulos, 2018; Nguyen, Salmela, & von Scheve, 2022; Hameleers et al., 2017; Rhodes-Purdy et al. 2021). For instance, it was found that anger in reaction to the economic crisis in Spain activated populist attitudes and made people vote for the populist left party Podemos (Rico et al., 2017). People feeling angry about the terror attacks in Paris were more likely to vote for the populist right party Front National (Vasilopoulos et al., 2019). Those who felt afraid were less likely to support Front National (Vasilopoulos et al., 2019), whereas fear in relation to the economic crisis in Spain did not significantly affect populist outcomes (Rico et al., 2017).

In my thesis, I aim to provide a more systematic account of emotional reactions to understand the way emotions affect the relationship between the perceptions of relative deprivation and populism. I use different layers of emotional experience, including emotional appraisals and emotions. To explore how and which emotions may occur from a particular stimulus in a given context and to predict how emotions may affect attitudes and behavior, I make use of the appraisal theories of emotions (Smith & Kirby, 2011, 2009; Smith & Lazarus, 1993; Scherer, 2001, 2005). An appraisal stands for an evaluation of the event or internal stimuli an individual encounters, which elicits emotions and is often done in an automatic way outside of individuals' awareness (Kappas, 2001; Moors et al., 2013). In contrast, emotions are a conscious verbal articulation of an emotional episode (Scherer, 2001; Moors et al., 2013).

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1.2.5. Attitude Polarization

Not all people are likely to react in the same way to instances of relative deprivation: some may perceive relative deprivation and others may not, some may feel angry and others may feel sad, and not all are likely to adopt populist ideas. I assume that part of this variance can be explained by attitude polarization caused by people's political ideology.

According to the theory of motivated reasoning (Taber, & Lodge, 2006), people not always involve in a rational and deliberate information processing and decision making. Instead, they may selectively process information, which reinforces their pre-existing beliefs and partisan attachments (Strickland, Taber, & Lodge, 2011). These beliefs serve as a bias: individuals recall the already existing cognitions before they process new information. Particularly, people are prone to confirm their initial beliefs (confirmation bias), take extra time to contest the information disapproving of their initial beliefs (disconfirmation bias), and evaluate the arguments that are congruent with their views as stronger compared to the arguments disapproving of their initial position (prior attitude effect). Encountering attitudinally congruent and incongruent information enhances attitude polarization on a given topic (Strickland et al., 2011; Taber, & Lodge, 2006).

A typical measure of the differences in political ideology is the divide between liberals and conservatives (e.g., Graham, Haidt, & Nosek, 2009; Kivikangas et al., 2021). For liberals, individual liberty is of key importance, and they hold a positive view of human nature: people should be free in their personal development (Graham et al., 2009). Conservatives oppose those who challenge the authorities and institutions; they are pessimistic about human nature and hold people for "selfish and imperfectible" (Graham et al., 2009, p. 1030).

For my thesis, it is important that liberals and conservatives are likely to react to instances of relative deprivation differently. According to the moral foundation theory, liberals and conservatives rely on different moral foundations (Haid & Graham, 2007, Graham et al., 2009). Moral foundations are moral intuitions stemming "from innate psychological

mechanisms that co-evolved with cultural institutions and practices" (Graham et al., 2009, p. 1030). Liberals rely on the moral foundations of fairness and care (Haid & Graham, 2007). Moral motivations of conservatives are guided by loyalty, authority, and purity (Graham et al., 2009), or by all five moral foundations (fairness/reciprocity, harm/care, ingroup/loyalty, authority/respect, purity/sanctity) simultaneously (Haid & Graham, 2007). Fairness is only one of the five moral foundations of conservatives; therefore, it plays a less important role for them than it does for liberals (Haid & Graham, 2007). In a meta-analysis, Kivikangas et al. (2021) found evidence that fairness/reciprocity and harm/care were negatively related, and ingroup/loyalty, authority/respect, purity/sanctity were positively related to conservatism. Moral foundations were found to contribute to confirmation bias. Exposure to more relevant moral foundations may strengthen pre-existing political beliefs. Day et al. (2014) found that exposure to pro-attitudinal political views (liberal or conservative) and moral frames congruent with liberalism or conservatism increased people's initial level of liberalism or, correspondingly, conservatism. Besides, when conservatives faced moral frames congruent for conservatives coupled with liberal political views, they became more liberal in their views (Day et al., 2014).

The left-right divide is often close to and is used interchangeably with the liberal-conservative divide (e.g., Kivikangas et al., 2021). Despite the fact that the left-right divide is specific for each country, I make use of the similarities between the left-right divide and the conservative-liberal divide here to explain how they contribute to the understanding of attitude polarization (e.g., Kivikangas et al., 2021; Piurko, Schwartz, & Davidov, 2011; Dalton, Farrell, & McAllister, 2011). Voters of radical right and left parties are likely to demonstrate attitude polarization on such issues as immigration, inequality, the EU, and "law-and-order" (Rooduijn et al., 2017). Liberals are more concerned with the moral foundation of fairness, which "encompasses notions of justice, inequality, reciprocity, and general unbiased treatment" (Day et al., 2014, p. 1560). Therefore, encountering a disadvantaged comparison

between the poor and the rich, underlying the perceptions of relative deprivation, may produce a stronger effect on the appraisals, attitudes, and behavior of the liberals compared to the conservatives. Given that liberals endorse the moral foundation of care, which means that they are sensitive to human suffering, are empathic, and care for other people (Day et al., 2014), they are likely to be more empathic to the disadvantaged third parties and perceive relative deprivation on behalf of them stronger than conservatives. On the contrary, since for conservatives the moral foundation of ingroup is important, which means that they are likely to value "loyalty and a group-based orientation" (Day et al., 2014, p. 1560), they are more likely to be affected by the disadvantaged social comparisons involving ethnic outgroups and fear that the outgroups threaten their access to material resources like welfare and jobs. The importance of the moral foundation of authority, which stands for the importance of traditions, power, and hierarchy (Day et al., 2014), is likely to make conservatives oppose ethnic outgroups since they are different from the ingroup in terms of traditions and may endanger their majority status (e.g., Norris & Inglehart, 2019). In the thesis, I account for the differences in political ideology and employ different contexts, which may be to a higher or lower extent congruent with people's political views.

Brexit. In the thesis, in online experiments conducted in the UK, I address the role of attitude polarization using people's opinion on Brexit. On July, 23rd, 2016, the scarce majority decided that the UK should leave the European Union (Hobolt, 2016). Two campaigns proceeding the referendum, to leave the EU or to remain in the EU, created a strong divide between the losers and winners of globalization (Hobolt, Leeper, & Tilley, 2021). The globalization winners (younger and educated professionals from large cities) were concerned with the economic disadvantages of leaving the EU, whereas the globalization losers (with lower levels of education, vulnerable labor market positions, people from rural areas and towns in the North-East of the UK with large shares of working class), feared unlimited immigration (Hobolt, 2016). After the referendum, the position on Brexit transformed into a source of identity

(Hobolt et al., 2021; Curtice, 2018), which Hobolt et al. (2021) called an "opinion-based group identity". Three fourth of population held a position on Brexit, which was similar to the identity based on partisanship (Hobolt et al., 2021). Based on the position on Brexit, individuals identified with the ingroup holding the same opinion, differentiated their ingroup from the outgroup holding the opposite opinion, and demonstrated evaluative bias in decision making towards the outgroup. The opinion-based identity cut across partisanship and was stable over time, from 2017 to 2019 (Hobolt et al., 2021). Tilley and Hobolt (2023) showed that six years after the referendum these identities still held, though they were somewhat weakened due to the decrease of the number of Brexit supporters.

In three experimental studies, conducted in 2019 and 2020, I used individuals' position on Brexit as a proxy for attitude polarization. I expected, similarly to Hobolt (2016; Hobolt et al., 2021), that issues of economic inequality and perceptions of relative deprivation related to it would be of higher relevance for Brexit opponents, who predominantly held liberal views (Hobolt, 2016). On the contrary, issues of migration and perceptions of relative deprivation related to it would be of higher relevance of Brexit supporters, who predominantly held conservative views (Hobolt, 2016). A third context which I addressed, involved perceptions of relative deprivation in a threatening situation. In accordance with the cultural backlash theory (Norris & Inglehart, 2019, but cf. Jost et al., 2003), Brexit supporters, as people equipped with authoritarian values, were more likely to respond to a relative deprivation instance related to survival with adopting a populist outlook.

1.3. Research gaps and contributions of the PhD project

Now that I have introduced the main concepts and theories I rely on in my thesis, I present the research gaps and contributions of the PhD project. Despite a large number of studies on the relationship between perceived relative deprivation and populism, as well as populism and emotions, there are significant gaps in the literature, which I address in this thesis. The research gaps and contributions fall into six main groups.

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The first gap refers to the relationship between perceptions of relative deprivation and populism. It has been suggested that perceptions of relative deprivation enhance populist outcomes (e.g., Urbanska & Guimond, 2018; Pettigrew, 2017; Spruyt et al., 2016), but empirical testing is still limited. First, the majority of studies on the relationship between perceptions of relative deprivation and populism are cross-sectional (Urbanska & Guimond, 2018; Spruyt et al., 2016; but cf. Marchlewska et al., 2018; Filsinger, 2023). Usually, single countries are studied, such as France (e.g., Urbanska & Guimond, 2018; Lüders et al., 2021), the Netherlands (e.g., Hameleers & de Vreese, 2020), Belgium (e.g., Spruyt et al., 2016), or the USA (Marchlewska et al., 2018). In all these studies, perceptions of relative deprivation were positively related to populist outcomes. A considerable number of single-country studies give an impression of the universality of the effect of perceived relative deprivation on populism. However, in cross-cultural studies that exist, there was no (Cena et al., 2023) or a very small association (Filsinger, 2023) of perceived relative deprivation with populism. Moreover, it is unclear in what types of societies and under what conditions there is a positive effect of the perceptions of relative deprivation on populism (e.g., Guiso et al., 2019). In my thesis, I revisit the relationship between perceptions of relative deprivation and populist voting; I test its universality using a sample of 23 European countries. It is important to mention that Pettigrew (2017) advocated for testing the association between perceptions of relative deprivation and populist voting using multilevel analysis, which I do here. Besides, I explore whether the perceptions of relative deprivation relate to populist right (as usually studied) or populist left voting. Using experimental designs, I test for a causal relationship between the perceptions of relative deprivation and populist attitudes in the contexts of economic injustice, cultural threat, and existential threat.

Second, the majority of authors believe that the relationship between perceptions of relative deprivation and populism is a direct one. In other words, people are consciously changing their perceptions and political behavior. Manunta et al. (2022) were among the first authors to

suggest that the effect of perceived relative deprivation on populism is not direct. They used identity threat and social exclusion threat as mediators. Rhodes-Purdy et al. (2021) used anger and fear as mediators of the relationship between economic threat and populism. An important role of emotions as a fallout or a correlate of perceptions of relative deprivation was advocated in key theoretical contributions on the role of perceptions of relative deprivation (e.g., Crosby, 1976; Smith et al., 2012; Folger, 1986; Smith & Pettigrew, 2014; Smith & Kessler, 2004) and studied empirically (e.g., Smith, Cronin & Kessler, 2008; Osborne, Smith, Huo, 2012). Additionally, a number of authors argued for a central role of emotions in driving populist support (e.g., Salmela & von Scheve, 2017, 2018; Demetriz, 2006; Rico et al., 2017). In this thesis, I show that the effect of perceptions of relative deprivation on populist outcomes happens through emotional reactions. In other words, emotions mediate the relationship between perceptions of relative deprivation and populism. Emotions are crucial in understanding how people may react to the events they encounter: some emotions like anger are likely to motivate people to redress injustice, whereas other emotions like sadness may motivate them to disengage from a disadvantaged situation (e.g., Smith & Lazarus, 1993; Smith & Kirby, 2011).

How perceptions of relative deprivation are measured is constitutes a further research gap. It is often assumed that there are generalized perceptions of relative deprivation that affect populism (e.g., Spruyt et al., 2016; Elchardus & Spruyt, 2016; Cena et al., 2023). However, since the definition of the perceptions of relative deprivation involves upward social comparisons (Smith et al., 2012), this implies that social comparisons can be done to different social targets (people can compare themselves with the rich, elites, the poor, or migrants) and on different dimensions (such as wealth, prestige, or social capital). In reality, perceptions of relative deprivation are measured in different ways and on different dimensions: for example, the perceptions of economic relative deprivation (e.g., Marchlewska et al., 2018; Urbinska & Guimond, 2018; Lüders et al., 2021), occupational relative deprivation (Cena et al., 2023) or

generalized social comparisons (e.g., Spruyt et al., 2016; Filsinger, 2023). As comparison targets, several authors used population majority (Urbinska & Guimond, 2018; Cena et al., 2023) or migrants (Marchlewska et al., 2018, Study 3; Meuleman et al., 2020). I check whether the three different types of relative deprivation perceptions – economic, occupational, and educational – relate to populism in the same way.

A fourth gap relates to existing research on emotions and populism. Most often, two discrete emotions, anger and fear, were studied (e.g., Rico et al., 2017; Vasilopoulos et al., 2019; Hameleers et al., 2017; Magni, 2017). On the one hand, the range of emotions studied is pre-defined by the emotions available in large-scale surveys. For instance, Mattes et al. (2018) noted that such emotions as contempt had rarely been studied in the US context since the American National Election Study included only anger, fear, pride, and hope. The same can be extended to other projects, including the British Election Studies, where respondents were asked to indicate how they felt about each party, and response options were: angry, hopeful, afraid, proud, or feeling none of these emotions (BES Waves 4 (March 2015), 5 (May 2015), 14 (May 2018))[5]. In the ISSP 2019, module "Social Inequality V Source Questionnaire", anger about the differences between the rich and the poor was measured (ISSP Research Group, 2022). On the other hand, sometimes non-significant results are not published in journal articles. For instance, while in a preprint, Rico et al. (2016) reported non-significant results on sadness, it is absent from the published article (2017). Only a few authors addressed the role of contempt (Mattes et al., 2018), resentment (Salmela & von Scheve, 2017, 2018; Salmela & Capelos, 2021), and shame (Salmela & von Scheve, 2017, 2018) in relation to populism. I contribute by addressing a wider range of discrete emotions.

Moreover, I account for another important research gap; there is no systematic account which emotions result from the experience of relative deprivation and how they affect populism.

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[5] However, Wave 15, conducted in 2019, included a wider range of emotions. The response options to the question "How does the prospect of leaving the EU **without a deal** make you feel?" included: angry, happy, disgusted, hopeful, uneasy, confident, afraid, proud, relieved, or no feelings.

Salmela and von Scheve (2017; 2018) provided elaborated theories involving complex emotional states, which are, however, rather difficult to test when relying on self-reported measures and – especially – only discrete emotions. While Smith et al. (2008) provided an account of the appraisals which are likely to result from perceptions of relative deprivation, not all of these appraisals are likely to activate populist support. Rico et al. (2017) addressed emotional appraisals, together with the affective intelligence theory, in formulating the hypotheses on how the emotional reactions in relation to the economic crises in Spain affected populist attitudes and voting for left-wing populists. However, the authors did not use the potential of the appraisal theory of emotions to predict how they could affect populist outcomes. I provide a systematic account of how people appraise instances of relative deprivation, which emotions they are likely to experience, and how appraisals and emotions may affect populist outcomes. In particular, I propose that a high level of appraisal of problem-focused coping potential (whether people feel that they can change a disadvantaged situation in a desired way) and other-accountability (whether people blame others for a disadvantaged situation) and the emotions they cause (anger, disgust, and contempt) are likely to activate populist support. On the contrary, appraisals of self-accountability (when you blame yourself for an undesired situation) and a low level of appraisal of problem-focused coping potential and the emotions they cause (sadness, fear and shame) are likely to deactivate populist support.

Fifth, when encountering an instance of relative deprivation, not everyone feels deprived, reacts with the same emotions and intensity, and not everyone is likely to respond with populist support. Among other factors, reactions to instances of relative deprivation can be affected by political ideology. So far, only Vasilopoulos et al. (2019) suggested that authoritarian values moderate the relationship between emotions and the probability of voting for the right-wing populist party Front National in France. In this thesis, I account for attitude polarization using a proxy for political ideology. I used attitudes towards Brexit as a proxy of

attitude polarization. Opinion on Brexit was found to work better than partisanship to capture attitude polarization in society even several years after the referendum on the EU membership (Hobolt, 2016, Hobolt et al., 2021, Tilley & Hobolt, 2023). I showed that attitude polarization is crucial for understanding emotional reactions to instances of relative deprivation and the way they shape populist outcomes.

The last significant contribution of the thesis is that I use different research designs, data, and methodology, which enables me to address different types and measurements of relative deprivation perceptions, various layers and measures of emotional experience, as well as different measures of populism. Besides, I employ different contexts to validate the theoretical mechanism proposed in the thesis. Additionally, in three experimental studies, I simulate a situation of a daily encounter with mass media, in that I use newspaper-like articles to manipulate perceptions of relative deprivation. By doing so, I also contribute to the literature studying how media exposure to populist communication activates populist attitudes (e.g., Schulz et al., 2020; Hameleers & Schmuck, 2017). Now, I introduce the research objectives and the design of the thesis.

1.4. Research objectives

The *overarching research question* of the thesis is *whether and how perceptions of relative deprivation and emotions affect populist outcomes*. The PhD thesis is comprised of several chapters with diverse research questions, different theories, research designs, and data. Still, they are strongly connected with each other and are aimed to answer a number of *key research questions* (RQ):

- RQ1. How do perceptions of relative deprivation affect populist outcomes?
- RQ2. How do emotions mediate the effect of perceptions of relative deprivation on populist outcomes?
- RQ3. How does the same mechanism – that perceptions of relative deprivation via emotions affect populist outcomes – replicate across different contexts?

- RQ 4. How does attitude polarization shape the way perceptions of relative deprivation and emotions affect populist outcomes?

An overview of key research hypotheses is presented at the end of the theoretical chapter, once the theoretical model of the thesis is introduced. Specific research questions and hypotheses are formulated in each chapter.

1.5. Overview of the PhD project

The thesis is comprised of a theoretical chapter, four empirical chapters, a chapter that describes a forthcoming study planned based on the results of the thesis, and conclusions and discussion. I will now present the chapters of the thesis, followed by the description of the case and data selection, and the measurement of the key variables. An overview of all chapters, their research questions, data, key results, contributions of each chapter to the thesis, and how the chapters are connected to each other is presented in Table 1.1.

Chapter 2

Chapter 2, "Theoretical Model of How Perceptions of Relative Deprivation and Emotions Affect Populism" is devoted to the theoretical model proposed in the thesis: perceptions of relative deprivation affect populism via appraisals and emotions. I claim that the appraisals of other-accountability and problem-focused coping potential, resulting from encountering an instance of relative deprivation play a key role in explaining emotions and how emotional reactions affect populist outcomes. It is proposed that emotions characterized by a high level of problem-focused coping potential and a high level of other-accountability are likely to activate populist support. Moreover, I account for the role of individual differences in appraisal. I suggest that self-efficacy beliefs affect the appraisal of problem-focused coping potential. Justice sensitivity beliefs have an impact on the appraisal of other-accountability.

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Table 1.1 *Overview of chapters and connection between them*

	Chapter 2	**Chapter 3**	**Chapter 4**	**Chapter 5**	**Chapter 6**
Key research questions	- relationship: PRD and populism - role of appraisals - individual differences in appraisal	- association: PRD & populist voting - types of PRD	- causality: PRD and populist attitudes - emotions as mediators - attitude polarization	- causality: PRD and populism - emotions as mediators - different layers of emotional experience - attitude polarization	- association: concerns about the coronavirus crisis and right-wing populism - emotions as mediators
Country, year	-	23 European countries, 2018-2020	UK, June, December 2019	UK, August 2020	Netherlands, October 2020
Data	-	ESS, Round 9, N=43843	2 online experiments, Study 1: economic injustice (N=589), Study 2: cultural threat (N=626)	an online experiment, N=756	EVS/LISS Panel, N=1462
Method	Literature review	Multilevel and multinomial regression	OLS regression, mediation analysis	OLS regression, mediation analysis	OLS, logistic regression, mediation analysis
Key contribution to the thesis	- theoretical model: PRD affects populism via emotional reactions - role of appraisals - selection of emotions - individual differences in appraisal	- different types of PRD - no universal effect of PRD on populist voting - economic PRD had a positive effect	- only in Study 1: effect of PRD on anti-elitism and popular sovereignty - positive mediation effect of negative discrete emotions (Study 1, Leavers in Study 2) - mechanism works if the situation is congruent with people's political views	- PRD enhanced anti-elitism among Leavers - replication: mediation effect of negative discrete emotions - appraisal of PFCP important in driving populist attitudes among Leavers - Blame attributions drive anti-elitism among Remainers	- concerns about COVID-19 unrelated to right-wing populism - negative mediation effect by sadness and fear - anger positively related to preference for the populist right
Gap & link to other chapters	Empirical testing needed - Ch. 3 – association of PRD and populist voting - Ch. 4, 5 – test for causality & role of emotions	PRD unrelated with populist voting in most countries - replication (Ch. 3, 4) - possible mediators (Ch. 3, 4)	replication needed: - no effect of PRD on populism (Ch. 5) - positive effects of all negative emotions (Ch. 5) - attitude polarization role (Ch.5) - the role of emotions (Ch.5)	replication needed: - fear in reaction to PRD activated populism (Ch.6) - the role of PFCP for Leavers => (Ch.7) - no effect of perceived existential insecurity on populism => Ch. 5	- Emotions measured via one item (vs. Ch.4, 5) - No information what aspects of COVID-19 people responded to (vs. Ch.5) - No measures of appraisals (Ch. 5, 7)

Note. PRD stands for the perceptions of relative deprivation, "Ch." for a "Chapter".

CHAPTER 1. GENERAL INTRODUCTION

Contribution to the thesis. The theoretical model proposed in Chapter 2 informs key hypotheses tested in the thesis (*Chapters 3-7*). The hypotheses on the effect of perceptions of relative deprivation on populist outcomes are tested in Chapters 3-5. The hypotheses on emotions are tested in *Chapters 4-6; the role of appraisals is addressed in Chapter 5, and a proposed study outlined in Chapter 7. The hypotheses on individual differences in appraisal are also addressed in the proposed study in Chapter 7*.

Chapter 3

In Chapter 3, "Their Grass is Greener! – Do Perceptions of Relative Deprivation Relate to Populist Voting? Evidence from European Societies", the relationship between perceptions of relative deprivation and voting for populist parties was explored in a correlational study of 23 European societies. I conducted secondary data analysis with the data of the European Social Survey (ESS), Round 9 conducted in 2018-2020, and the data of PopuList dataset (Versions 1.0 and 2.0; Rooduijn et al., 2019) to code populist, populist left, and populist right parties. Three types of perceptions of relative deprivation were measured: perceptions of economic, occupational, and educational relative deprivation. Additionally, using a subsample of five countries where both populist left and populist right parties were present, I tested whether the perceptions of relative deprivation relate to populist left and populist right voting.

Contribution to the thesis. The study shows that there are different types of relative deprivation perceptions, which can differently affect populist outcomes. In the latter studies, I address perceptions of relative deprivation in diverse contexts (***Chapters 4*** and ***5***). The study shows that the relationship between perceptions of relative deprivation and populist voting is not universal: in some countries, the association between the different types of perceptions of relative deprivation was positive, in others negative, and in the majority, the association was non-significant. This finding is revisited in Chapters 4 and 5, where I, following Smith and Pettigrew (2014), address the role of emotions as mediators of the relationship between perceptions of relative deprivation and populism.

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Chapter 4

In the Chapter "Our People are Suffering! — How Perceptions of Relative Deprivation and Emotions Affect Populist Attitudes", I test the central mechanism of my thesis: whether an instance of relative deprivation activates populist attitudes and whether emotions mediate this relationship. Two online experiments were conducted in 2019 in the UK. I employ two different contexts: perceptions of relative deprivation in the context of economic inequality (Study 1, *N*=589), which is likely to be more congruent with the views of left-wing populist parties, and perceptions of relative deprivation in the context of cultural threat (Study 2, *N*=626), which is a topic of the right-wing populists (e.g., Gidron & Hall, 2017; Hobolt, 2016). In Study 2, I account for attitude polarization using opinion towards Brexit (Hobolt, 2016; Gidron & Hall, 2017) as a proxy for the liberal-conservative divide.

Contribution to the thesis. Building on the findings from Chapter 2, the studies test for a causal relationship between the perceptions of relative deprivation and populist attitudes and whether emotions mediated this relationship. There is strong evidence that deprived people endorse populist attitudes due to their emotional reactions. Different negative emotions, such as anger, disgust, contempt, and sadness increased populist attitudes. These findings are replicated in Chapter 5, using a different context.

Chapter 5

In the Chapter "Insecurity, Injustice, and Powerlessness: What Drives Populism under Threat?" the mechanism tested in Chapter 4 is replicated using a scenario characterized by a higher level of external validity; an existential threat caused by the coronavirus pandemic. I employ two theories which have been used to explain populist support: relative deprivation theory (Pettigrew, 2017; Urbanska & Guimond, 2018; Spruyt et al., 2016) and cultural backlash theory by Inglehart and Norris (2017, Norris & Inglehart, 2019). In both cases, perceptions of existential insecurity and relative deprivation are expected to enhance populist support via emotions. I employ three different layers of emotions to get a better understanding

of the role of emotions compared to Chapter 4. I also account for the role of attitude polarization (Hobolt et al., 2021, Hobolt, 2016; Tilley & Hobolt, 2023) in using individuals' opinion on Brexit as a proxy of attitude polarization. An online experiment (N=756) was conducted in August 2020 among UK citizens.

Contribution to the thesis. The study validated key effects found in Chapter 4. Similar to Chapter 4, there was limited evidence of the direct effect of perceptions of relative deprivation on populist attitudes. Emotions played a key role in driving populist support.

As in Chapter 4, the discrete negative emotions caused by encountering an instance of relative deprivation led people to adopt a populist outlook. The results of Chapter 5 confirm the assumption formulated in Chapter 4: there is a generalized negative affect underlying the reactions to relative deprivation instances, which makes people adopt a populist mindset.

Chapter 5 gave additional evidence on how appraisals of instances of relative deprivation activate populist support. Remainers and Leavers appraised a disadvantaged social comparison differently. While Remainers targeted their emotional reactions at those who could have caused the negative event, Leavers suffered from a loss of control over the situation and were willing to regain the sense of control by opposing elites. Among people facing instances of relative deprivation, a high level of blame attributions to the government (Remainers), a low level of blame attributions to nature or fortune (Remainers and Leavers), and a low level of problem-focused coping potential (Leavers) enhanced populist attitudes.

Similar to Chapter 4, there was evidence that the three components of populist attitudes functioned differently across the experimental conditions and among Remainers and Leavers. It strengthens the argument that it is crucial to analyze the three components of populist attitudes separately.

Chapter 6

In Chapter 6, "Rally around the Government or a Populist Response? How Concerns about COVID-19 and Emotional Responses Relate to Institutional Trust and Support for the

Populist Right[6]", I explore how concerns about the coronavirus crisis relate to trust in political institutions (comprised by trust in the government and parliament), trust in experts, and preference for populist right parties and whether emotions mediate these relationships. Of relevance for the thesis is the question, whether people who are concerned about COVID-19 may support populists and what role emotions play in this process. I employ for a secondary data analysis the data of the Longitudinal Internet studies for the Social Sciences (LISS) Panel Survey, representative of the Netherlands (N=1462) and conducted in October 2020.

Contribution to the thesis. Similar to Study 5 and contrary to the propositions of the "cultural backlash theory" (cf., Lazarev et al., 2014), people concerned about the coronavirus crisis did not prefer the populist right over incumbents. Moreover, the study employs a different measure of emotions, where respondents indicated one emotional category. Results were consistent with existing literature on populism and emotions (e.g., Vasilopoulos et al., 2019). Sad and frightened people trusted the government, parliament, and experts, but did not support the populist right. Anger was positively associated with a preference for the populist right but was unrelated to concerns about the coronavirus crisis (cf. Abadi, Arnaldo, & Fischer, 2021). Therefore, anger did not mediate the relationship between concerns about the coronavirus crisis and measures of trust and preference for populist right parties.

Chapter 7

Chapter 7 "The role of Problem-Focused Coping Potential and Perceptions of Relative Deprivation in Inducing Populist Support" contains the design of a future study that aims to revisit the role of the appraisal of problem-focused coping potential (PFCP) in how this appraisal, together with the perceptions of relative deprivation, affect populist attitudes. The study is designed to replicate the findings of Chapter 5. Unlike the predictions in Chapter 2, it was found that among Brexit supporters, a low level of the appraisal of problem-focused

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[6] This paper included into Chapter 4 is co-authored with Tim Reeskens. The author of the thesis is the corresponding author.

coping potential enhanced populist support. Moreover, I plan to account for the individual differences in emotional appraisals by including measures of justice sensitivity beliefs and self-efficacy beliefs, as proposed in Chapter 2. In addition, I present the results of an exploratory analysis using the data from Study 2 in Chapter 4 and Chapter 5, where I test for the role of the appraisal of problem-focused coping potential (Chapter 5) or appraisals of power and control (Chapter 4) in inducing populist attitudes among Leavers and Remainers.

Expectations. I expect that perceptions of relative deprivation, coupled with a high level of appraisal of PFCP, will enhance people's level of populist attitudes. I expect that people with a higher level of self-efficacy will rate their appraisal of problem-focused coping potential as higher, whereas people who are more sensitive to injustice will be more prone to adopt populist views when facing an instance of relative deprivation.

1.6. Case and Data selection

In the thesis, I used different research designs and different data sources. I will now describe the case and data selection. In the literature, the effects of perceptions of relative deprivation and emotions on populism have been measured in Western societies. The use of data from European countries allows to replicate the most relevant findings from the literature.

In the case of secondary data analysis, the selection of the data was affected by its availability. The European Social Survey (ESS) data (Round 9, 2018-2021) was used in Chapter 3. It is representative of the majority of European societies. It contains a module on Justice and Fairness, which allowed to operationalize different types of perceptions of relative deprivation and to test whether the relationship of the perceptions of relative deprivation and populist voting is universal.

In Chapter 6, the cross-sectional data of the Dutch module of the European Values Study (EVS) collected within the Longitudinal Internet Studies for the Social Sciences (LISS) Panel Survey (CentERdata, 2020) was used. The survey was conducted in October 2020, at the beginning of the second wave of the coronavirus pandemic, and contained measures of

emotions that people felt in relation to the pandemic. The measure of emotions used the same discrete emotions that were used in the online experimental studies I conducted in the thesis (Chapters 4 and 5). So, I could test for the association of these emotions with a preference for right-wing populist parties.

I conducted three experimental studies (Chapters 4 and 5) to test for causal relationships between perceptions of relative deprivation, emotions, and populism. The studies were performed in the UK for several reasons. First, the UK was the only country to leave the European Union (Hobolt, 2016). Second, the Brexit referendum and the campaign preceding it resulted in a high level of attitude polarization, based on the opinion on Brexit. At that time, partisanship did not work well (Hobolt et al., 2021). In my data, a large number of people did not feel affiliated with any political party. So, the divide based on the opinion on Brexit enabled me to account for how people with opposite political views react to instances of relative deprivation. Additionally, after Brexit, the UK experienced a number of political crises, including changes of Prime Ministers and various political scandals. A newly created right-wing Brexit Party managed to gain 30.5% of votes in the European Parliament election in 2019 (European Parliament, 22/10/2019), when the country was already in the process of leaving the European Union. That all makes the UK an interesting case to study. On the practical side, measures of emotions, populism, and emotional appraisals were available and validated in English. Besides, it was possible to collect data of high quality using the service "Prolific" for online recruitment (Palan & Schitter, 2018; Douglas, Ewell, & Brauer, 2023), where the British population is better represented than people from other countries. On the platform, I could separately sample respondents supporting and opposing Brexit using the pre-existing sampling criteria, which was crucial for the research design. The experimental studies were approved by the Constructor University Ethics Committee and pre-registered on the OSF platform.

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1.7. Method of data analysis

In Chapter 3, I explored the association between perceptions of relative deprivation and populist voting and tested whether it is universal across European societies. Populist parties were coded using the *PopuList* data (Rooduijn et al., 2019). Since the dependent variable (voting for populist parties) was binary, I ran multilevel logistic regression. The ICC coefficient was justified using the multilevel analysis: 33% of the variance in the dependent variable was explained at the country level. To test whether the perceptions of relative deprivation were associated with voting for populist right or populist left parties, I used multinomial regression for a sample of five countries where populist left and populist right parties were present. All analysis was performed with the statistical program R.

In Chapters 4 and 5, enclosing three experimental studies, I used OLS regression to test for the causality between perceptions of relative deprivation and populist outcomes. The analysis was performed with the statistical program R. To test whether emotional reactions mediated the relationship between perceptions of relative deprivation and measures of populism, I performed a mediation analysis with the maximum likelihood estimator and bias corrected bootstrap (N=10 000) standard errors and confidence intervals (Fritz & MacKinnon, 2007). I used the statistical programs MPLUS 8.5 and 8.6, which allows to perform mediation analysis in one step (Muthén & Muthén, 1998-2012).

In Chapter 6, which focused on how concerns about the coronavirus pandemic were related to preferences for populist right parties, I used logistic regression because the dependent variable was dummy-coded. I used the statistical program R. To explore whether the emotions mediated the relationship between the concerns about the coronavirus crisis and preference for populist right parties, I used mediation analysis with the maximum likelihood estimator and bias corrected bootstrap (N=10 000) standard errors and confidence intervals. I used the statistical program MPLUS 8.7. Since the mediators and the dependent variable were binary-coded, all paths were estimated with logistic regression.

1.8. Measurement

Next, I present the measures for the key variables – perceptions of relative deprivation, populist outcomes, and emotions used in this thesis. Perceptions of relative deprivation were used as an independent variable, populist outcomes as the dependent variable, and emotions as mediators.

Perceptions of relative deprivation. For measuring perceptions of relative deprivation, I relied on the model suggested by Smith et al. (2012). The minimal requirement for a measure of perceptions of relative deprivation was an upward social comparison (when the person was doing worse off than the comparison target) and a perception that the disadvantaged condition was unfair (e.g., Meuleman et al., 2020). These two components were present in the measures I used in Chapter 3.

In experimental studies (Chapters 4 and 5), I manipulated the perceptions of relative deprivation. Manipulation materials were selected upon a pretest. In Chapter 4 (Study 2) and Chapter 5, perceptions of relative deprivation were measured as manipulation checks. All measures are presented in Table 1.2.

Table 1.2

Overview of measures of relative deprivation perceptions across chapters

Chapter	Data	Perceptions of Relative deprivation	Items
Chapter 3	ESS, Round 9, 23 European countries	Perceptions of economic, occupational, and educational relative deprivation	*Perceptions of economic relative deprivation (arithmetic mean):* (1) economic injustice at the individual level - "Your net [pay/pensions/social benefits] is unfairly low, fair, or unfairly high" (measured on an 11-point Likert scale, reversely-coded) (2) disadvantaged social comparison to the outgroup - "Top 10% full-time employees in country, earning more than [amount], how fair" (measured on an 11-point Likert scale)

			Perceptions of occupational relative deprivation: "Imagine you were looking for a job today. To what extent do you think this statement would apply to you? Compared to other people in [country], I would have a fair chance of getting the job I was seeking" (measured on an 11-point Likert scale, reversely recoded, centered around the grand mean) *Perceptions of educational relative deprivation:* "Compared to other people in [country], I have had a fair chance of achieving the level of education I was seeking" (measured on an 11-point Likert scale, reversely recoded, centered around the grand mean)
Chapter 4	Online experiments, UK (2018)	Manipulated: Perceptions of economic (Study 1) and cultural (Study 2) relative deprivation	Perceptions of relative deprivation were measured in Study 2 as a manipulation check. Based on the theoretical models presented in Smith et al., 2012 and Smith et al., 2008, relative deprivation was measured: (1) *presence of an upward social comparison* ("The issue described in the article puts the UK citizens in a worse condition compared to illegal migrants" and a reversed version "The issue described in the article puts the UK citizens in a better condition compared to illegal migrants") (2) *illegitimacy of the situation* which has led to a disadvantaged social comparison ("The issue described in the article is just" and "The issue described in the article is fair") (3) *durability of the situation* which led to a disadvantaged social comparison ("The issue described in the article will increase the difference between the UK citizens and illegal migrants", "The issue described in the article will decrease the difference between the UK citizens and illegal migrants", "The problem of the difference between the UK citizens and illegal migrants will be alleviated", and "The problem of the difference between the UK citizens and illegal migrants will be exacerbated").

			All these items were measured on a scale from 1 to 7 and recorded so that the higher value would stands for a higher level of perceptions of relative deprivation. Since only a theoretical model of perceived relative deprivation was available (Smith et al., 2008, 2012), I run an exploratory and subsequently confirmatory factor analysis. In the resulting model, perceptions of relative deprivation were a second-order factor, comprised by first-order factors "social comparisons", "injustice" and "durability". Model fits: X^2= 18.058, df = 6, p-value = 0.006, RMSEA = 0.057; CFI = 0.995, TLI = 0.987; SRMR = 0.025). The perceived relative deprivation index ranged from -2.640 to 2.144.
Chapter 5	Online experiment, 2020, UK	Manipulated: Perceptions of relative deprivation in the context of the coronavirus pandemic	Upon a pretest, a manipulation perceived as most unjust was selected to manipulate the perceptions of relative deprivation. In the main study, perceptions of relative deprivation were used as a manipulation check. Perceptions of relative deprivation were measured as an index comprised by an arithmetic sum of three items: "To what extent do you think the British will be in a worse condition compared to Germans regarding access to the vaccine?", "To what extent do you think poor people will be in a worse condition compared to wealthy people regarding access to the vaccine?", "To what extent do you think poor countries will be in a worse condition compared to wealthy countries regarding access to the vaccine?" All variables were measured on a scale from 1 to 9, from the lowest to the highest level.

Measures of populism. In the thesis, I used different measures of populism (see Table 1.3). In Chapter 3, I employed *voting for populist parties*. The variable was constructed by combining the parties people voted for in the last election in the ESS dataset with the list of populist parties in the *PopuList* data (Versions 1.0 and 2.0; Rooduijn et al., 2019). I created three dummy variables: voting for populist, populist left, and populist right parties.

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In Chapters 3 and 4, I measured ***populist attitudes*** using the scale created by Schulz et al. (2018), which included anti-elitism, homogeneity, and popular sovereignty to measure populist attitudes. This scale operationalized the populist core in accordance with Mudde (2004), showed one of the best performances among the populism scales (Casthano Silva et al., 2020), and was validated in the UK (Schulz et al., 2018). Its disadvantage is that it lacks negatively-coded items. In all studies, I included additional negatively-coded items in the scale. The inclusion of these additional items did not substantially change the results (this analysis is not reported in the thesis to avoid unnecessary complexity).

In contrast to Schulz et al. (2018), who constructed a second-order factor of populist attitudes, I analyze the three populist components separately. First, there are reasons to suggest that the components building the scale proposed by Schulz et al. (2018) are likely to reflect diverse types of attitudes and beliefs, involving intergroup relations (e.g., Schulz et al., 2020) or more stable political beliefs on where the source of popular sovereignty should come from (for a discussion on the role of popular sovereignty, see e.g., Abts & Rummens, 2007). Second, there is disagreement in the literature about which concepts build the core of populist attitudes (e.g., whether homogeneity or the Manichean outlook should be included to measure the populist core); different scales use different concepts (for an overview, see Casthano Silva et al., 2020). Third, in Chapters 4 and 5, results of confirmatory factor analysis also indicated that the three components of populist attitudes anti-elitism, homogeneity, and popular sovereignty should be analyzed separately, without a second-order factor of populist attitudes (cf., Casthano Silva et al., 2018; Oliver & Rahn, 2016).

Additionally, in Chapter 5, I introduced in an exploratory way a measure of ***voting for a populist candidate***. It was inspired by a measure of the vote choice of a candidate using anti-establishment rhetoric employed by Bakker, Schumacher, & Rooduijn (2021) in a conjoint experiment. The measure I introduced in my thesis represented two speeches by two fictitious "candidates" (see Figure 1.1). The measure comprised concepts associated with populism

(Rooduijn, 2014) and populist rhetoric during the coronavirus pandemic (e.g., Wondreys &

Mudde, 2022; Inglehart, 2020, April 10): popular sovereignty, anti-elitism, homogeneity,

support for a direct democracy, blame attribution to China, and support for a strong leader.

Respondents were asked to select one of the candidates (as a forced choice). The measure was

pretested before the fieldwork (*N*=142). The advantage of using a fictitious candidate is that it

allows to capture the attractiveness of the populist component, which is not affected by

existing party preferences or attitudes towards real politicians (e.g., Bakker et al., 2021).

In ***Chapter 6***, I used ***preference for right-wing populist parties*** as a measure of populism,

using the data representative of the Netherlands from the EVS/LISS Panel (2020).

Respondents who indicated their preference for the populist right parties, the Freedom Party

(PVV) and Forum for Democracy (FvD) (Otjes, 2021), were coded as populists, and voters of

other parties were coded as non-populists. Preference for populist right parties may be a

beneficial indicator since it taps into partisanship as an affective connection between a party

and its supporters and excludes protest voting, which may also motivate people to support

populists (Casthano Silva et al., 2020). The data did not allow to explore how the different

measures of populism relate to each other, which is an interesting question for future research.

Table 1.3

Overview of measures of populism across chapters

Chapter	Data	Measures of Populism
Chapter 3	ESS, Round 9, 23 European countries	*(1) Populist voting* – voting for any populist party, regardless of its host ideology coded using the data from PopuList (Rooduijn et al., 2019). Thus, '1' is coded as voting for a populist, '0' is coded as voting for a non-populist party. *(2) Voting for populist left* – voting for a populist left party coded using the data from PopuList, where '1' is coded as voting for a populist left and '0' is coded as voting for any other party. *(3) Voting for populist right* – voting for a populist right party coded using the data from PopuList, where '1' is coded as voting for a populist right and '0' is coded as voting for any other party.

Chapter 4	Online experiments, UK (2019)	Populist attitudes (measured via anti-elitism, homogeneity, popular sovereignty) 1) *Anti-elitism* • MPs in Parliament very quickly lose touch with ordinary people • The differences between ordinary people and the ruling elite are much greater than the differences between ordinary people. • People like me have no influence on what the government does. • Politicians talk too much and take too little action 2) *Homogeneity* • Ordinary people all pull together • Ordinary people are of good and honest character • Ordinary people share the same values and interests • Although the British are very different from each other, when it comes down to it they all think the same 3) *Popular Sovereignty* • The people should have the final say on the most important political issues by voting on them directly in referendums • The people should be asked whenever important decisions are taken • The people, not the politicians, should make our most important policy decisions • The politicians in Parliament need to follow the will of the people
Chapter 5	Online experiment, 2020, UK	(1) *Populist attitudes* consisted of three components—*anti-elitism*, *homogeneity*, and *popular sovereignty* (Schulz, Wirth, & Müller, 2018) —each measured with three items on a 5-point Likert scale ("1" is coded as "completely disagree", "5" is coded as "completely agree"). The same measure was used in Chapter 3. (2) *Voting for a populist candidate* Respondents read speeches of two "candidates", an "extreme populist", and an "extreme non-populist", and indicated whom of the two they would vote for. Respondent's choice was dummy coded, so that "1" is coded as voting for a populist, and "0" is coded as voting for a non-populist candidate. (See Figure 1.1)
Chapter 6	EVS / LISS-Panel, 2020	*Preference for right-wing populist parties*—combined supporters of the PVV and the FvD, where "1" is coded as prefer right-wing populist parties, "0" is coded as prefer other parties

Figure 1.1

Measure of voting for a populist candidate (Chapter 5)

Imagine, there are elections for an MP in your constituency. Two candidates are competing for the seat. In recent debates, they expressed different views. These views are summarized in the table below.

Now, please choose who you would vote for in case there were only two options: candidate 1 or candidate 2.

Candidate 1		Candidate 2	

Candidate 1

> I will do what my constituents want. I always rely on people's opinions in my decision-making.
>
> That's easy: 99 per cent of all British think the same! I will organize referendums. Citizens should have the final say on important issues!
>
> As for the coronavirus – that's simple. China is responsible for the large number of deaths of our citizens!
>
> In these tough times, we need a strong leader taking the full control of the situation. That's the way I am!

Candidate 2

> I have the courage to take unpopular decisions if and when they are necessary. I rely on experts and scientists in my decision-making.
>
> We, the British, are all different. The elected representatives in the House of Commons should decide on all issues in the national interest. That's how we can make sure that all interests are accounted for.
>
> Coronavirus is our shared tragedy. China suffered like any other country. Especially in these hard days, we need a leader who listens to other politicians and experts to make a well-thought out decision. That's the politician I am.

Measures of emotions. In this thesis, I measured emotional appraisals and emotions. Different measures were used in different chapters (see Table 1.4). In Chapter 4, I was interested to capture a wide range of emotions, both negative and positive. I used the Geneva Emotion Wheel 3.0 (See Figure 1.2; Scherer & Meuleman, 2013; Sacharin, Schlegel, & Scherer, 2012), where twenty discrete emotion families are organized in a wheel shape. Respondents could indicate no, one, or several emotions, marking their intensity on a scale from '1' (lowest

level) to '5' (highest level). Six emotions were selected upon the appraisal theories of emotions and were pre-registered to be used as mediators. These emotions were the most salient emotional reactions to the experiences of relative deprivation.

In Chapter 5, three different layers of emotional experience were measured. First, based on the literature analysis, I included *appraisals* of problem-focused coping potential (Kirby et al., 2022) and self- and other-accountability (Kibry & Smith, 2011; Kirby et al., 2022). These appraisals were measured on a 9-point scale, from the lowest (1) to the highest (9) level. Second, I included a measure of separate *discrete self-reported emotions*, which were of significance in the studies in Chapter 4: anger, disgust, contempt, sadness, and fear. Their intensity was measured on a 9-point scale from extremely low (1) to extremely high (9). Third, I included a *non-verbal pictorial measure of emotional dimensions* using the self-assessment Manikin (see Figure 1.3). Pictures were used to capture the intensity of valence, arousal, and dominance on a 9-point Likert scale (Bradley & Lang, 1994). This measure enabled me to account for the emotional experience without relying on the complexity of verbal expressions of emotions.

In *Chapter 6*, discrete emotions were measured with one item: "Which emotion comes to mind first when you think about the coronavirus?" Even though this measure could not capture the complexity of the emotional states and did not specify which aspect of the pandemic people reacted to, it was identical to measures of emotions used in existing studies on emotions and politics (e.g., Capelos & Demertzis, 2018) and allowed to validate some of the results from *Chapter 5*, captured with a different measure of emotions.

Table 1.4

Overview of measures of emotional reactions across chapters

Chapter	Data	Measures of Emotions
Chapter 4	Online experiments, UK (2018)	Geneva Emotion Wheel 3.0 (Scherer & Meuleman, 2013; Sacharin et al., 2012): anger, disgust, contempt, sadness, shame, and fear were pre-registered and used in the analysis (See Figure 1.2)
Chapter 5	Online experiment, 2020, UK	Emotions were measured in three ways: (1) selected and pre-registered *discrete emotions,* each measured on a 9-point scale from the lowest to the highest level: anger, contempt, disgust, fear, and sadness (2) *Appraisals of emotions*: *a) Appraisal of problem-focused coping potential (PFCP):* captured by three items: general PFCP, capability to meet one's physical and social goals (Kirby et al., 2022). Items were measured on a 9-point scale from the lowest (1) to the highest (9) level. An index was built upon the confirmatory factor analysis *b) Appraisals of self- and other-accountability,* were measures as blaming political leaders, blaming nature or fortune, blaming the ingroup (self or the British), and blaming the outgroups (migrants, refugees, and ethnic minorities) - measured on a 9-point scale from the lowest (1) to the highest (9) level. Corresponding indexes were built upon the confirmatory factor analysis (3) a *non-verbal pictorial measure of emotional dimensions* measured via the self-assessment Manikin: valence, arousal, dominance, measured on a 9-point scale from the lowest (1) to the highest (9) level. (See Figure 1.3)
Chapter 6	EVS / LISS-Panel, 2020	*Emotional reaction to the coronavirus:* "Which emotion comes to mind first when you think about the coronavirus?" Single-response options were suggested: fear, sadness, hope, disgust, anger, contempt, shame, other emotion (respondents could indicate which), no emotion. In the analysis, rare emotional reactions (contempt, shame and answers to the open-ended question on "other emotions" – each of them was selected by less than 15 participants) were included to the category of "other emotions". The category "no emotions" served as a reference category.

Figure 1.2

The Geneva Emotion Wheel 3.0 with an instruction used in Chapter 4 (Studies 1 and 2)

In order to make it easier for you to report the type of emotion you experienced, 20 different emotions are arranged in a circular fashion on the following response sheet.

Our emotions are often mixed and contain many different components. Please rate the intensity of all the emotions in the wheel with respect to what you felt, even if the intensities are very low. For those emotions that were not at all part of your reaction, please check the small box under the smallest circle, respectively.

If you did not feel any emotion at all, please check the upper half circle in the center of the wheel (labeled "None"). If you experienced an emotion that is very different from any of the emotions in the wheel, please check the lower half circle (labeled "Other").
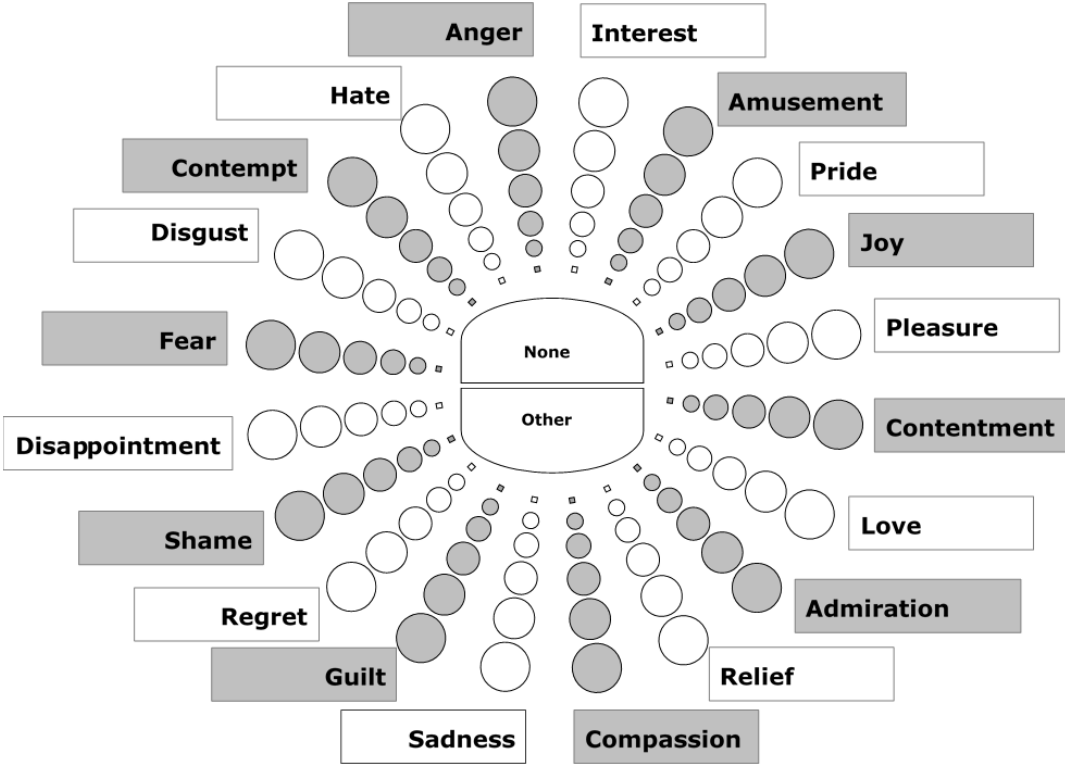
Note: The instruction was adapted to the research objectives from: Swiss Center for Affective Sciences (n.d.). *The Geneva Emotion Wheel*. https://www.unige.ch/cisa/gew/

CHAPTER 1. GENERAL INTRODUCTION

Figure 1.3

The Self-Assessment Manikin (SAM) used to rate the affective dimensions of valence (top panel), arousal (middle panel), and dominance (bottom panel) in Chapter 5
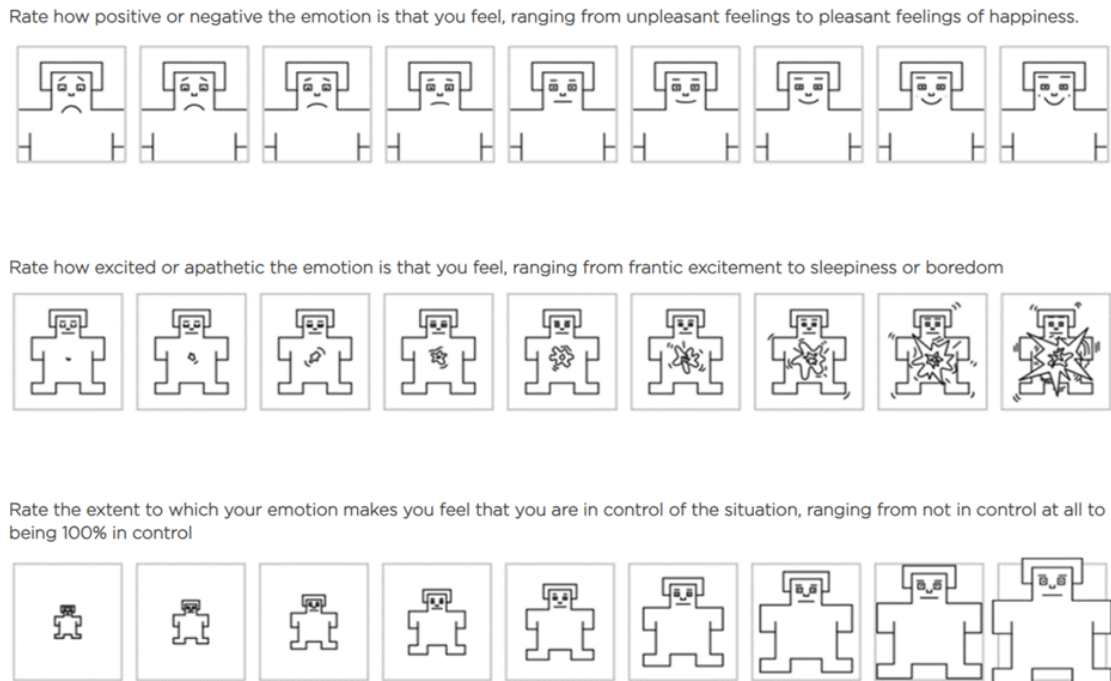
Source: Toet, A., Houtkamp, J. M., & Vreugdenhil, P. E. (2016). Effects of personal relevance and simulated darkness on the affective appraisal of a virtual environment. *PeerJ*, *4*, e1743. https://doi.org/10.7717/peerj.1743

The next chapter is devoted to the theoretical model of the thesis and introduces the key hypotheses, most of which are tested in the thesis. Subsequent chapters empirically test these hypotheses. After the empirical chapters, a study based on the findings of the thesis is proposed. The thesis is concluded with a discussion of results, implications of the findings for theory, methods, policy implication, and possible interventions aimed to prevent that people experiencing relative deprivation would adopt populist ideas.

2. How Perceived Relative Deprivation and Emotions Affect Populist Outcomes:

Introducing the Theoretical Mechanism

Abstract

Even though the number of studies on emotions and populism has significantly increased, the only evidence we more or less know is that anger activates populist support. This paper addresses emotional reactions caused by encountering instances of relative deprivation and how these emotional reactions affect populist outcomes. In particular, it is claimed that perceptions of relative deprivation affect populist support via emotions. Relying on the appraisal theory of emotions, I revisit which appraisals and emotions people are likely to feel when facing an instance of relative deprivation, and how people's appraisals and emotions may affect populist outcomes. It is argued that the appraisals of problem-focused coping potential (PFCP) and other-accountability are likely to activate populist support. In addition, the role of individual differences in appraisal are accounted. It is argued that self-efficacy beliefs are likely to enhance the level of the appraised PFCP, while justice sensitivity beliefs are likely to increase the level of the appraisal of other-accountability. A theoretical model and a set of hypotheses are proposed for future empirical testing.

Keywords: populism, emotions, perceived relative deprivation, appraisals, individual differences in appraisal.

CHAPTER 2. INTRODUCING THE THEORETICAL MECHANISM

2.1. Introduction

Populist rhetoric intensively uses emotions (e.g., Widmann, 2021, 2022; Rhodes-Purdy et al. 2021) and instances of relative deprivation (Hameleers et al., 2017; Filsinger, 2023) to attract supporters. A considerable attention has recently been paid to the role of emotions in activating populist support (e.g., Salmela & von Scheve, 2017, 2018; Demertzis, 2006; Widmann, 2021; Rico et al., 2017; Capelos et al., 2021; Rhodes-Purdy et al., 2021; Hameleers et al., 2017). There is a consensus that anger activates populist outcomes (Rico et al., 2017, 2020; Vasilopoulos et al., 2019, Vasilopoulos, 2018; Nguyen, Salmela, & von Scheve, 2022; Hameleers et al., 2017; Rhodes-Purdy et al., 2021). Significantly less attention has been paid to the role of other emotions. Fear was found to decrease populist support (e.g., Vasilopoulos et al., 2019), but it also led to inconsistent findings (Rhodes-Purdy et al., 2021), or was unrelated to populism (Rico et al., 2017; Nguyen et al., 2022). The effect of sadness on populist outcomes was insignificant (Rico et al., 2016). Despite the considerable amount of literature, we lack the understanding of which emotions and why affect populist outcomes in particular ways.

This article addresses the role of emotions in inducing populist support by revisiting one of the well-established explanations of populism – perceived relative deprivation. Majority of researchers have assumed that perceived relative deprivation enhances populist support (e.g., Pettigrew, 2017; Urbanska & Guimond, 2018; Marchlewska et al., 2018; Elchardus & Spruyt, 2016; Filsinger, 2023; Manunta et al., 2022). Researchers studying perceived relative deprivation advocated for an inclusion of emotions in addressing its fallout (Smith et al., 2012; Smith & Pettigrew, 2014). However, so far, no research has considered the role of emotions in shaping the way perceived relative deprivation affects populism, which I do in this article.

Despite the numerous contributions on the role of emotions in affecting populist support, there is a need for a more systematic review why in response to a particular stimulus,

such as encountering an instance of relative deprivation, people respond with particular emotions, which emotions these are, and how these emotions affect populist outcomes. Understanding mechanisms behind emotional experiences would help explain why in the face of injustice some people form populist attitudes and others not. That is why I use the appraisal theory of emotions (Smith & Kirby, 2011; Smith & Lazarus, 1993; Smith & Kirby, 2009).

Under an appraisal one understands an evaluation of an event which is largely immediate, implicit and outside of people's awareness (Kappas, 2006). According to several appraisal theories of emotions, an emotional episode starts with appraisals, which determine the motivational, somatic, motor and the feeling components of emotional experience (Moors et al., 2013; Scherer, 2005). The feeling component is what we typically describe as emotions. While the appraisal is predominantly unconscious, part of it can become conscious as part of emotions (Scherer, 2009; Moors et al., 2013). Appraisals account for emotional elicitation and differentiation. Additionally, the appraisal theory of emotions allows to explain variability in emotional reactions among different people (e.g., Smith & Kirby, 2011; Moors et al., 2013).

In this article, I review the literature on the relationship between the perceived relative deprivation and populist outcomes, and how emotions affect populist support. I propose a theoretical model of how encountering an instance of relative deprivation affects populism through emotions and appraisals. To develop the model, I conduct a systematic review of how people appraise instances of relative deprivation, and how these appraisals may shape populist outcomes. This expands the existing research on the impact of the perceptions of relative deprivation on populism by adding emotional reactions to the model, which, as claimed here, play a key role in driving populist support (see also Smith & Pettigrew, 2014). Several appraisals linked to how people react to disadvantaged social comparisons causing perceived relative deprivation were suggested by Smith et al. (2008; see also Smith & Pettigrew, 2014), but not all of them are likely to affect populist outcomes. Since populist attitudes were linked with specific emotions (e.g., anger and fear), I focus on appraisals central for these emotions:

problem-focused coping potential (PFCP) and other-accountability. Moreover, I suggest that it is beneficial to account for the role of individual differences in appraisal (e.g., Kuppens & Tong, 2010; Smith & Kirby, 2009; Kuppens et al., 2007): in a same situation, different people are likely to experience different emotions and behave differently. I suggest that two individual dispositions are crucial in shaping the way an instance of relative deprivation is appraised: self-efficacy beliefs, which inform the appraised PFCP, and justice sensitivity beliefs, which inform the appraised other-accountability.

In the sections to follow, I firstly present how perceived relative deprivation affects populist outcomes and which emotions affect populist outcomes. I proceed with the appraisals that are likely to result from encountering instances of relative deprivation, which explain why people experience particular emotions and how these emotions may affect populist outcomes. Further, I elaborate on the role of emotions and address the role of the individual differences in appraisal. Lastly, I summarize the hypotheses of model and conclude with implications of the proposed mechanism for future research and policy implications.

2.2. Perceptions of relative deprivation and populism

Perceptions of relative deprivation can be defined as a subjective state resulting from disadvantaged social comparisons (when an individual compares the social situation of themselves or the ingroup with the social situation of another individual or outgroup), which happen due to a reason or a process perceived as unfair, while the individual thinks they or the ingroup deserve more (Smith et al., 2012). Perceptions of relative deprivation affect different kinds of political attitudes and behavior such as participation in protest (Smith et al., 2008, Walker & Mann, 1987), prejudice towards outgroups (Meuleman et al., 2020; Pettigrew & Meertens, 1995), and, which is of particular relevance here, populism (e.g., Marchlewska et al., 2018, Elchardus & Spruyt, 2016; Urbanska & Guimond, 2018; Spruyt, Keppens, & Van Droogenbroeck, 2016).

CHAPTER 2. INTRODUCING THE THEORETICAL MECHANISM

In this article, I follow the so-called "ideational approach" to populism, according to which populism is a "unique set of ideas, one that understands politics as a Manichean struggle between a reified will of the people and a conspiring elite" (Hawkins & Rovira Kaltwasser, 2018, p. 3). Populism consists of the moral opposition between the vicious and self-serving elites and the virtuous and homogenous people, and supposes that the general will of the people should guide politics (Hawkins & Rovira Kaltwasser, 2018, Mudde, 2004). Populism as a set of ideas adopts different ideological contents depending on people's grievances existing in a particular society (Hawkins & Rovira Kaltwasser, 2018).

A considerable number of empirical studies employs populist attitudes as a measure of populism. Populist attitudes can be defined as a disposition to endorse populist ideas on the nature of the people and elites coupled with the Manichean opposition between them (Hawkins & Rovira Kaltwasser, 2018; Schulz et al., 2020). Populist attitudes are activated through framing and may lead to populist support (Hawkins & Rovira Kaltwasser, 2018). Populist attitudes are comprised of such components as anti-elitism, homogeneity, and popular sovereignty (Schulz et al., 2018; for an overview, see Castanho Silva et al., 2020).

A positive association or causal relationship between perceptions of relative deprivation and populist outcomes was found in multiple studies with diverse indicators of populism (e.g., Elchardus & Spruyt, 2016; Spruyt et al., 2016; Abrams & Grant, 2012, Urbinska & Guimond, 2018; Marchlewska et al., 2018; Manunta et al., 2022). Therefore, also in this paper, it is assumed that perceptions of relative deprivation enhance populist support. In contrast to existing literature, I claim that whether deprived people adopt populist ideas or support populists depends on two factors. First, the question is whether encountering instances of relative deprivation triggers emotions among people. Second, of importance is which emotions they experience. The following section is devoted to the impact of emotions on populist support.

2.3. Emotions and populism

CHAPTER 2. INTRODUCING THE THEORETICAL MECHANISM

There is a number of reasons why it is vital to study emotions in relation to populism. Researchers write about the emotionality of members of populist movements (Rhodes-Purdy et al. 2021) and wide usage of emotions in populist rhetoric (Widmann, 2021, 2022; Rhodes-Purdy et al. 2021). Moreover, since emotions are dynamic, they can account for the sharp changes in the popularity of populism (Rhodes-Purdy et al. 2021), whereas negative emotions can serve as a frame activating populist attitudes (Hawkins & Rovira Kaltwasser, 2018).

Unsurprisingly, emotions have been considered in numerous studies, especially, those focusing on the role of anger (e.g., Rico et al., 2017, 2020; Vasilopoulos et al., 2019, Vasilopoulos, 2018; Nguyen et al., 2022; Hameleers et al., 2017; Rhodes-Purdy et al. 2021; Magni, 2017). It was found that anger in relation to the economic crisis in Spain enhanced people's populist attitudes and increased the propensity of voting for the populist-left party Podemos (Rico et al., 2017). People feeling angry about the terror attacks in Paris in 2015, especially those equipped with authoritarian values, were more prone to vote for the populist right party Front National in France (Vasilopoulos et al., 2019). Generalized anger increased the support for the right-wing party Alternative für Deutschland (AfD) in Germany (Nguyen et al., 2022).

In contrast, fear about the terror attacks in Paris diminished the likelihood of voting for Front National (Vasilopoulos et al., 2019). Fear about the economic crisis did not significantly affect populist attitudes and the likelihood of voting for Podemos (Rico et al., 2017; see also Rhodes-Purdy et al. 2021 who found inconsistent results on fear), while generalized fear did not enhance the support for the AFD in Germany (Nguyen et al., 2022). A related to fear emotion of worry (e.g., Sacharin, Schlegel, & Scherer, 2012) revealed mixed evidence: worries about migrants, criminals, economy and one's own economic situation increased support for the AfD, while worries about the climate change and environment decreased support for the AfD (Nguyen et al., 2022).

In some studies, also other emotions were used. Sadness about the economic crisis was unrelated to populist outcomes (Rico et al., 2016). Mattes et al. (2018) advocate for an inclusion of contempt towards politicians in political campaigns. They measured the association of contempt, anger, and fear resulting from the exposure to advertisements with voting intentions for the populist candidate for presidency in the USA Donald Trump and his non-populist rival Hilary Clinton.

Salmela and von Scheve (2017, 2018) in their explanations of populism describe complex affective processes. They suggest two mechanisms of how emotions mediate the relationship between the way people perceive economic and socio-cultural change and support for populist right parties. In the first mechanism, addressed as ressentiment (see also Salmela & Capelos, 2021), negative emotions, including fear and insecurity, turn through repressed shame into resentment and hatred. The latter emotions are targeted towards outgroups, such as immigrants, unemployed, and "the elites". All of these groups are perceived as enemies of "the people". The second mechanism involves managing negative social identities that cause feelings of shame and other negative emotions. To cope with these negative identities and emotions related to them, people search for attractively stable identities based on nationality, traditional roles, or other foundations. Such positive identities are endorsed by the populist right (Salmela & von Scheve, 2017). Salmela and von Scheve (2018) explained support for the populist left in the following way: people become aware of and share socially negative self-focused emotions, such as shame. Through social bonds, these emotions transform into resentment at neoliberal policies and their advocates or into positive feelings, like hope, pride, and joy.

Ressentiment seems particularly applicable to experience of relative deprivation: Salmela and Capelos (2021) suggest that ressentiment manages frustration through reassessing what was previously desired and unattainable to become undesired, whereas the self, previously perceived as inferior and unsuccessful is reassessed to become "noble and

superior" (p. 192). However, in practical terms, testing of such complex models is rather rare (but, cf., Nguyen et al., 2022), and is problematic with non-longitudinal designs with emotions captured with self-reported measures. In contrast, majority of studies employs a limited number of negative discrete emotions measured with verbal self-reported measures (but cf. Schumacher, Rooduijn, & Bakker, 2022, who measured arousal with skin-conductance and valence with facial electromyography).

While the emotions suggested above, and especially anger, render plausible mechanisms for why people may endorse populist ideas or not, we lack explanations for why people feel these emotions. Given that populist outcomes were linked to specific emotions (e.g., anger and fear), I focus on appraisals which enable us to predict these emotions.

2.4. The role of appraisals

Appraisal theory assumes that appraisals play a central role in emotion elicitation, since an appraisal "triggers and differentiates emotional episodes through synchronic changes in other components. Appraisal determines the intensity and quality of action tendencies, responses, behavior and feelings" (Moors et al., 2013, p. 120). Appraisals signal what the circumstances of a stimulus mean for the individual in relation to one's well-being (Smith & Kirby, 2011). Appraisals can be both automatic, immediate, intuitive, outside of people's awareness, as well as reflective and conscious; both types of appraisals elicit emotions (Kappas, 2006).

Of particular importance for us is that specific appraisal patterns help us understand whether people experience emotions and why people experience specific emotions. As Moors et al. (2013) write, "if only a few appraisals yield results, the emotional experience is relatively undifferentiated and global; if many appraisals are made, the emotional experience is highly differentiated and specific" (p. 121).

In research on relative deprivation, it has already been suggested that cognitive antecedents of perceived relative deprivation correspond to particular appraisal patterns,

which induce emotions (Smith & Pettigrew, 2014; Smith et al., 2008; Smith et al., 2012). In particular, the desire for something people do not possess, which is embedded in a disadvantaged social comparison, corresponds to the appraisal of high motivational relevance and low motivational congruence. The appraisal of legitimacy of the process causing perceptions of relative deprivation corresponds to the appraisal of legitimacy or fairness, the appraisal of responsibility corresponds to the appraisal of agency or responsibility in appraisal theories, the appraisal of efficacy relates to coping potential or controllability, whereas the estimate of deterioration or improvement of the situation relates to appraisals of future expectations, probability, and stability addressed in different appraisal theories of emotion (Smith et al., 2008; see also Smith & Pettigrew, 2014).

Also, in research on populism, predictions were made on appraisal patterns explaining emotions. Rico et al. (2017) suggested that three appraisals are informative to predict emotional reactions to the economic crisis: certainty (meaning how likely an outcome will happen), responsibility (who is responsible for a disadvantaged situation), and efficacy (capability to influence the disadvantaged situation). Authors used appraisal theories of emotion together with the theory of affective intelligence to justify the choice of discrete emotions (anger, fear, and sadness), but their predictions about the influence of selected emotions on populist outcomes were informed by the latter theory. Hameleers, Bos, and de Vreese (2017) addressed appraisals of certainty and controllability in order to derive hypotheses on how anger and fear coupled with blame attributions in communication affects populist attitudes.

Both strains of research on appraisals related to perceptions of relative deprivation and appraisals explaining emotional reactions, which predict populism, provide helpful evidence. Still, in order to use them in one mechanism, I revisit which appraisal patterns can explain how encountering instances of relative deprivation induces emotional reactions which affect

populist outcomes. In the selection of appraisals, I predominantly rely on the appraisal theory of Smith and Kirby (2011, 2009, Smith & Lazarus, 1993).

People constantly appraise internal and external stimuli in the environment, which, however, not always results in emotions. Whether people feel emotions depends on whether an appraised event is considered to be of importance to one's wellbeing (Smith & Kirby, 2011). Emotions signal that a situation needs to be attended to (Yih et al., 2020). In case an individual encounters an instance of relative deprivation which is perceived as undesirable and hinders the person in reaching one's goals (low appraised motivational congruence), the situation is appraised as stressful (Smith & Kirby, 2011).

Appraisals, which reflect what people can do about the situation determine emotion differentiation (Smith & Kirby, 2011). Whether individuals facing instances of relative deprivation feel anger, sadness, or other emotions is likely to depend on the appraisals of PFCP and other-accountability. The appraised PFCP stands for the capability to act upon an undesired situation to bring it in accordance with individuals' goals, whereas other-accountability means that someone other than the self is responsible for the disadvantaged situation. Anger is caused by the core relational theme of "other-blame" (Smith & Lazarus, 1993; Smith & Kirby, 2011) and high level of the appraised PFCP (Scherer, 2001). On the contrary, sadness is characterized by a low level of the appraised PFCP. Fear is characterized by a low level of PFCP (Smith & Lazarus, 1993, 1990; Ellsworth & Scherer, 2003; Scherer, 2001). The appraisal of self-accountability (when people blame themselves for an undesired situation) is likely to result in the feelings of shame or guilt (Smith & Kirby, 2011, Smith & Kirby, 2004). In addition, the selected appraisals enable us to also address two other emotions – contempt and disgust, which in some theories are characterized by relatively high levels of other-accountability (Smith & Ellsworth, 1985, p. 828; Haidt, 2003; on disgust, see also Scherer, 2001, p. 116) and a high level of appraised PFCP (Roseman, 2013).

Both appraisals of PFCP and other-accountability have been addressed in research on perceived relative deprivation by Smith et al. (2008) and populism by Rico et al. (2017). In contrast to Smith et al. (2012), instead of the appraisal of illegitimacy, I propose to account for individual differences in justice sensitivity being sensitive to issues of injustice and unfairness (e.g., Baumert & Schmitt, 2016), which I address later in the article. I do not include the appraisal of future expectancy, since the focus is on how people appraise an instance of relative deprivation in the present and not the fallout of relative deprivation in the future. In contrast to Rico et al. (2017), I do not hold the appraisal of certainty crucial for shaping the way deprived people adopt a populist outlook. The appraisal of certainty is different from the appraisal of future expectancy used by Smith et al. (2008), it is not included in the majority of definitions of perceptions of relative deprivation (e.g., Pettigrew, 2017; Urbanska & Guimond, 2018).

Even though the appraisals of PFCP and other-accountability have not been addressed in populism research, phenomena close to them has been used to explain populist outcomes. I next review the studies which give evidence on how these appraisals are likely to affect populist outcomes. I formulate hypotheses based on this literature.

2.4.1. Appraisal of problem-focused coping potential

PFCP is "an assessment of the individual's ability to act on the situation to increase or maintain its desirability" (Smith & Kirby, 2009, p. 1357). It captures an "evaluation of one's ability to do something, which is not necessarily specified, to improve (or maintain) the desirability of the situation" (Smith & Kirby, 2009, p. 1361). Scherer and Moors (2019) treated PFCP as prospective control, which they defined as an expectation that one will be capable in the future to change a currently undesired stimulus to a desired one.

The appraisal of PFCP contains an evaluation of how difficult it is to change a situation in a desired way and how this evaluation relates to one's perceived ability to make this change. If an immediate solution to a problem is available, or an individual thinks they

can easily solve the problem, the appraised PFCP is very high. On the contrary, if the perceived difficulty exceeds the perceived abilities or no immediate solutions are available, that appraisal of PFCP is low (Smith & Kirby, 2009; Kappas, 2001). A low level of the appraisal of the appraised PFCP is undesirable for individual's wellbeing (Smith & Kirby, 2011). If the appraised situation is similar to other previous situations, than the evaluation of the appraisal of PFCP depends on remembering success in those situations (Kappas, 2001). Important to note that in real life (in contrast to laboratory research or studies on academic performance where the role of PFCP was studied, e.g., Smith & Kirby, 2009; Smith & Pope, 1992; Kappas, 1999), the appraised situations are rather complex, and it is difficult to predict whether people will be capable to change a situation in a desired way (Kappas, 2001). According to Scherer and Moors (2019), a high level of PFCP makes people more active in achieving desired outcomes and also leads to the tendency of aggressive and antisocial behavior. A low level of PFCP results in resistance and opposition to an undesired outcome and, over time, a tendency to be more passive. It also stimulates the tendency to avoid (Scherer & Moors, 2019). This could hint at the possibility that a high level of PFCP is likely to activate populist support.

Concepts close to the appraised PFCP have been used to explain populist support, such as internal political efficacy (e.g., Magni, 2017; Rico et al., 2020; Spruyt et al., 2016) and powerlessness (Salmela & von Scheve, 2017). Surprisingly, researchers make different predictions and find diverse empirical evidence. Rico et al. (2020) argues that a higher level of internal efficacy enhances populist attitudes. According to the authors, since populist parties challenge elites and glorify "the will of the people" in making political decisions, a high level of internal efficacy serves as a pre-requisite for adopting populist attitudes: people perceive themselves capable to understand and participate in politics. Rico et al. (2020) found support for their hypothesis addressing only popular sovereignty, one of components of populist attitudes.

On the contrary, Magni (2017) suggests, in case people blame the political system for economic hardships but are inefficacious, they tend to think that a change is not feasible. In this situation, populists become especially attractive, since they are capable of channeling grievances of powerless people and offer them a clear target to blame – the elites – and a way to change the situation outside of the existing political system. Magni (2017) found that angry people with a low level of internal political efficacy voted for far-right populists, whereas angry efficacious people supported mainstream opposition. In contrast, Spruyt et al. (2016) found no effect of internal political efficacy on populist attitudes, which they explained in the following way: since factors outside of the individual were made responsible for feelings of vulnerability (such as perceptions of relative deprivation and low levels of external political efficacy), the situation is perceived as being out of individual's control.

I suggest that, despite the diverse evidence, a high level of appraised PFCP is likely to activate populist support. This hypothesis is indirectly confirmed by the consistent finding that anger, an emotion characterized by a high level of appraised PFCP, enhances populist outcomes. From appraisal theories of emotions (e.g., Smith & Kirby, 2011; Scherer, 2001), we know that people feel angry when they appraise their coping potential as high.

2.4.2. Appraisal of other-accountability

Appraisal of other-accountability is an assessment whether someone is responsible for a disadvantaged or stressful situation (Smith & Kirby, 2011). It "provides direction and focus to the emotional response and the coping it motivates" (Smith & Pope, 1992, p. 41). If the situation is motivationally incongruent and oneself is not responsible for it, the appraisal of other-accountability directs who should be blamed for it and towards who emotions, attitudes, and behavior should be directed. Blaming another person for a negative outcome increases aggressive behavioral tendencies; if the self is blamed and another person experiences a negative outcome, one feels regret or guilt (Scherer & Moors, 2019; Smith & Kirby, 2011; Haidt, 2003).

CHAPTER 2. INTRODUCING THE THEORETICAL MECHANISM

In populism research, Hawkins and Rovira Kaltwasser (2018) treat dispositional blame attributions as a framing involved in populist rhetoric, which can activate populist attitudes: people are encouraged to blame elites for governmental failures as if they were done on intend. Populism, which presents 'the people 'as pure and 'the establishment' as vicious, is "inherently about attributing blame to others while absolving the people of responsibility" (Hameleers, Bos, de Vreese, 2020, p. 871). Elites are blamed for not representing the people, for negative outcomes of the ingroup, and for threatening the future of the ingroup. Spruyt et al. (2016) suggests that people experiencing vulnerability, such as perceptions of relative deprivation, find in populism a coping strategy guarding their self-esteem. For doing so, people transfer their personal responsibility for perceived relative deprivation and feelings of frustration to the group level (one's own problems turn into the problems of the ingroup). Hameleers et al. (2020), drawing on the social identity approach, argue that attributing blame to the outgroup (in our case, "the elites") helps individuals who self-identify as members of the ingroup (in our case, "the people") to maintain a positive self-concept by blaming the outgroup for the negative qualities which they attribute to the outgroup.

Indeed, several studies have shown the effect of blame attributions on driving populist attitudes. Hameleers and Schmuck (2017) found that blaming elites activated anti-establishment and popular sovereignty attitudes in case people trusted the source of information. Hameleers et al. (2020) found that blame attributions to the Dutch government and the EU authorities slightly activated populist attitudes. Blame attribution increased the perceptions that people's will was not represented by politicians and, though to a less extent, the perception of the moral antagonism between "the good people" and "the culprit elites". These effects were dependent on national and European identity, which dampened the effects of blame attribution on populist attitudes.

Following Hameleers et al. (2020) and Hameleers and Schmuck (2017), I expect that blaming political or economic elites for causing instances of relative deprivation is likely to

make people adopt a populist outlook and support populist politicians. If, on the contrary, populists are part of elites, the opposition, economic or international organizations and authorities are blamed (e.g., Müller, 2016; Wondreys & Mudde, 2022). In case people are not satisfied with the status quo, they may hope for an improvement brought by populists, or be eager to punish the elites for the disadvantaged situation (in case populists are not in power).

In contrast, the appraisal of self-accountability is an assessment that the self is responsible for the disadvantaged situation (Smith & Kirby, 2011). If people tend to blame themselves, they are unlikely to support populists who challenge the incumbents (no effect or a negative effect on populist outcomes is possible).

2.4.3. Appraisals and emotions

Now that both the role of appraisals and emotions which are likely to be caused by instances of relative deprivation was introduced, of importance is to make predictions how particular emotions shape populist outcomes. According to the appraisal theory, anger motivates people to remove the source of harm, whereas guilt or shame motivates one to remove the harm oneself did to others (Smith & Lazarus, 1990; Haidt, 2003). Sadness motivates people to disengage from the situation (Smith & Kirby, 2011). Fear motivates people to be cautious and avoid potential harm (Smith & Lazarus, 1990, Smith & Kirby, 2011).

Emotions characterized by other-blame and higher levels of PFCP are likely to enhance populist outcomes. Apart from anger, these can also be such emotions as contempt and disgust. One can expect that these emotions felt in reaction to instances of relative deprivation, are likely to activate populist outcomes. On the contrary, emotions characterized by the appraisal that individuals are incapable to change the disadvantaged situation coupled with the lack of other-accountability, such as fear, shame, and sadness, and emotions characterized by self-blame, such as guilt and sadness, are likely to make populist appeals less attractive.

2.5. Individual differences in appraising instances of relative deprivation

Still, people are different in how they react to the same situation in terms of appraisals, emotions, and behavior, which can be accounted by dispositional differences in appraisal (e.g., Smith & Kirby, 2011, 2009). The appraisal process is formed by people's dispositional (which relate to personality, pre-existing beliefs, values, and emotion traits) and situational (which relate to the characteristics of an appraised event) factors (Kuppens & Tong, 2010; Kappas, 2001; Poluektova, Kappas, & Smith, 2023; Smith & Kirby, 2009). There are different sources of individual differences in emotion elicitation and experience: people may appraise an event differently, appraisals may be differently related to emotions, and emotions can be regulated differently (Kuppens & Tong, 2010). Here I consider the role of the first two sources.

Firstly, same events can be differently appraised. Since appraisals are not only reflective and conscious processes, but they are also fast and automatic (Kappas, 2006), not all the available information of a situation is used in the appraisal process. Personality and pre-existing beliefs guide the way people process information when forming appraisal. For example, people may have hostile attribution bias and blame others for disadvantaged outcomes, tend to evaluate their PFCP as high or low due to their self-efficacy beliefs, or perceive situations as more unfair. These distortions can be explained by personality traits, since certain personality constructs (e.g., blame attributions) are easily accessible and are activated by lower levels of stimuli (Kuppens & Tong, 2010).

Second, also the way appraisals are related to emotions differs among people: the same appraisals patterns, which are believed to elicit certain emotions in accordance with appraisal theories, do not always result in particular emotional reactions (Kuppens & Tong, 2010; Kuppens et al., 2007). Of importance are biases, or systematic distortions, which explain why some people may experience certain emotions more frequently and at a higher intensity than other people (see also Scherer, 2021). Same appraisals may lead to different

outcomes among different people: while for majority of individuals the appraisal of goal frustration was sufficient to make them feel angry, for other individuals, appraisal patterns also included appraisals of other-accountability and unfairness (Kuppens et al., 2007). Moreover, it was found that external attribution bias, when others are constantly blamed for disadvantaged situations (which they are not responsible for), caused anger and contempt emotion dispositions, whereas underestimation of the appraised controllability and personal power to influence on event (in other words, underestimation of one's PFCP) resulted in the emotion dispositions of sadness, worry, and fear (Scherer, 2021).

It is important to note that individual differences in appraisal are not themselves drivers of populism. The way people emotionally react to instances of relative deprivation is likely to be an important predictor of populist support. However, individual factors are useful in explaining why people appraise the event one way or another. Individual factors not only directly affect appraisals (and through them emotions), but also interact with the available situational information used to form the appraisals. That means how much personality contributes to the appraisal process may also depend on situational information (Kuppens & Tong, 2010). For instance, Kuppens and van Mechelen (2007) found that personality traits of neuroticism and self-esteem only in specific situations affected the appraisal of other-accountability.

Even though different personality characteristics may be relevant for how people appraise instances of relative deprivation, two of them are likely to be of particular importance in shaping the selected appraisals: self-efficacy beliefs and justice sensitivity beliefs. I propose that self-efficacy beliefs shape the appraisals of problem-focused coping potential, while justice sensitivity beliefs affect the appraisal of other-accountability. In populism research, a phenomenon related to it, internal political efficacy was addressed as a moderator (Magni, 2017) or a predictor (Rico et al., 2020; Spruyt et al., 2016) of populist outcomes. Rothmund, Bromme, and Azevedo (2020) tested how justice sensitivity beliefs

affect populist attitudes and voting for the populist right. I now introduce the role of these personality characteristics.

Self-efficacy beliefs are "people's beliefs about their capabilities to exercise control over events that affect their lives" (Bandura, 1989, p.1175). They are stable within individuals and can be regarded as cognitive schemata components (Poluektova et al., 2023). Self-efficacy beliefs are associated with positive emotions, optimistic appraisals, efficient coping, they are positively related to well-being and accomplishments (Bandura, 1989, 1997; Karademas, Kafetsios, and Sideridis, 2007, Karademas & Kalantzi-Azizi, 2004).

It is important to differentiate between self-efficacy, appraised PFCP and internal political efficacy. PFCP refers to several behaviors, combining expectancies of success and several self-efficacy judgements which are done in parallel (Poluektova et al., 2023). Expectancies of success predict whether and which actions can be done to attain a desired outcome, while self-efficacy judgements estimate one's capabilities of coping in a particular situation. As Smith and Kirby write, PFCP is an "evaluation of one's ability to do *something*, which is not necessarily specified, to improve (or maintain) the desirability of the situation" (2009, p.1361). Another concept, internal political efficacy, which was used in populism research (e.g., Spruyt et al., 2016; Magni, 2017), stands for "beliefs about one's own competence to understand, and to participate effectively in, politics" (Niemi, Craig, & Mattei, 1991, p. 1407). While self-efficacy beliefs capture general and stable characteristics of individuals (Poluektova et al., 2023), internal political efficacy is domain-specific (e.g., Bandura, 1997), since it only refers to the sphere of politics. In contrast, appraised PFCP relates to a situational appraisal.

Self-efficacy beliefs guide the appraised PFCP through attentional (which information about a situation is used in the appraisal process), memory (which situations in relation to self-efficacy individuals are recalled), and attributional (whether people attribute success and failure internally or externally) processes (Poluektova et al., 2023; Karademas et al., 2007).

People with lower levels of self-efficacy are more likely to pay attention to cues of a situation which are related to a potential failure, allocate more attention to threat-related stimuli, more often retrieve memories when they failed. They tend to attribute success to external or internal unstable factors, and failure to internal and stable factors. On the contrary, people with high levels of self-efficacy focus on the positive aspects of a stressful situation and engage in more effective coping strategies, are more likely to activate memories of success, attribute success to internal and stable causes and failure to external and internal unstable factors (Poluektova et al., 2023; Karademas et al., 2007; Bandura, 1994, 1989). Therefore, I assume that people with higher levels of self-efficacy beliefs who face an instance of relative deprivation are more likely to appraise their PFCP higher than people with lower levels of self-efficacy beliefs.

Justice Sensitivity. Perceptions that people do not get what they think they are entitled to and that the process leading to perceived inequality is unfair are at the core of perceived relative deprivation (e.g., Smith et al., 2012, 2008; Pettigrew, 2017, Smith & Pettigrew, 2014). Osborne and Sibley (2013) found that the effect of perceived relative deprivation on several outcome variables was dampened by system justifying beliefs (see also Smith & Pettigrew, 2014). For instance, people strongly endorsing justice sensitivity beliefs were two times less motivated to support political mobilization. Endorsement of justice sensitivity beliefs protects people from experiencing psychological distress and makes them less prone to assess their own standards of living (Osborne & Sibley, 2013). To address the individual bias of information processing related to fairness and justice, I use justice sensitivity beliefs.

Justice sensitivity beliefs are personality dispositions reflecting a person's concern for justice. They capture "stable and consistent differences in individuals' readiness to perceive injustice and in the strength of their cognitive, emotional, and behavioral reactions to injustice" (Baumert & Schmitt, 2016, p. 162). There are four indicators of justice sensitivity based on the perspective of the person: victim sensitivity, when a person perceives themselves

as a victim of injustice, observer sensitivity, when a person observes injustice happening to others, beneficiary sensitivity, when a person passively benefits from injustice happening to others, and perpetrator sensitivity, when a person is an active perpetrator of injustice (Baumert et al., 2014; Baumert & Schmitt, 2016).

I argue that victim sensitivity and observer sensitivity are relevant to situations of relative deprivation. Victim sensitivity is likely to affect the appraisal of other-accountability if interests of the deprived person are affected. If a person feels deprived on behalf of other people, whom one feels empathy towards or affiliates with (e.g., people sharing the same social category as the observer of injustice), one's appraisal of other-accountability may be affected by observer sensitivity beliefs. Other types of justice sensitivity can be related to perceived relative gratification instead (see, Baumert & Schmitt, 2016). Rothmund et al. (2020) suggested that victim sensitivity serves as a dispositional tendency to perceive relative deprivation, since it involves the fear of being exploited and deprived. Baumert et al. (2014) found that victim and observer sensitivity are positively related to social comparisons, which are a key component of perceived relative deprivation (Smith et al., 2012). Victim sensitivity involves people's inclination to compare their own treatment and outcome to those of other people, while observer sensitivity serves as an inclination to make social comparisons among other individuals (Baumert et al., 2014). Rothmund et al. (2020) found that victim sensitivity positively related to populist attitudes, preferences for the populist president Trump in the USA and the populist right party AfD in Germany. On the contrary, other-oriented justice sensitivity (which encompasses observer sensitivity, beneficiary sensitivity, and perpetrator sensitivity) was negatively related to populist attitudes, preference for Trump and the AfD.

Of particular importance here is how justice sensitivity beliefs serve as a bias in information processing. Baumert et al. (2011) showed that observer sensitivity was related to the accessibility and activation of injustice-related concepts. Observer sensitive individuals were more attentive to unjust cues than to negative cues; they perceived ambiguous situations

as less fair compared to people with lower levels of justice sensitivity beliefs. Besides, individuals with a high level of observer sensitivity had more accurate memories of unjust information. Given that individual's attention, interpretation, and memory are affected by justice sensitivity beliefs, people with higher levels of observer sensitivity are more likely to react to instances of injustice, including deliberate and automatic processing of information, and are strongly guided by justice-related information in their behavior (Baumert et al., 2011). There is also evidence that people with higher levels of victim sensitivity are more susceptible to unjust cues (Baumert & Schmitt, 2016). Baumert and Schmitt (2016) argue in case a person is disadvantaged themselves, victim sensitivity predicts people's emotions and behavior in reaction to injustice, whereas if people judge the situation they observe but their own interests are not affected, then observer sensitivity beliefs predict their reactions to injustice.

Given that justice sensitive people are more attentive to cues related to unfairness and injustice, they are more likely to search for causes of injustice, blame others for instances of injustice, and make efforts to redress injustice. According to Baumert, Adra, and Li (2022), people with higher levels of victim sensitivity are more likely to blame outgroup members. Using a third-party punishment game, Lotz et al. (2011) showed that individuals with a high level of observer sensitivity were prone to punish violators of justice to re-establish justice, also at their own expenses. Therefore, I expect that victim sensitivity may enhance appraised other-accountability in case people experience relative deprivation themselves. In case of third-party deprivation (relative deprivation felt from the position of a neutral observer), observer sensitivity is likely to increase the level of appraised other-accountability.

2.6. Summary of the theoretical model

Summarizing the model presented on Figure 2.1, I expect that people facing relative deprivation instances will report higher levels of populist attitudes and be more likely to vote for populists. This relationship is mediated by emotional reactions. In case people encounter an instance of relative deprivation, situational characteristics may inform them that someone

is responsible for the cause of the situation (resulting in a higher level of appraised other-accountability), and some efforts should be done in order to bring the situation closer to their goals (resulting in a lower level of appraised PFCP). These characteristics are embedded in the situation of relative deprivation: if people were themselves responsible for the disadvantaged situation, or the disadvantaged situation could easily be improved, people would not perceive relative deprivation (Smith et al., 2012, Smith & Pettigrew, 2014). At the same time, appraisals are also affected by individual factors: people with higher levels of self-efficacy are likely to pay less attention to negative aspects of a situation and are likely to appraise their PFCP as higher. On the contrary, people with lower levels of self-efficacy may be more attentive to negative aspects of a situation and may generally be more prone to feel that they cannot affect the situation. People with higher levels of justice sensitivity are more likely to search for situational cues rendering that someone is responsible for the situation and to blame someone for the disadvantaged situation. In contrast, people with lower levels of justice sensitivity are less susceptible to situational cues that someone is to blame in the disadvantaged situation and are less likely to blame anyone for the disadvantaged situation. Appraisals of PFCP and other-accountability, in their turn, affect emotions and populist outcomes. High levels of appraised other-accountability and high levels of PFCP result in such emotions as anger, disgust and contempt, which are likely to activate populist support. On the contrary, absence of other-accountability, appraised self-accountability, and the appraisal that one cannot influence the situation in the desired way (low levels of PFCP) are likely to result in such emotions as sadness, fear, guilt, and shame, which are likely to diminish the attractiveness of the populist outlook. Of course, other appraisals, emotions, and personality traits and beliefs and other factors may be of importance to the proposed model. In Table 2.1, I present the key hypotheses and indicate which of them are tested in the thesis.

Figure 2.1

Proposed theoretical model of how perceptions of relative deprivation and emotional reactions affect populism
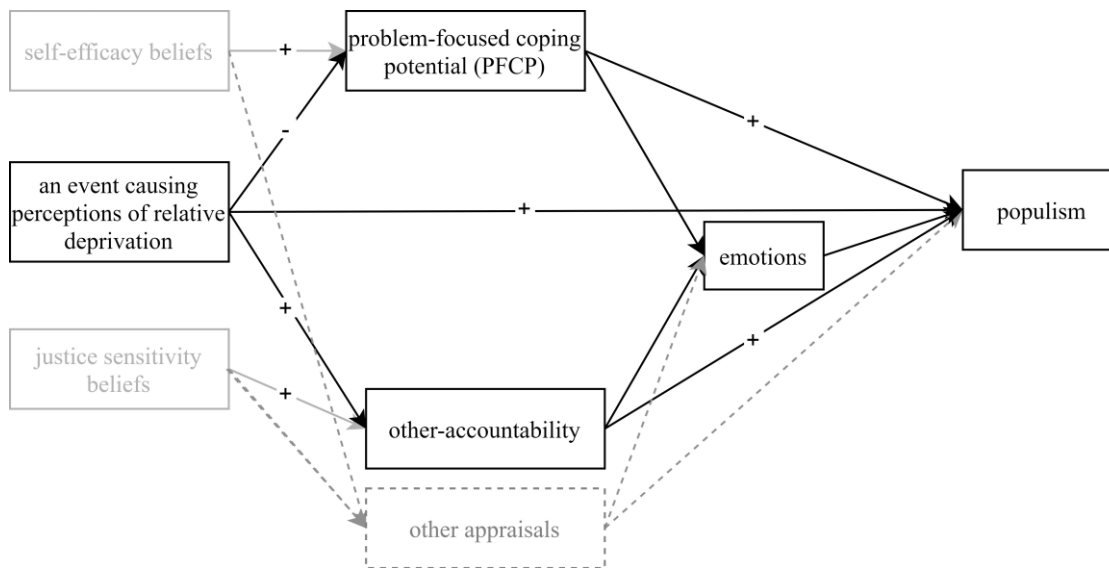
Note. Dashed lines and boxes reflect the possible relations not addressed in the model Effects for emotions are not plotted, since they are different for diverse emotions.

Table 2.1

Overview of hypotheses

	Hypotheses	Addressed
Hypothesis 1	If people encounter an instance of relative deprivation, they are more likely to endorse populist ideas	Chapters 3, 4, 5, 7
Hypothesis 2a	If people encountering an instance of relative deprivation appraise other-accountability as high, they are more likely to endorse populist ideas	Chapter 5
Hypothesis 2b	If people encountering an instance of relative deprivation appraise their PFCP as high, they are more likely to endorse populist ideas	Chapters 5, 7
Hypothesis 3a	If people encountering an instance of relative deprivation feel anger, disgust or contempt, they are more likely to endorse populist ideas	Chapters 4, 5
Hypothesis 3b	If people encountering an instance of relative deprivation feel sadness, fear, or shame, they are less likely to endorse populist ideas	Chapters 4, 5
Hypothesis 4a	People with higher levels of self-efficacy beliefs are likely to appraise their PFCP level higher than those with lower levels of self-efficacy beliefs	Chapter 7[a]
Hypothesis 4b	People with higher levels of justice sensitivity beliefs are likely to appraise other-accountability higher than those with lower levels of justice sensitivity beliefs	Chapter 7 [a]

Note. [a] Hypotheses are not tested in the thesis

2.7. **Conclusions and discussion**

In the paper, a theoretical model of how perceived relative deprivation affects populist outcomes is proposed. In contrast to established literature (e.g., Pettigrew, 2017; Urbanska & Guimond, 2018; Elchardus & Spruyt, 2016), it is argued that this relationship is more complicated than assumed, and the impact of perceived relative deprivation on populist outcomes is mediated by emotions. To have a better understanding of the process how emotional reactions to instances of relative deprivation occur, it is beneficial to go beyond the discrete emotions typically studied in relation to populism. That is why, appraisals are addressed.

Appraisals are responsible for emotions elicitation and differentiation, and they also serve as a pre-condition for the emergence of emotions. It is suggested that two appraisals are crucial for understanding the way people react to instances of relative deprivation, and how the experience of relative deprivation and emotional reactions caused by it affect populist outcomes. High levels of appraised other-accountability are likely to enhance populist outcomes, which is in accordance with the literature on blame attribution and populism (e.g., Hameleers & Schmuck, 2017; Hameleers et al., 2020). High levels of appraised PFCP are assumed to activate populist support (e.g., Rico et al., 2020). However, empirical studies on the effect of internal political efficacy on populist outcomes rendered contradictory results (Rico et al., 2020; Magni, 2017; Spruyt et al., 2016). At the same time, these studies employed not the situational appraisal of PFCP but the more stable internal political efficacy, which generalizes to the domain of politics. Empirical testing is crucial to gain data on the hypothesized here relationships. Potentially, also other factors such as the external political efficacy and knowledge on politics may be if importance to how the appraisal of PFCP is formed.

Moreover, it is suggested that individual differences in appraisal affect the two selected appraisals. Individual differences serve as biases to appraisals, particularly, those

appraisals done fast and in an automatic way, when information on previous experience is missing, or when situations are ambiguous. Self-efficacy beliefs are likely to affect appraised PFCP: the higher one's level of self-efficacy, the more capable people feel they are to change a disadvantaged situation in a desired way (Poluektova et al., 2023). Justice sensitivity beliefs are likely to inform the appraisal of other-accountability: if people are more sensitive to justice-related cues, they are more likely to search for causes of unfairness and injustice and be eager to recover the unfair or unjust situation. Therefore, they may be more prone to find the responsible for it and blame them. It is assumed that the role of individual differences in appraisal is rather small; empirical testing of these effects is missing.

While the paper contains several hypotheses, which may be informative for understanding how perceived relative deprivation affects populist outcomes, several aspects should be considered. Perceptions of relative deprivation are only a possible predictor of populism, together with trust in political institutions or external political efficacy (e.g., Geurkink et al., 2020). Support for populism is explained by other individual characteristics, which are out of scope here: political ideology, level of education, media consumption, and so on. Other sources of bias are likely to affect the selected appraisals, such as optimism (e.g., Karademas et al., 2007), perceived self-esteem, neuroticism, or habitual tendencies to experience particular emotions (Kuppens & van Mechelen, 2007). In addition, the proposed here mechanism may be more complicated. Other appraisals than PFCP and other-accountability may be involved.

Some remarks should also be made in regard to the theoretical model proposed here. First, I predominantly relied on the appraisal theory of emotion of Smith with co-authors (e.g., Smith & Kirby, 2009, 2011; Lazarus & Smith, 1993). Other appraisal theories use other appraisals, such as compatibility with external and internal standards or whether the disadvantaged situation happens due to someone's intent (e.g., Scherer, 2001). Second, while individual differences in appraisal were considered, it would be beneficial to address the

situational factors contributing to differences in appraisals and emotions in the future (e.g., Kuppens & Tong, 2010; Smith & Kirby, 2011). Third, out of the scope were the possible interactions between appraisals and emotions (e.g., Scherer, 2001), feedback loops of appraisals, emotions, and populist outcomes on people's emotional reactions, self-efficacy beliefs (Poluektova et al., 2023; Filsinger, 2023), and justice sensitivity beliefs. Despite their potential role, addressing these complexities would imply complex longitudinal designs with other than self-reported measures of emotions and appraisals, which would be difficult to implement. Next, reversed causality of the proposed model is also possible: indeed, populist supporters are more prone to feel deprived (e.g., Filsinger, 2023) and to experience particular emotions (e.g., Wirz, 2018), which can be determined by populist rhetoric (Widmann, 2021). Lastly, out of scope was the role of reappraisal: people may reconsider their appraisals, and the reappraised emotional reactions may affect populist outcomes (e.g., Abadi, Arnaldo, & Fischer, 2021).

The paper makes several important contributions. The first contribution is the proposed theoretical model, which gives us a new understanding of the psychological processes underlying the way perceptions of relative deprivation affect populism. The model suggests the centrality of emotional process and demonstrates the anticipated complexity of this process, which has been so far neglected in existing literature. In the paper, several hypotheses were formulated, which can be tested in future studies to understand how perceptions of relative deprivation affect populism. Next, the paper provides a systematic account of emotional reactions. By addressing appraisals, one has a better understanding which emotions deprived people are likely to feel, why they are more likely to experience particular emotions and not others, and how emotions may affect populist outcomes. Moreover, the paper brings some clarity in research on self-efficacy, emotions, and populism. Some authors used internal efficacy as an independent variable (Rico et al., 2020), whereas others used it as a moderator of the effect of emotions on populist outcomes (e.g., Magni,

2017). In the paper, it was shown that the role of stable self-efficacy beliefs is different from the situational appraisal of capability to act upon a specific situation. In addition, the paper contributes to the literature which addresses the role of individual differences in appraisal processes, in that it proposes several hypotheses, which can be tested in a real-life context.

The paper also has several practical contributions. It assumes that affective processes play a prominent role in activating populist outcomes. One could in civic education draw attention to the possible negative consequences of emotional reactions and teach people to rely less on deliberate information processing. Also, the proposed mechanism that personal characteristics and situational factors are involved in the appraisal process renders possible directions for future interventions. While personality traits and beliefs are rather stable, situational factors can more easily be acted upon. It is not feasible to prevent instances of relative deprivation from happening, but it is feasible through education to enable people with positive mastery experiences, memories of successfully dealing with similar situations, and provide them with strategies for efficient coping. That would be helpful in making populist ideas less attractive to people facing instances of relative deprivation.

3. Their Grass is Greener! – Are Perceptions of Relative Deprivation Related to Populist Voting? Evidence from European Societies

Abstract

Despite the fact that perceptions of relative deprivation have been addressed as one of predictors of populism, no attention has been paid to the fact that one can feel deprived in one particular life domain, which does not necessarily result in generalized perceptions of relative deprivation. The focus of this paper is whether perceptions of economic, occupational or educational relative deprivation are associated with voting for a populist party. Multilevel analysis was performed for 23 European countries with the European Social Survey (Round 9) data. Across societies, only perceptions of economic relative deprivation were positively and significantly related to populist voting. However, these associations worked differently in different countries: in the Netherlands and France the relationship between perceptions of economic relative deprivation and voting for populist parties was positive, whereas in Spain, Croatia, and Bulgaria, it was negative, and in other countries - insignificant. Cross-country affluence partially accounted for country differences: even though the level of populist voting was higher in poor countries, in affluent societies, the more economic relative deprivation people experienced, the more likely they were to vote for populist parties. Additionally, for a subsample of five countries, the difference of how perceptions of relative deprivation related to voting for populist right and populist left was explored. Results give some evidence that populist left voting was associated with the desire to improve one's economic situation, while right-wing populist voting was also related to non-economic factors.

Keywords: perceptions of relative deprivation, subjective disadvantage, populism, left-wing populism, right-wing populism, populist voting, multilevel analysis

CHAPTER 3: PERCEPTIONS OF RELATIVE DEPRIVATION AND POPULIST VOTING

3.1. Introduction

Angry wight working class men, "losers of globalization" – these typical portraits of populist supporters (e.g., Inglehart & Norris, 2017; Gidron & Hall, 2017; Kriesi et al., 2006) seem rather intuitive. However, empirical evidence renders that across different European countries, populist voters are not necessarily unemployed, with lower income, stemming from lower social classes, and having lower levels of education (Rooduijn, 2018; Spruyt et al., 2016). One of explanations why objective economic measures often fail to explain populism is that not the objective state of being disadvantaged, put perceptions of being disadvantaged, or *perceptions of relative deprivation*, account for populist support (Pettigrew et al, 2017; Urbanska & Guimond, 2018).

Individuals' perceptions of relative deprivation are their erroneous perceptions that "less deserving" groups possess more than they do; these perceptions result from individuals' feelings of being "deprived relative to their hopes and expectations" (Pettigrew, 2017, p. 111). Indeed, perceptions of relative deprivation were found to be one of predictors of populism (e.g., Marchlewska et al., 2018; Urbanska & Guimond, 2018). However, it is erroneous to consider that there is only one type of relative deprivation perceptions, or that one can feel deprived in simultaneously all life domains. People compare themselves with others on different dimensions: for instance, they can be economically disadvantaged, but feel moral superiority. Results of empirical studies render different results for different dimensions of relative deprivation: perceptions of economic (e.g., Urbanska & Guimond, 2018; Marchlewska et al., 2018) or generalized relative deprivation (e.g., Spruyt et al., 2016; Filsinger, 2023) were positively related to populism, while perceptions of occupational relative deprivation were found to be unrelated to right-wing populist voting (Cena et al., 2023). However, in all these studies, different datasets were used, so that associations of different relative deprivation dimensions (e.g., whether people made negative social comparisons with others in terms of wealth or level of education) with populism cannot be compared against each other. I aim to fill this gap.

CHAPTER 3: PERCEPTIONS OF RELATIVE DEPRIVATION AND POPULIST VOTING

The paper makes four contributions. First, I revisit results of Cena et al. (2023), who found no direct relationship between perceptions of relative deprivation and right-wing populist voting. I suggest that of key importance are the dimensions of social comparisons, which underly perceptions of relative deprivation. In particular, Cena et al. (2023) only measured occupational relative deprivation. In contrast, I bring tree types of relative deprivation perceptions – economic, occupational, and educational. I expect perceptions of economic relative deprivation to have a highest association with populist support. Second, I follow Rooduijn (2017), who suggested that one can draw inferences on populist supporters only when addressing both, populist left and right. To explore the relationship between perceptions of relative deprivation and populism in general, I use voting for populist parties as the dependent variable (Rooduijn et al., 2019) in accordance with the thin-centered approach (Mudde, 2004; Mudde & Kaltwasser, 2013). It allows to tap into populism as a phenomenon, and not preferences for host ideologies. Third, I also account for the fact that perceptions of relative deprivation can be differently associated with left- and right-wing populism. For the analysis, I used a subsample from the ESS data with five countries where respondents voted for both populist right and left parties. In contrast to Cena et al. (2023), who addressed far-right parties, in this paper, only parties both marked as populist and right (or left)-wing were included into analysis. Fourth, the paper contributes by addressing the relationship between perceptions of relative deprivation and populist voting in a cross-cultural perspective. Studies relating perceptions of relative deprivation to populist outcomes usually employ either singular cultures (e.g., Urbanska & Guimond, 2018; Elchardus and Spruyt, 2016), or a relatively small number of countries, which does not allow to model country differences (e.g., Gidron & Hall, 2017). Large-scale comparative research of populist supporters is rare (except for, e.g., Kriesi & Bernhard, 2019; Rooduijn, 2018; Cena et al, 2023). I made use of the representative data of 23 European societies from Wave 9 of the European Social Survey (ESS), which allowed to measure perceptions of relative deprivation on different dimensions and to account for the party voted for during the last

elections. Important to mention, that the data is cross-sectional, so I avoid making causal claims, and I cannot expel reversed causality.

I first address the concepts of populism and perceptions of relative deprivation and elaborate on how they are related to each other. Further, I formulate the hypotheses and describe data and method. After describing the results of multilevel analysis for 23 European countries, I present the findings on how perceptions of relative deprivation relate to voting for populist left and right parties. I conclude by explaining why it is important to consider dimensions of perceptions of relative deprivation and address country differences and propose directions for future research on perceptions of relative deprivation and populism.

3.2. Theoretical Framework

3.2.1. Populism

In 2018, Europe faced an unprecedented support of populists: every fourth person voted for them (Lewis et al., 2018). Despite wide debate whether populism is an ideology, discursive style, or a political strategy (e. g., Gidron & Bonikowski, 2013), its most established (e.g., Rooduijn, 2019) definition was introduced by Mudde (2004, p. 543):

> an ideology that considers society to be ultimately separated into two homogeneous and antagonistic groups, "the pure people" versus "the corrupt elite", and which argues that politics should be an expression of the *volonté générale* (general will) of the people.

Therefore, all types of populism entail a moral opposition between the homogenous virtuous people and homogenous vicious elites, as well as the belief that the people are the only legitimate sources of political power (Mudde & Kaltwasser, 2013; Hawkins & Kaltwasser, 2018). These three components of populism form its core and are shared by any type of populism, whereas political contexts shape subtypes of populism, its "host" ideologies, which add to the populist core (Mudde & Kaltwasser, 2013).

CHAPTER 3: PERCEPTIONS OF RELATIVE DEPRIVATION AND POPULIST VOTING

To capture the diversity of types of populism, Mudde & Kaltwasser (2013) suggested to use the dimension of exclusion / inclusion, which reflects how the concepts of "the people" and "the elites" are filled - who belongs to these groups. *Inclusionary populism* implies that particular groups are symbolically included in the definition of "the people". Therefore, they should be more represented and increase their participation in politics; they are targeted at receiving material resources. On the contrary, *exclusionary populism* implies that certain groups are excluded from the definition of "the people" or are included or linked to "the elites". Hence, they should be excluded from full participation and representation in the political system and denied access to material resources such as welfare benefits. One can therefore view left-wing, or inclusionary populism, as including the poor on the socio-economic dimension, and right-wing, or exclusionary populism, as excluding the "aliens" on the socio-cultural dimension (Mudde & Kaltwasser, 2013). In a similar vein, Vachudova writes that European populist parties on the economic left are focused on inequality and redistribution, whereas those on the cultural right are "broadening and amplifying exclusionary appeals" (Vachudova 2021, p. 472).

In both types of populism, the elites can be blamed for not representing people's will (Hameleers & Schmuck, 2017), for granting undeserved advantages to outgroups, especially the outgroups perceived as wrongly privileged (Pettigrew, 2017). Additionally, in exclusionary populism, outgroups are also blamed for depriving the native population on the economic and cultural dimension (Hameleers & Schmuck, 2017; Gidron & Hall, 2017).

According to one of most influential explanations of populism (Kriesi et al., 2006), people support populist parties as a reaction to globalization and denationalization. A new structural divide within the economic and cultural dimensions of the political sphere has emerged – that of „winners" and „losers" of globalization. The first ones, like qualified labor forces or cosmopolitan citizens, benefit from globalization, whereas the existence of the second ones, like those working in state-protected sectors, unqualified workers, and those who strongly identify

with local communities, is undermined by globalization. Populist parties appeal to the fears of „losers" of globalization on both, economic and cultural dimensions (Kriesi et al., 2006).

The issues of resources redistribution and social status are of extreme importance to both - left and right-wing populism (Bernhard & Kriesi, 2019; Gidron & Hall, 2017). However, a considerable number of empirical studies contradicts the thesis on winners and losers of globalization, especially, in relation to income or other socio-demographic characteristics. Particularly, Pettigrew (2017) writes that Trump voters were more affluent than those who voted for Clinton; Trump was supported in areas with decreasing mobility, but people also voted more Republican in areas with greater social mobility. In the same vein, Hansen and Olsen (2019) did not find evidence that AfD voters in Germany were economically deprived or differed demographically from supporters of other parties. Spruyt, Keppens, and Van Droogenbroeck (2016) showed that once perceptions of relative deprivation and anomie were accounted for, the negative relationship of income with populist attitudes disappeared.

According to the relative deprivation theory, what matters in all these cases is not the objective deprivation, but the perceptions of being deprived (Pettigrew, 2017). As already mentioned, the relationship between perceptions of relative deprivation and populism is the focus of this article.

3.2.2. Perceptions of Relative Deprivation and Populism

Perceptions of relative deprivation have been used to predict populist attitudes (e.g., Elchardus & Spruyt, 2016; Filsinger, 2023), voting for right-wing populist parties (e.g., Cena et al., 2023; Abrams & Grant, 2012), and right-wing leaders (e.g., Urbinska & Guimond, 2018; Marchlewska et al., 2018).

Perceptions of relative deprivation result from a social comparison made by an individual perceiving that oneself or one's ingroup are disadvantaged compared with some other individual or outgroup, while this perceived disadvantaged condition is considered unfair (Smith et al., 2012). For relative deprivation to occur, people should care about what they lack, feel that the

process producing disadvantage is illegitimate, believe that they or their ingroup are not responsible for the disadvantaged situation, and feel that a change is possible. However, for the change to happen, an intervention from the outside is needed (Smith & Pettigrew, 2014).

There are two possible explanations of how perceptions of relative deprivation relate to populism. According to the first one, people compare themselves to others – as addressed in this article – on the economic, occupational or educational dimensions, which results in perceptions of being deprived on a corresponding dimension. Those feeling "left behind" due to globalization, such as low skilled workers, entrepreneurs from protected sectors (Kriesi et al., 2006), or employed in precarious jobs (Gidron & Hall, 2017), may support left-wing parties, including populists, who promise amendment of their disadvantaged situation, - for instance, by introducing protectionist measures (Kriesi et al., 2006; Girdron & Hall, 2017). That is why economic issues are also used by right-wing populists (Gidron & Hall, 2017), pleading for economic benefits for the native population (Urbanksa & Guimond, 2018). However, while this explanation is applicable for support for left-wing parties, it cannot predict right-wing support and it does not capture what makes populism especially attractive (Kriesi et al., 2006; Girdron & Hall, 2017).

Another explanation addresses self-portrait and social status concerns. When making social comparisons, people strive for self-enhancement, feeling that they are doing better than others (Wills, 1981). However, in the times of growing social inequality and job precarity, it has become more difficult to make such advantageous for self-esteem comparisons based on one's material possessions, educational level or job prestige. While previously working-class members were respected for their jobs, recently many blue-collar jobs have become precarious and less respected, which does not allow one to elevate one's perceived social status (Gidron & Hall, 2017). Moreover, due to recent societal changes and affirmative politics, white working-class men are no longer able to feel they are doing better than previously disadvantaged groups, such as ethnic minorities or migrants (Gidron & Hall, 2017). Individuals who feel that their social

status is threatened strive for other means to enhance their self-esteem. By offering ready categories for self-categorization, such as "virtue" and "genius" people and "vicious" and "corrupt" elites, populists provide deprived people with a desired dimension for advantageous social comparisons. This allows them to gain a positive self-portrait (Schulz, Wirth, & Müller, 2020). By blaming elites, rich capital, migrants, or other outgroups as morally wrong, individuals may feel that their social status, based on moral superiority, is elevating.

Important to mention, that social comparisons, which is one of prerequisites for perceptions of relative deprivation (Smith et al., 2012), are performed on different dimensions. I address perceptions of relative deprivation resulting from disadvantaged economic, educational, and occupational social comparisons. Predominantly, studies on the relationship between perceptions of relative deprivation and populism have measured social comparisons performed on the economic dimension (e.g., Marchlewska et al., 2017; Urbinska & Guimond, 2018) or generalized social comparisons (e.g., Spruyt et al., 2016; Filsinger, 2023; Abts & Baute, 2022). The economic dimension has been captured by personal economic situation in comparison to population majority (Urbinska & Guimond, 2018), or comparison of one's own economic situation with that of migrants (Marchlewska et al., 2017, Study 3; Meuleman et al., 2020). The association of perceptions of economic relative deprivation with populism was positive (e.g., Urbinska & Guimond, 2018; Marchlewska et al., 2017). Cena et al. (2023) addressed occupational relative deprivation and found it to be unrelated to support for populist right parties. Among other, I revisit the direct association of perceptions of occupational relative deprivation and populism using voting for populist parties in general instead of support for far-right parties as the dependent variable (cf. Cena et al., 2023). Besides, I also address perceptions of economic and educational relative deprivation.

Based on the literature above, I hypothesize that *perceptions of economic, educational, or occupational relative deprivation are positively related to voting for populist parties (H1)*. At the same time, I *expect perceptions of economic relative deprivation to have a stronger association*

with populist voting (H2). Particularly, in contemporary societies, subjective social status is predominantly defined by income and wealth, and not education level or the job people perform (e.g., Gidron & Hall, 2017).

Moreover, using a subsample of countries with a sufficient number of supporters of both populist left and populist right parties, I test whether perceptions of relative deprivation are differently related to voting for populist left and right. Compared to Cena et al. (2023), I selected parties marked at *PopuList* (versions 1.0 and 2.0; Rooduijn et al., 2019) as both, populist and right- or left-wing. Indeed, right- or left-wing parties may be radical, but not populist, implying that in their politics, there is no vertical divide between the elites and the people, which is vital for populism (e.g., Rooduijn, 2019). Given the relatively small number of countries and people voting for right or left-wing populists in the data, I treat this analysis an exploratory. The proposition is that people vote for populist left to improve their economic situation: in this case, with inclusions of measures of objective deprivation (such as being dependent on welfare, pensions or being unemployed), the relationship of perceptions of relative deprivation with voting for populist left is likely to disappear. On the contrary, people vote for populist right to enhance symbolic representation and self-esteem and significantly less – for economic reasons. That is why I expect the relationship between perceptions of relative deprivation and voting for populist right to hold with inclusion of measures of objective deprivation.

3.2.3. Country-level effects

There are significant differences between countries in the level of populism (e.g., Rooduijn, 2018, Rooduijn et al., 2017; Norris & Inglehart, 2019). Given the evidence that the relationship between occupational relative deprivation and support for populist right parties was moderated by GDP (Cena et al., 2023), I checked whether affluence at the country level moderated the relationships between perceptions of relative deprivation and populist voting. On the one hand, in less *affluent* societies, economic issues are more salient, which makes left-wing populism more widespread (Rodrik, 2018). Similarly, difficult economic conditions in such

countries could increase the importance of resources redistribution, thus enhancing social

competition (Meuleman et al., 2020). On the other hand, more affluent societies may

demonstrate higher levels of social inequality thus making more downward social comparisons

targets salient (e.g., Rooduijn & Burgoon, 2018; Smith & Pettigrew, 2014); in affluent societies

there may be a higher discrepancy between what people strive to get and what they possess in

reality (e.g., Pettigrew, 2017; Smith & Pettigrew, 2014). Cena et al. (2023) found that

perceptions of occupational relative deprivation were positively associated with voting for

populist right among people living in affluent societies. I expect a similar effect for all types of

perceptions of relative deprivation: *in more affluent countries, perceptions of relative*

deprivation are positively related to populist voting (H3).

Apart from the economic affluence, I hold political differences between countries for

important. *Openness of the political system or* aggregated at the country-level measure of

political efficacy reflects how open the citizens perceive the political system of a country to be.

At the individual level, external political efficacy has a strong negative association with

populism: if the political system is open, people can make changes within the system and they do

not need to support populists (Geurkink et al., 2020). At the same time, populism was considered

a problem of democratic societies, where people can support populists in democratic elections

(Abts & Rummers, 2007). In contrast to Abts and Rummers (2007), I hold openness of the

political system vital for preventing populism: if people can make changes within the system,

they do not need to seek empowerment among populists (e.g., Magni, 2017). Therefore, I

hypothesize that *perceptions of relative deprivations in less open political systems are positively*

related to populist voting (H4).

Since I address perceptions of economic, occupational, and educational relative

deprivation, which are all related to social status (e.g., Gidron & Hall, 2017), of importance is to

account for country-level *inequality* (e.g., Smith et al., 2018). In countries with higher inequality,

more targets for disadvantaged social comparisons are available, which may cause more

frustration among people – parallel to the seminal work of Stouffer et al. (1949), where researchers found more frustration in the army due to a higher promotions rate (as quoted in Smith & Pettigrew, 2014). Therefore, *in more unequal societies, the (positive) relationship between perceptions of relative deprivation and populist voting is likely to be stronger than in equal societies* (H5).

3.4. Data and Methodology

I used the data of Wave 9 of the European Social Survey, which was conducted in 2018-2020, and contained variables capturing perceptions of relative deprivation (ESS Round 9, 2021). For measuring populism, alike Cena et al. (2023), I selected the respondents who voted during the last elections and indicated their party choice. I coded parties people voted for as populist or non-populist employing the data of *PopuList* (Versions 1.0 and 2.0; Rooduijn et al., 2019). Since Montenegro and Serbia are not present in the PopuList, I excluded them from the analysis. Besides, I excluded Portugal, which had no populist parties in 2018, and Cyprus, where the share of populist voters was negligible (N=3)[1]. The resulting sample comprised 23 countries, which enabled me to run multilevel analysis (Bryan & Jenkins, 2016). Multilevel regression analysis allows for non-biased coefficient estimates within and across countries (Hox, 2010). The *ICC* coefficient reached 33% of variance in the dependent variable being explained at the country level, which made the use of multilevel analysis meaningful. To conduct multilevel analysis, I used the R (version 4.2.2) package "lmer4" (function "glmer" for binary outcomes). I weighted for cross-national differences in sampling design (e.g., Meuleman et al., 2020). Since I checked for cross-level interactions, I applied grand mean centering for interval and ordinary independent variables and controls. Dummies were recoded to include '0' as a theoretical mean (Hox, 2010, pp. 61-64). Given the relatively small number of countries, I included one country-level predictor at a time.

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[1] Analysis with Portugal and Cyprus rendered same results. The only difference was that when Portugal and Cyprus were included, ICC was 44.5% instead of 33%.

To test whether perceptions of relative deprivation were differently related to voting for populist right and populist left, I selected a sample of five countries[2], where people voted for the both, populist right and left. I run multinomial regression models with the statistical programme R (package "nnet").

Dependent Variables

Populist voting – captures voting for any populist parties, regardless of their host ideologies (e.g., Mudde & Kaltwasser, 2013). Thus, '1' stands for voting for a populist, '0' – non-populist party.

Voting for populist left – captures voting for populist left parties, where '1' means voting for a populist left and '0' – any other party.

Voting for populist right - captures voting for populist right parties, where '1' means voting for a populist right and '0' – any other party.

Independent Variables

Individual-level predictors. *Perceptions of economic relative deprivation* were measured as arithmetic means of two variables – (1) economic injustice at the individual level - "Your net [pay/pensions/social benefits] is unfairly low, fair, or unfairly high", which was reversely coded, and (2) disadvantaged social comparison to the outgroup - "Top 10% full-time employees in country, earning more than [amount], how fair". The measure captured two crucial concepts of perceptions of relative deprivation – negative social comparison and injustice (Smith et al., 2012) and was similar to existing literature (e.g., Urbanska & Guimond, 2018; Meuleman et al., 2020). The index was grand mean centered and ranged from '-4.992' (lowest level) to '3.008' (highest level of perceptions of economic relative deprivation).

Perceptions of occupational relative deprivation were measured as proposed by Cena et al. (2023) via one item "Imagine you were looking for a job today. To what extent do you think

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[2] Germany, Spain, France, Netherlands, and Slovenia. Countries with less than 50 populist left or right voters were excluded from the analysis.

this statement would apply to you? Compared to other people in [country], I would have a fair chance of getting the job I was seeking", on an 11-point Likert scale, from '0' – "Does not apply at all" to '10' – "Applies completely". The variable was reversely recoded and centered around the grand mean. It ranged from the lowest (-3.981) to highest (6.019) level of perceptions of occupational relative deprivation.

Similarly, *perceptions of educational relative deprivation* were captured via one item "Compared to other people in [country], I have had a fair chance of achieving the level of education I was seeking" using an 11-point Likert scale, from '0' – "Does not apply at all" to '10' – "Applies completely". The variable was reversely recoded, and grand-mean centered. It ranged from -2.829 (lowest level) to '7.171' (highest level of perceptions of educational relative deprivation).

Country-level predictors. *Affluence* was measured via GDP per capita to account for country wealth. I use the log of GDP per capita expressed in current international dollars converted by purchasing power parity (PPP) in 2018 (World Bank, 2020a), centered around grand mean.

Openness of the political system is captured by a measure of external political efficacy from ESS (Round 9), which was aggregated at the country level.

Inequality was measured via GINI for all countries in 2018 (World Bank, 2020b) and centered around grand mean.

Control Variables

I used several socio-demographic variables as controls. Men and people without college education are considered support populists (e.g., Inglehart & Norris, 2017). Therefore, I included *gender* ('0.5' – males, '-0.5' – females), and *level of education* (ES – ISCED, from '1' - less than lower secondary to '7' - higher tertiary education). I considered that the most vulnerable to perceptions of relative deprivation could be unemployed people (Guriev, 2018) or those dependent on state benefits or pensions. Therefore, I created dummies for *unemployment* ('0.5' –

being unemployed for more than three months, '-0.5' – not unemployed), *pension receivers* ('0.5' – households dependent on pensions, '- 0.5'– not dependent on pensions), and *benefits receivers* ('0.5' – households dependent on unemployment, redundancy, or other social benefits and grants, '-0.5' – not receiving benefits). Besides, I also used *self-placement on the left-right scale* (from '-5.13' – being at the extreme left to '4.87' – being at the extreme right, grand-mean centered), since in multilevel models, I addressed voting for populist parties on both political left and right. Age was not included, since it was highly correlated with receiving pensions ($\rho = 0.698$). Income was not included, while in some countries, half a sample had missing values on it.

3.5. Results

Descriptive Account

First, I plot the association between perceptions of relative deprivation and populist voting across countries. First, in Austria, Germany, France, Italy, and the Netherlands people with a higher level of perceptions of economic relative deprivation (See Figure 3.1) were more likely to vote for populists, whereas in Bulgaria people with a higher level of relative deprivation were less likely to support populists. In other countries, perceptions of economic relative deprivation were unrelated to voting for populist parties.

Figure 3.1

Means of Perceptions of Economic Relative Deprivation and Voting for Populist Parties across

23 Countries

Cases weighted by Design weight
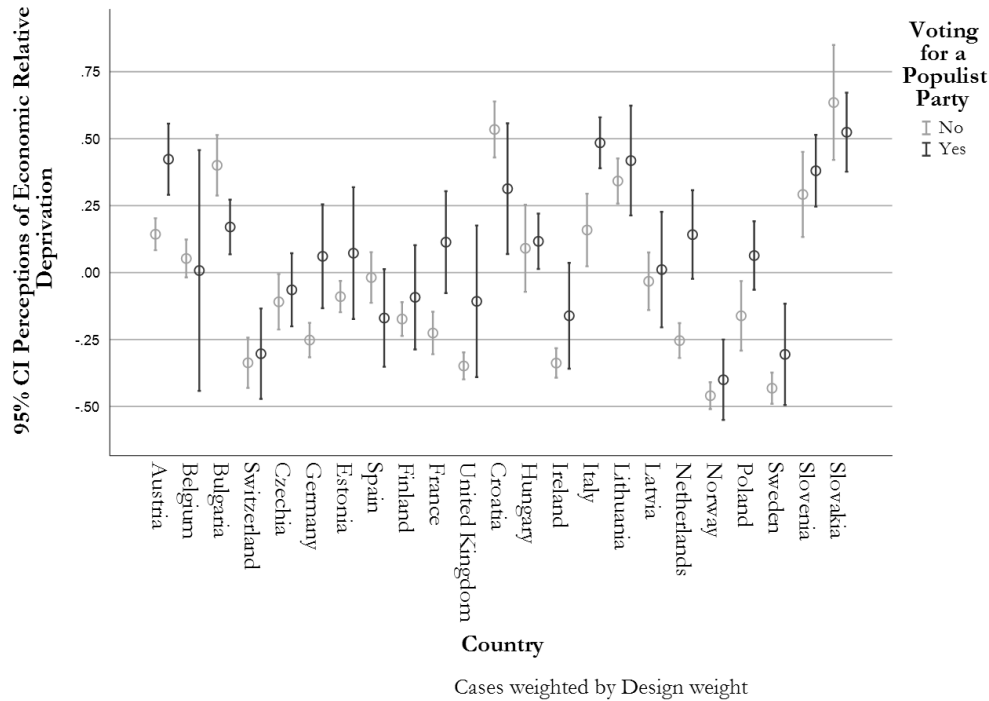
Next, people with a higher level of perceptions of occupational relative deprivation (See Figure 3.2) were more likely to vote populist in Germany and Italy. On the contrary, in Bulgaria and Slovenia those who experienced perceptions of occupational relative deprivation, were less supportive of populists.

Figure 3.2

Means of Perceptions of Occupational Relative Deprivation and Voting for Populist Parties

across 23 Countries

Cases weighted by Design weight
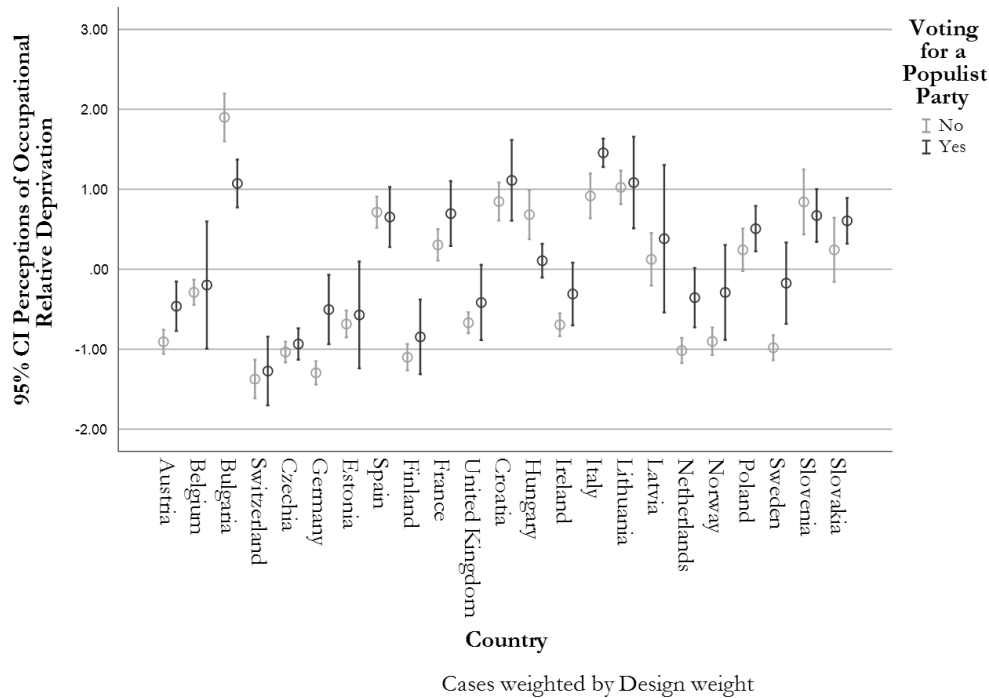
People feeling deprived of educational chances (See Figure 3.3) were more likely to vote for

populist parties in Austria, France, Netherlands, Norway, and Sweden. Perceptions of

educational relative deprivation related negatively to populist support in Bulgaria.

Figure 3.3

Means of Perceptions of Educational Relative Deprivation and Voting for Populist Parties

across 23 Countries

Cases weighted by Design weight
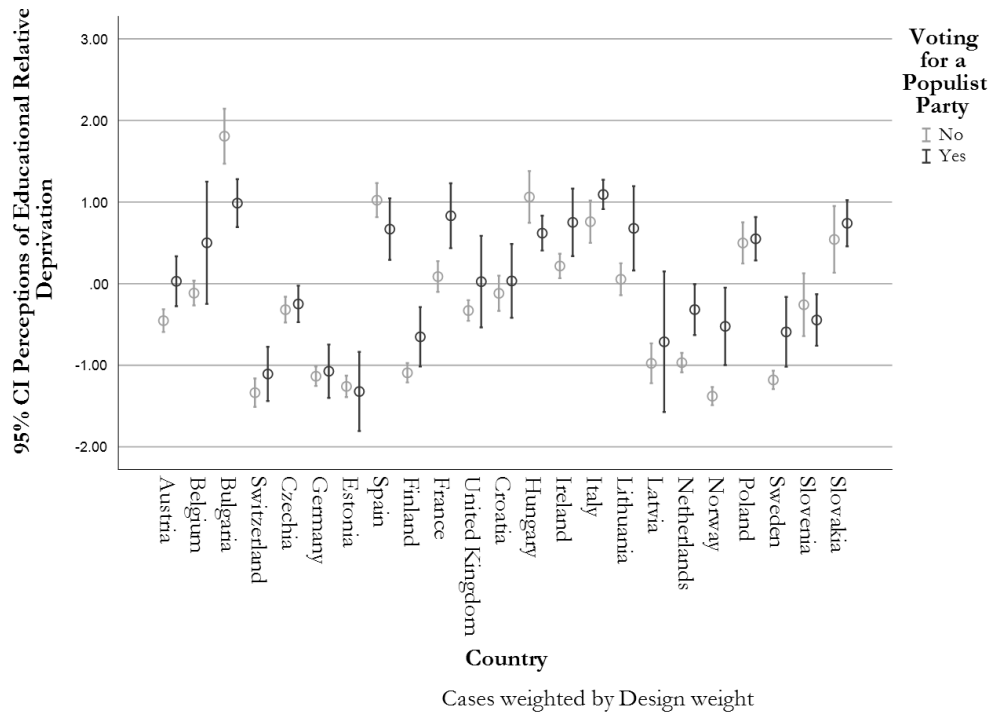
Bivariate Correlations

Associations between the variables (See Table 3.1) reveal that perceptions of relative deprivation are not one phenomenon: perceived economic deprivation does not mean that one also feels deprived on the occupational and educational dimensions. All measures of perceived relative deprivation were positively correlated with each other, with the strongest association between educational and occupational relative deprivation ($\rho = 0.52$**), and weaker relations of perceptions of economic deprivation with educational ($\rho = 0.18$**) and occupational ($\rho = 0.22$**) relative deprivation[3].

Next, voting for a populist party was positively related to perceptions of economic ($\rho = 0.10$**), educational ($\rho = 0.12$**), and occupational relative deprivation ($\rho = 0.11$**), though the associations were weak. At the country level, populist voting was reversely related to openness of the political system ($\rho = -0.24$**), affluence ($\rho = -0.25$**) and had an almost negligible

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[3] Since the sample size is large, we do not interpret the significance levels, but the size and strength of associations.

association with the inequality level ($\rho = 0.02$**).

Table 3.1

Means, standard deviations, and correlations for the variables of interest (23 European countries)

Variable	M	SD	Range	1	2	3	4	7	8
1. Economic relative deprivation	0.00	1.15	-4.99-3.01						
2. Educational relative deprivation	0.00	2.73	-2.83-7.17	.18**					
3. Occupational relative deprivation	0.00	2.89	-3.98-6.02	.22**	.52**				
4. Populist vote [a]	-	-	0; 1	.10**	.12**	.11**			
7. Country: openness of political system	0.00	0.33	-0.62-0.77	-.19**	-.20**	-.26**	-.24**		
8. Country: affluence	0.00	0.32	-0.66-0.64	-.16**	-.14**	-.21**	-.25**	.75**	
9. Country: inequality	0.00	4.06	-6.67-10.03	.02**	.14**	.16**	.02**	-.31**	-.27**

Note. M and SD represent mean and standard deviation, respectively.

[a] $N = 5852$ (24.3%).

*$p<0.01$; **$p<0.005$; ***$p<0.001$.

Multilevel Analysis Explaining Populist Voting

Next, I present the results of multilevel analysis used to study the relationship between perceptions of relative deprivation and voting for populist parties. I show random intercept random slope models, which had best fit statistics. Since I used logistic regression, odds ratios were obtained. Significance was defined via confidence intervals (not crossing '1').

Perceptions of economic relative deprivation related positively (see Table 3.2, Model 1) albeit with a small effect to populist voting ($OR = 1.08$, *95%CI* [1.002, 1.16]). The effect was significant despite the inclusion of measures of objective deprivation, such as unemployment or

receiving benefits. On the contrary, perceptions of occupational (Model 2, *OR* = 1.01, *95%CI* [0.988, 1.04]) and educational relative deprivation (Model 3, *OR* = 1.02, *95%CI* [0.988, 1.04]) were unrelated to populist support. In Model 4, all perceptions of relative deprivation were included at the individual level; random slopes of perceptions of economic relative deprivation[4], and affluence were used at the country level[5]. Only perceptions of economic relative deprivation had a significant and positive association with populist voting (*OR* = 1.08, *95%CI* [1.003, 1.16]). Therefore, one can conclude that perceptions of economic relative deprivation were positively and significantly, albeit with a very small coefficient, related to populist voting, whereas other types of relative deprivation perceptions were not associated with it.

Having said that, the association between perceptions of economic relative deprivation and populism was rather small: those feeling economically deprived were feeling 1.08 times more likely to vote for a populist candidate. We compare it to how other socio-demographic variables were related to populist voting. All coefficients, as seen in Model 4, were rather small (similar to, e.g., Gidron & Hall, 2017; Filsinger, 2023): men were 1.27 times, unemployed - 1.3 times, and people receiving benefits - 1.46 times, and those on the political right spectrum - 1.24 times more likely to vote for populist parties; people with lower education were 0.84 times less likely to do so.

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[4] The model with random slope of perceptions of economic relative deprivation rendered better fit than models with random slopes of other or all types of relative deprivation perceptions – see Appendix 2.2.

[5] However, in case one used openness of the political system as the country-level predictor in the full model, the association between the perceptions of economic relative deprivation and populist voting was only marginally significant (OR = 1.07; [0.995; 1.15], p=0.067.

Table 3.2

The Relationship between Perceptions of Economic, Occupational, and Educational Relative

Deprivation and Voting for Populist Parties across 23 Countries with Affluence as a Country-

Level Predictor

	Vote populist, EcRD *Model 1*		Vote populist, ORD *Model 2*		Vote populist, EdRD *Model 3*		Vote populist, *All deprivation types Model 4*	
Predictors	*OR*	*95%CI*	*OR*	*95%CI*	*OR*	*95%CI*	*OR*	*95%CI*
(Intercept)	**0.31**	[0.19, 0.50]	**0.31**	[0.19, 0.51]	**0.31**	[0.19, 0.52]	**0.31**	[0.19, 0.50]
EcRD	**1.08**	[1.002, 1.16]					**1.08**	[1.003, 1.16]
ORD			1.01	[0.988, 1.04]			1.02	[0.999, 1.03]
EdRD					1.02	[0.988, 1.04]	0.985	[0.966, 1.004]
Gender (male)	**1.28**	[1.18, 1.39]	**1.24**	[1.15, 1.34]	**1.25**	[1.16, 1.35]	**1.27**	[1.17, 1.38]
education	**0.84**	[0.82, 0.86]	**0.84**	[0.82, 0.86]	**0.85**	[0.83, 0.87]	**0.84**	[0.81, 0.86]
unemployed	**1.35**	[1.23, 1.48]	**1.32**	[1.21, 1.44]	**1.35**	[1.24, 1.47]	**1.30**	[1.18, 1.43]
pensions	**0.73**	[0.67, 0.80]	**0.73**	[0.67, 0.80]	**0.73**	[0.67, 0.80]	**0.73**	[0.67, 0.81]
benefits	**1.46**	[1.16, 1.83]	**1.49**	[1.21, 1.84]	**1.46**	[1.18, 1.80]	**1.46**	[1.16, 1.84]
Left-right	**1.25**	[1.22, 1.27]	**1.23**	[1.21, 1.25]	**1.23**	[1.21, 1.25]	**1.24**	[1.22, 1.27]
Country level predictors:								
affluence	0.23	[0.04, 1.32]	0.22	[0.04, 1.39]	0.42	[0.08, 2.09]	0.23	[0.04, 1.25]
Random Effects								
σ^2	3.29		3.29		3.29		3.29	
τ_{00}	1.32 cntry		1.33 cntry		1.41 cntry		1.30 cntry	
τ_{11}	0.02 cntry.EcRD		0.00 cntry.ORD		0.00 cntry.EdRD		0.02 cntry. EcRD	
ρ_{01}	-0.21 cntry		-0.21 cntry		-0.60 cntry		-0.23 cntry	
N	23 cntry		23 cntry		23 cntry		23 cntry	
N	19636		22111		22387		19021	
Marginal R^2 / Conditional R^2	0.121 / 0.377		0.117 / 0.373		0.092 / 0.369		0.122 / 0.375	
Deviance	15482.579		17730.348		17915.607		14994.043	
AIC	15506.579		17754.348		17939.607		15022.043	
log-Likelihood	-7741.290		-8865.174		-8957.803		-7497.022	

Note. Odds Ratios (*OR*) and their 95% confidence intervals (*95%CI*) are displayed.

'EcRD' stands for perceptions of economic relative deprivation, 'ORD' – perceptions of

occupational relative deprivation, 'EdRD' – perceptions of educational relative deprivation.

Next, cross-level interaction effects were plotted for the mean and one standard deviation

below and above the mean of country-level moderators (Aiken, West., & Reno, 1991). One moderation effect was significant (see Figure 3.4): while the level of populist voting was higher in less affluent societies, people perceiving relative deprivation were more likely to support populist parties in more prosperous countries. Even though there were small interaction effects of all types of perceptions of relative deprivation with affluence and openness of the political system, in all other cases, confidence intervals of the moderators at one standard deviation below and above the mean overlapped (see Appendix 2.3). Inequality did not moderate the relation of perceptions of relative deprivation with populist support.

Figure 3.4

Cross-Level Interactions: How Affluence Moderates the Relationships between Perceptions of Economic Relative Deprivation and Predicted Probability for Voting for Populist Parties
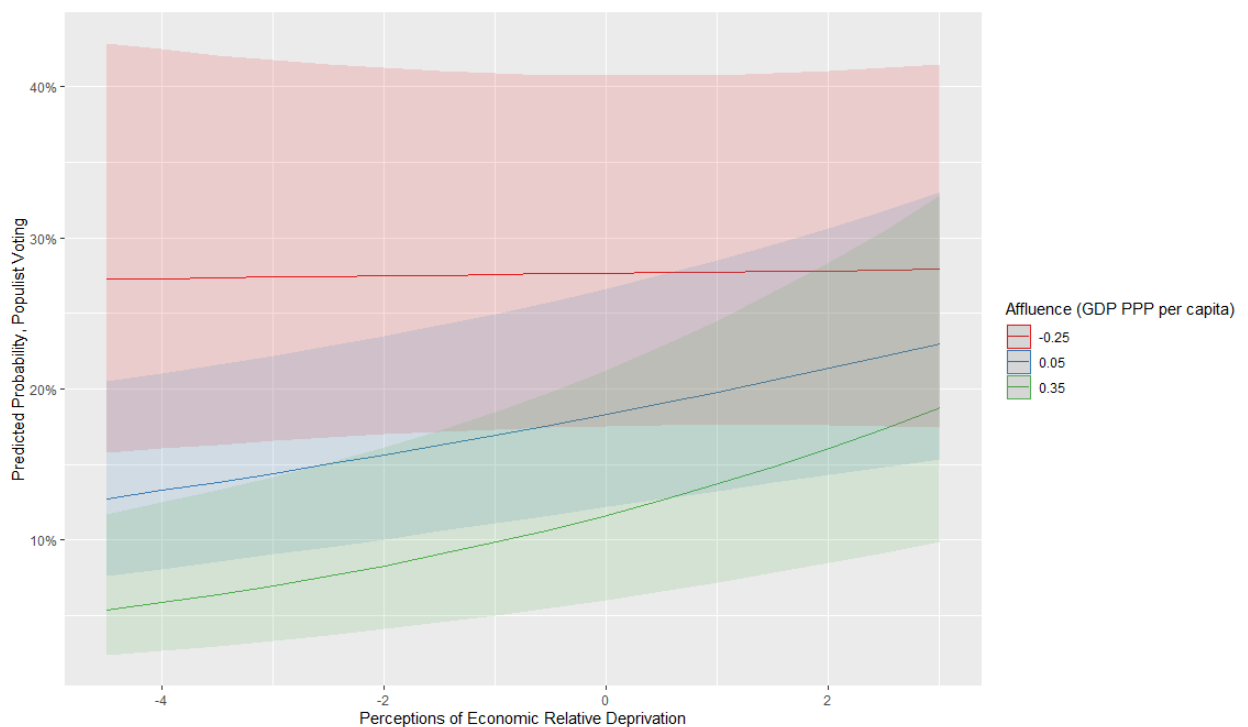
Note. Means, and +- one standard deviation of Affluence are plotted.

Country Effects. The finding that only perceptions of economic relative deprivation related to populist voting with a small, albeit significant effect, could be explained by country differences. Therefore, I checked whether the relationships between the three dimensions of relative deprivation perceptions and populist voting were similar across countries by plotting country slopes (see Appendix 2.4, Figures 1-3).

Perceptions of economic relative deprivation were positively and significantly related to populist voting in the Netherlands ($B = 0.221$) and France ($B = 0.149$), while in Bulgaria ($B = -0.226$), Croatia ($B = -0.209$), and Spain ($B = -0.200$) the relationship was negative. In other countries, there was no significant association between perceptions of economic relative deprivation and populism (confidence intervals of slopes crossed the zero point). Slopes for perceptions of occupational and educational relative deprivation were smaller than those of perceptions of economic relative deprivation. In none of the countries were perceptions of occupational relative deprivation positively and significantly linked to populist voting. This relationship was negative and significant in two post-communist societies, Bulgaria ($B = -0.095$) and Hungary ($B = -0.060$), and insignificant in all other countries.

Perceptions of educational relative deprivation were negatively and significantly, though with a very small effect size, related to populist voting in Bulgaria ($B = -0.096$), Slovenia ($B = -0.083$), and Spain ($B = -0.058$), and positively – in Norway ($B = 0.068$). There was no association between perceptions of educational relative deprivation and populist support in other societies.

3.6. Voting for Populist Left and Right

A possible explanation for the absence of associations between perceptions of relative deprivation and populist voting in majority of countries is that perceptions of relative deprivation related differently to left and right-wing populism. Therefore, in the last part, I tested for this proposition. This analysis was exploratory.

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I selected a subsample of 5 countries, where respondents voted for both, populist left and populist right parties[6]. I conducted multinomial regression with three outcome variables – voting for populist left, populist right, and non-populist parties (used as a reference category). In Model 1, I included perceptions of relative deprivation as independent variables and countries as dummies to control for country effects (See Table 3). Compared to voting for non-populist parties, there was a significant positive relationship of perceptions of economic relative deprivation with voting for populist left ($OR = 1.15$, $95\%CI$ [1.03, 1.27]) and right ($OR = 1.19$, $95\%CI$ [1.08, 1.31]) parties; and a significant positive relationship between perceptions of occupational relative deprivation and voting for populist left ($OR = 1.05$, $95\%CI$ [1.004, 1.10]). The association of occupational relative deprivation with voting for populist right, however, was insignificant ($OR = 1.04$, $95\%CI$ [0.997, 1.08]). All these coefficients were very small. Perceptions of educational relative deprivation had no significant associations with voting for populist left or right. Average marginal effect (Leeper, 2017) of experiencing economic relative deprivation was associated with 0.9% higher likelihood of voting for populist left, and 1.5% - voting for populist right, whereas the average marginal effect of experiencing occupational relative deprivation was only 0.3% associated with increased likelihood of voting for populist right

In Model 2, when socio-demographic variables were added to account for objective deprivation, most of these effects disappeared (See Table 3.3, Model 2): only the associations of perceptions of economic ($OR = 1.13$, $95\%CI$ [1.02, 1.25]) and occupational ($OR = 1.05$, $95\%CI$ [1.01, 1.10]) relative deprivation with voting for populist right parties remained significant, albeit the coefficients were rather small. Average marginal effects for experiencing economic relative deprivation was 0.9% related to higher likelihood of voting for populist right, and occupational relative deprivation was 0.4% related to higher likelihood of voting for populist right.

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[6] In Slovenia, respondents also voted for populist parties not being on the political left or right. We excluded them from the analysis (N=130).

This finding seems to suggest that there was a difference why those who felt economically deprived supported left and right-wing populists. Since with inclusion of socio-demographic variables, the association between perceptions of economic deprivation disappeared, one can assume that by supporting populist left, people wanted to improve their economic situation. People with higher level of education (*OR* = 0.93, *95%CI* [0.87, 0.997]), those on the political right (*OR* = 0.65, *95%CI* [0.62, 0.69]) and pension receivers (*OR* = 0.50, *95%CI* [0.37, 0.68]) were less supportive of populist left parties.

On the contrary, both, objective and subjective deprivation with small but significant coefficients accounted for voting for populist right parties. Apart from those perceiving economic and occupational relative deprivation, people with lower education (higher education - *OR* = 0.80, *95%CI* [0.75, 0.86]) and unemployed (*OR* = 1.44, *95%CI* [1.13, 1.83]), as well as men (*OR* = 1.55, *95%CI* [1.23, 1.95]) and those on the political right (*OR* = 1.55, *95%CI* [1.46, 1.64]) were more supportive for populist right. Similar to populist left, pension receivers were less supportive of populist right (*OR* = 0.49, *95%CI* [0.37, 0.64]).

Table 3.3

Results of Multinomial Regression with Voting for Non-Populist Parties as a Reference Category

	Model 1				Model 2			
	Populist Left Voting		**Populist Right Voting**		**Populist Left Voting**		**Populist Right Voting**	
Predictors	*OR*	*95%CI*	*OR*	*95%CI*	*OR*	*95%CI*	*OR*	*95%CI*
(Intercept)	**0.09**	[0.07, 0.11]	**0.08**	[0.07, 0.10]	**0.05**	[0.03, 0.07]	**0.06**	[0.04, 0.09]
EcRD	**1.15**	[1.03, 1.27]	**1.19**	[1.08, 1.31]	1.08	[0.97, 1.21]	**1.13**	[1.02, 1.25]
ORD	**1.05**	[1.004, 1.10]	1.04	[0.997, 1.08]	1.03	[0.98, 1.09]	**1.05**	[1.01, 1.10]
EdRD	0.95	[0.90, 1.001]	1.03	[0.99, 1.08]	0.96	[0.91, 1.02]	0.999	[0.95, 1.05]
gender					1.15	[0.91, 1.45]	**1.55**	[1.23, 1.95]
education					**0.93**	[0.87, 0.997]	**0.80**	[0.75, 0.86]
unemployed					1.25	[0.98, 1.61]	**1.44**	[1.13, 1.83]
pensions					**0.50**	[0.37, 0.68]	**0.49**	[0.37, 0.64]
benefits					1.29	[0.78, 2.11]	0.77	[0.42, 1.41]
left-right					**0.65**	[0.62, 0.69]	**1.55**	[1.46, 1.64]
Country: reference – Germany								
Spain	**2.05**	[1.48, 2.86]	**1.70**	[1.20, 2.42]	**1.75**	[1.22, 2.49]	1.07	[0.73, 1.58]
France	1.20	[0.85, 1.69]	**2.06**	[1.50, 2.82]	1.36	[0.94, 1.96]	**1.55**	[1.10, 2.18]
Netherlands	1.13	[0.83, 1.54]	1.32	[0.96, 1.82]	1.40	[1.004, 1.95]	0.88	[0.62, 1.24]
Slovenia	**1.98**	[1.31, 3.01]	**7.84**	[5.67, 10.82]	**2.10**	[1.35, 3.27]	**7.37**	[5.11, 10.62]
N	4038				3929			
Pseudo R^2	0.249				0.373			
Deviance	4996.231				4168.760			
AIC	5028.231				4224.760			
log-Likelihood	-2498.116				-2084.380			

Note. Odds Ratios (*OR*) and their 95% confidence intervals (*95%CI*) are displayed. Bold are effects reaching conventional significance level.

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Despite some evidence in favor of the argument that people feeling economically deprived seemed to support populist left to improve their economic situation and populist right – at least partially – for other reasons than improvement of their economic condition, further investigations are needed to test whether these associations hold in different settings.

3.7. Conclusions and Discussion

This paper is among the first ones to show that perceptions of relative deprivation do not necessarily function as a generalized phenomenon (cf. Spruyt et al., 2016); one can feel deprived on one dimension, but not on another one. Besides, it showed that there may be differences in how perceptions of relative deprivation relate to left and right-wing populism.

Three different dimensions of perceptions of relative deprivation were addressed in relation to populism. It was revealed, that in European societies in general, perceptions of economic relative deprivation were positively associated with voting for populist parties, whereas perceptions of occupational and educational relative deprivation were unrelated to populist support. This study showed the benefits of using different dimensions of relative deprivation perceptions instead of generalized measures, since perceptions of relative deprivation on diverse dimensions were differently related to populism.

Next, in the paper, I showed the importance of addressing country differences on how perceptions of relative deprivation relate to populist outcomes. I found that perceptions of economic relative deprivation were positively related to voting for populist parties only in affluent societies – Netherlands and France, and were negatively related to populist outcomes in least affluent countries - Croatia and Bulgaria, but also in a rather affluent country – Spain, (cf. Filsinger, 2023 (Study 2) for populist attitudes). Even though the associations of perceptions of occupational relative deprivation with populist voting were rather weak, they were negative and significant in Hungary and Bulgaria. The relations of educational relative deprivation perceptions with populist voting were negative, though rather weak, in Bulgaria, Slovenia, and

Spain, and positive and weak in Norway. Despite the differences between the dimensions of relative deprivation perceptions, there is evidence that in Bulgaria, experience of relative deprivation increased support of non-populist parties – possibly, in this country, people considered themselves not "losers", but "winners" of globalization – EU membership increased prosperity of the society (Guiso et al., 2019). The effect found in Spain needs further investigation.

When I accounted for cross-level interactions, I found that in more affluent societies, there was a positive relationship of perceptions of economic relative deprivation and populist vote, which is in accordance with findings of Cena et al. (2023). Contrary to expectations, there was very low and insignificant effect of openness of the political system and no effect of country-level inequality on the relationship of perceptions of relative deprivation and populist vote. Having said that, one should treat country-level effects in this study with caution – I only address 23 European countries with strong geographical and cultural proximity.

Besides, exploratory analysis was performed to disentangle between the motivations to vote for populist left and populist right. When measures of objective deprivation were included as controls, only the relationship between perceptions of economic relative deprivation and voting for populist right parties remained significant, though it had very small coefficients. This can be explained in the following way: people feeling deprived supported populist right not only in order to improve their negative economic situation, but, potentially, to enhance social status and self-esteem. Populist left voting was explained by measures of objective deprivation. Results mirrored findings of several studies, where perceptions of relative deprivation were related to populist right support (Urbanska & Guimond, 2018; Marchlewska et al., 2018). However, further research should strengthen the corresponding theory, and replicate these findings to see whether they hold when employing other research designs, data, and contexts.

The fact that perceptions of economic relative deprivation were more than other types of perceptions of relative deprivation related to populism, implies an important role of individuals'

feelings towards personal economic situation rather than occupation or education. However, these results need further investigation across different contexts. Even though I relied on existing studies in operationalizing perceptions of relative deprivation (e.g., Urbanska & Guimond, 2018), the measures of perceived relative deprivation used here were not identical among each other, since different comparison targets were addressed. In case of economic relative deprivation, people were comparing themselves with the richest ten percent; the latter can be seen as an outgroup of "the rich". In the measures of occupational and educational relative deprivation perceptions, individuals compared their standing with that of other citizens of their country. Therefore, in future research, one should replicate the results using refined measures of dimensions of perceptions of relative deprivation.

One should consider that in all analyses conducted, the effect sizes of associations between perceptions of relative deprivation and populist voting measures were rather small. At the same time, associations of socio-demographic variables, which were of significance in literature, with populist voting were also small. This could potentially be explained by significant differences between the countries, and a relatively small number of populist voters in the sample.

Of special interest is why in majority of countries, there was no association between the perceptions of relative deprivation and populist voting. To answer this question, one should further investigate the appraisals, associated with relative deprivation, as suggested by Smith and Pettigrew (2014). To be deprived, one should not only make social comparisons, but perceive the disadvantaged situation as illegitimate, feel that the situation can be improved, and blame other agents than oneself, one's ingroup or bad luck for the disadvantaged condition. The data used here, and relative deprivation measures did not allow to account for these factors. Possibly, also other dimensions of perceptions of relative deprivation, e.g., involving disadvantaged comparisons with migrants (e.g., Meuleman et al., 2020; Urbanska & Guimond, 2018), could have higher associations with populist voting in a larger number of societies.

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Besides, the relationship of perceptions of relative deprivation and voting could be shaped by other factors. Zero or negative effects could be present due presence of system justification beliefs or "fair process effect", which makes people feel less dissatisfied or makes them even legitimize the unfavorable outcomes (Smith & Pettigrew, 2014). For instance, Osborne & Sibley (2013) found that endorsement of system justification beliefs dampened the relationship of group relative deprivation on support of political mobilization. Next, one should account for emotional reactions which result from perceptions of relative deprivation, since they could shape the attitudinal and behavioral fallout of perceptions of relative deprivation (Smith et al., 2008, Smith & Pettigrew, 2014). For instance, Smith et al. (2008) found that people who responded to group relative deprivation with anger, were more willing to protest, whereas feeling of sadness increased loyalty to organization, thus decreasing the effect of perceptions of relative deprivation.

Even though our study addressed the association of perceptions of relative deprivation with populist voting in a large number of countries using representative data of high quality, it did not allow to account for causal relationship, and waive the possibility of reversed causality. Populist parties may use perceptions of relative deprivation in their rhetoric to gain voters' support. Future research should also test this relationship (cf. Filsinger, 2023). The findings of this paper should be validated using experimental and longitudinal designs to establish causality, which has so far been rare in research on perceptions of relative deprivation and populism (cf. Marchlewska et al., 2018; Filsinger, 2023).

One should also mention that all findings relate to people, who voted during the last elections. This approach was similar to Gidron & Hall (2017) and Cena et al. (2023). However, future research should replicate the effects found in this paper with other measures of populism, which allow to include both voters and non-voters.

Still, the paper made three important contributions to research on perceptions of relative deprivation and populism. First, showed the importance of considering the dimensions on which

people compare themselves to others and feel deprived. Different types of perceptions of relative deprivation were associated with populism in a different way. Second, when conducting multilevel analysis on the relationship between perceptions of relative deprivation and populist voting, it is of advantage to account for country differences. Compared to existing literature, which assumes universality of the effect of perceptions of relative deprivation on populism (e.g., Gidron, & Hall, 2017; Pettigrew, 2017, but cf. Filsinger, 2023 (Study 2); Cena et al., 2023), I showed that the association between perceptions of relative deprivation and populist voting was not universal, and was insignificant in majority of countries. The country effects found in the paper are in line with literature: I found a positive relationship between perceptions of economic relative deprivation and populism in France (e.g., Urbanska & Guimond, 2018) and Netherlands (e.g., Hameleers & de Vreese, 2020). It opens the question what makes perceptions of relative deprivation function differently in diverse societies. Lastly, the paper renders some evidence that there is difference of how perceptions of economic relative deprivation relate to populist left and right, which needs further investigation.

4. Our People are Suffering!—How Perceptions of Relative Deprivation and Emotions Affect Populist Attitudes

Abstract

It is commonly assumed that there is a direct effect of perceptions of relative deprivation (PRD) on populism: people feeling deprived choose to support populist politicians. In contrast, in this paper, we show that the effect of PRD on populism, measured via populist attitudes, occurs via emotions. In two experimental studies conducted online in the UK in 2019, PRD were induced with the help of mass media articles containing instances of PRD in a socio-economic (Study 1, N=589) and socio-cultural (Study 2, N=626) contexts. In Study 1, PRD activated anti-elitist and homogeneity attitudes; in Study 2 there was no direct effect of PRD on populist attitudes. In study 1, disgust mediated the effect of PRD on anti-elitism; and sadness the effect of PRD on popular sovereignty. In study 2, we additionally accounted for attitude polarization using attitudes on Brexit as a proxy for political ideology. Among a subsample of Brexit supporters (N=288), anger mediated the relationship between PRD and anti-elitism, PRD and popular sovereignty; disgust mediated the relationship between PRD and homogeneity.

Keywords: relative deprivation, populist attitudes, populism, emotions, Brexit, attitude polarization

CHAPTER 4: PERCEPTIONS OF RELATIVE DEPRIVATION, EMOTIONS, POPULISM

4.1. Introduction

People compare themselves to other people or their ingroup with an outgroup in order to raise their self-esteem: they are willing to feel that they are doing better than others (Gerber, Wheeler, & Suls, 2018). However, often no social comparisons allowing positive social identity are available. In case the reason causing a disadvantaged social comparison is perceived as illegitimate, people feel relative deprivation (Smith et al., 2012). Several studies suggested that perceptions of relative deprivation (PRD) enhance populist outcomes (e.g., Urbanska & Guimond, 2018; Pettigrew, 2017; Marchlewska et al., 2018). Majority of existing studies suggest a direct effect of PRD on populism (e.g., Elhardus & Spruyt, 2016; Spruyt, Keppens, & Van Droogenbroeck, 2016; Pettigrew, 2017; but cf. Manunta et al., 2022).

However, Smith et al. (2008) showed that the effect of PRD on such outcomes as willingness to protest or loyalty to an organization is mediated via emotion. In populism research, emotions were treated as a frame activating a populist outlook (Hawkins & Rovira Kaltwasser, 2018) and they were found to affect populist support (e.g., Rico, Guinjoan, & Anduiza, 2017; Vasilopoulos et al., 2019). Negative emotions are considered to be central for populist rhetoric (e.g., Hameleers et al., 2017). The fundamental categories of populism – "the bad elites" and "the good people" (Mudde, 2004) involve a comparison of the two on a moral dimension (Müller, 2016). One is expected to experience negative feelings towards "the elites" and positive feelings towards "the people" (Gidron & Hall, 2017; Salmela & von Scheve, 2017).

In this article, we suggest that emotions serve as mediators between PRD and populism and test it in two online experiments. Our contribution is as follows. First, in line with the existing literature, we test for a causal relationship between PRD and populism. Since the majority of studies exploring this relationship are correlational (e.g., Urbanska & Guimond, 2018; Elhardus & Spruyt, 2016, Spruyt et al., 2016; but cf. Filsinger, 2023; Marchlewska et al., 2018), it is highly beneficial to test for a causal relationship (e.g., Gidron & Hall, 2013). Second, based on research on PRD and populism (Spruyt et al., 2016; Pettigrew, 2017), and emotions and

populism (Salmela & von Scheve, 2017; Rico et al., 2017), we hold that events causing PRD have the potential to elicit powerful emotions, which, in turn, may reinforce populist outcomes among people facing relative deprivation instances. Third, we contribute by addressing a larger selection of scales of emotions. The effects of emotions on populist attitudes have been addressed in several studies with regard to anger (e.g., Kimmel, 2017; Gaffney et al., 2018; Vasilopoulos et al., 2019; Rico et al., 2017), fear (Vasilopoulos et al., 2019; Rico et al., 2017) and sadness (Rico et al., 2016). In the present study, we hypothesize that certain other emotions, such as shame (Salmela & von Scheve, 2017, 2018) or contempt (Mattes et al., 2018) may also appear in situations where people perceive relative deprivation. Additionally, we test the role of disgust. Moreover, we also revisit the role of sadness, which was found to have no effect on populist outcomes (Rico et al., 2017). Fourth, we provide a systematic account of emotional reactions of how people may react to instances of relative deprivation, and which emotions in what way may affect populist outcomes. For doing so, we rely on appraisal theories of emotions, which allow to predict possible emotional reactions to a stimulus (e.g., Scherer, 2001, 2005) and substantial changes in attitudes and behavior (see also Smith & Kirby, 2011; Smith & Lazarus, 1993). Fifth, we account for the role of attitude polarization (Taber & Lodge, 2006), since people with different ideological views can react to instances of relative deprivation in different ways. Since we conducted our studies in the UK, we used attitudes on Brexit as a proxy for the ideological divide between liberals and conservatives (Hobolt, 2016; Hobolt et al., 2021).

The focus of this study is somewhat different compared to existing studies on PRD: we address PRD felt on behalf of other people, while individuals' own goals and needs are not directly affected. For example, on a daily basis, we all see news where we encounter instances of relative deprivation. It makes us feel for other people facing injustice. Addressing this type of PRD brings the perspective of third-party justice judgements to populism research (Blader et al., 2013).

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We conducted two online experimental studies in the UK in 2019. In Study 1, we induced PRD in the socio-economic and in Study 2 in the socio-cultural contexts. Besides, in the second study, we accounted for attitude polarization. In the following sections, we introduce the concepts of populist attitudes and PRD. We then elaborate on the appraisal theory of emotions and account for the role of emotions in shaping the relationship between PRD and populism. After presenting two studies, we conclude with the implications of our results for research of PRD, populism, and emotions.

4.2. Theoretical Framework

4.2.1. Populism

While the majority of research defines populism through the juxtaposition between the evil and corrupt elites and the virtue people (e.g., Laclau, 2005; Mueller, 2016), the "ideational" approach to populism, which dominates empirical research, adds a third component: the view that politics should result from the "general will" of "the people" (Mudde, 2004; Hawkins & Kaltwasser, 2018). Mudde and Kaltwasser (2013) suggest that the opposition between "the elites" and "the people", and popular sovereignty, used to capture the popular will, are sufficient and necessary criteria to capture the core of populism.

While this core is shared by any type of populism, ideological contents of any populism type are defined by "host ideologies", which add to the populist core (Mudde & Kaltwasser, 2013). The authors classify populist host-ideologies as "inclusionary" and "exclusionary", based on how the categories of "the people" and "the elites" are constructed. Inclusionary populism predominantly refers to the socio-economic dimension, providing the poor with state resources, political and symbolic representation as of part of "the people". Exclusionary populism refers to the socio-cultural dimension and aims to exclude outsiders, such as migrants, from receiving state resources, such as welfare provisions and jobs. It also aims to prevent outsiders from political participation, and exclude them from the category of "the good people" (Mudde & Kaltwasser, 2013).

We follow a considerable number of studies employing populist attitudes as one of measures of populism (e.g., Akkermann, Mudde, & Zaslove, 2014; Spruyt et al., 2016; Schulz et al., 2018). Populist attitudes reflect agreement with the core ideas of populism about the opposition between "the bad elites" and "the good people" (Hawkins & Rovira Kaltwasser, 2018; Schulz et al., 2020). They serve as a disposition towards populist support activated by framing under certain conditions (Hawkins & Rovira Kaltwasser, 2018). In empirical research, the populist attitudes are comprised by such components as "anti-elitism", "homogeneity", and "popular sovereignty" (e.g., Schulz et al., 2018).

Even though we employ populist attitudes in the paper, both types of populism – inclusionary and exclusionary – are of relevance to us. We believe that PRD in a socio-economic context is likely to induce inclusionary populism, whereas PRD in the socio-cultural context is likely to result in an exclusionary populism. We assume that the relationship between PRD and the two types of populism may be caused by two different mechanisms.

4.2.2. The Role of Perceptions of Relative Deprivation

We focus here on the subjective and not the objective relative deprivation (Crosby, 1976; Walker & Pettigrew, 1984). According to Smith et al. (2012), PRD capture the feeling that individuals do not get in what they consider themselves entitled to, whereas others possess it; there is no personal or group responsibility for this disadvantaged condition, and the process causing the disadvantaged situation is seen as illegitimate or unjust. Besides, individuals care about what they lack, and the disadvantaged condition is endurable.

Importantly, social comparisons can be done in relation to different targets, such as the rich or the migrants. From social comparisons, people strive for a positive distinctiveness: the perception that they or their ingroup is doing better than others. PRD may be harmful for individual's self-esteem in cause people do not manage to gain positive distinctiveness (Walker, 1999). Disadvantaged comparisons make people feel powerless: there is injustice in society, but people hardly have means to deal with it (Salmela & von Scheve, 2017). Searching for a way to

cope with these harmful for well-being perceptions may result in populist support (Filsinger, 2023; Spruyt et al., 2016). There are several explanations of how PRD affect populism (e.g., Pettigrew, 2017; Spruyt et al., 2016; Schulz, Wirth, & Müller, 2020; Hameleers et al., 2018). We focus on the two which tap into the difference between the inclusionary and exclusionary populism.

We assume that PRD in a socio-cultural context is likely to result in inclusionary populism. Wealth is vital for the subjective social status, which, in its turn, is necessary for individuals' personal and social esteem, resulting in better psychological well-being. People may support populists in case they await them to improve their financial situation (Gidron & Hall, 2017). Those who feel "left behind" due to economic changes and globalization will be most likely to support populists to increase availability of state resources (Kriesi et al., 2006). At the same time, economic issues can also be of importance for exclusionary populism (e.g., Gidron & Hall, 2017; Bernhard & Kriesi, 2019), especially, when resources are represented as a zero-sum game between the ingroup and the outgroup (Mudde & Kaltwasser, 2013).

Exclusionary populism can be best explained by PRD in a socio-cultural context. Lack of the possibilities to improve one's economic situation, which became especially difficult in the times of increased peculiarity of jobs and growing income inequalities, results in the perceptions of being disrespected in the society, fears over the status of population majority, and the feeling that people's values and lifestyle are threatened by outsiders (Gidron & Hall, 2017; Norris & Inglehart, 2019). Previously respected representatives of the working class have lost their social status. Affirmative policies have enhanced the well-being of the social groups previously doing worse off, such as migrants or ethnic minorities. In the search for a positive social identity, people support populists, since they believe that populists will promote their symbolic representation and thus enhance their social status (Gidron & Hall, 2017).

In addition, while research typically addresses PRD which individuals experience when judging their own situation (e.g., Smith et al., 2012; Crosby, 1976), we address PRD experienced

on behalf of others. As Blader et al. (2013) wrote, people may engage with experiences of others through a mentalizing process, which allows them to imagine how other people might feel (Blader et al., 2013). If an observer feels positive about a person or a social group facing deprivation (feels empathy towards them), the observer will mirror anticipated thoughts and emotional reactions of the deprived person or people. Therefore, the observer will perceive the disadvantaged event happening to others as unfair (Blader et al., 2013).

Based on the literature review, our first hypothesis is: *If individuals perceive relative deprivation, they are likely to score higher on their level of populist attitudes (H1)*. As already mentioned, in contrast to the majority of existing studies (e.g., Pettigrew, 2017; Spruyt et al., 2016; Urbanska & Guimond, 2018), we argue that the relationship between PRD and populist attitudes is shaped by affective processes. In the next section, we introduce the role of emotions in relation to PRD and populism.

4.2.3. Perceptions of Relative Deprivation and Emotional Reactions

Majority of authors suggested that PRD directly affects populism (e.g., Spruyt et al., 2016; Elhardus & Spruyt, 2016; Pettigrew, 2017; Urbanska & Guimond, 2018). In research on relative deprivation, PRD were found to result in emotional reactions (Smith et al., 2008; Folger, 1986). Researchers advocated for an inclusion of angry resentment towards the system causing injustice (Smith et al., 2012; Crosby, 1976). Smith et al. (2008) found that people reacting to collective economic disadvantage with anger were more willing to protest; those who felt sad showed less loyalty to organization, whereas those who were afraid were more loyal to it.

We claim that the effect of perceptions of relative deprivation on populism is mediated via emotions. People encountering relative deprivation instances react with emotional reactions, which activates their populist attitudes. The role of emotions as mediators between PRD and populist outcomes has not been tested, which we do in this paper. It was shown that perceptions of economic threat affected populist attitudes via emotions (Rhodes-Purdy, Navarre, & Utych, 2021). In comparison to a number of studies on emotions and populism (e.g., Kimmel, 2017;

Gaffney et al., 2018), which used predominantly one or a couple of discrete emotions, we hold it crucial to not only use the most commonly studied emotions, but to provide a systematic account which emotions are likely to result from encountering an instance of relative deprivation and how they can affect populist attitudes. For doing so, we address the level of appraisals, given the agreement that emotions are caused by appraisal patterns (Smith & Kirby, 2011; Scherer, 2001; Kappas, 2001).

Appraisals refer to automatic evaluations of events that occur subconsciously and can be altered by simultaneous reflective thinking (Kappas, 2006). They predominantly link an individual's circumstances and event features to their goals and needs, as well as their ability to adapt to the evaluated event, all occurring directly and instantaneously without the individual's awareness (Kappas, 2001; Smith & Kirby, 2011). These appraisals are pivotal in determining emotional responses and can subsequently lead to alterations in attitudes or behaviors (Kappas, 2008; Scherer, 2001). Given that different authors used somewhat different appraisals to predict a diverse number of emotions, we rely on Scherer's (2001, 2005) model [1]. It allows us to include an appraisal related to norms, since perceptions of injustice are a precondition for PRD (Smith et al., 2012). Besides, we use a measure of emotions, the Geneva Emotion Wheel, developed within Scherer's structural appraisal model of emotions (Sacharin, Schlegel, & Scherer, 2012).

To predict, which emotions result from an appraised event, one needs to select the appraisals that one is likely to make when encountering an instance of PRD. Then, one can check which emotions are likely to be caused by a corresponding appraisal pattern. This approach was used by Rico et al. (2017). To predict which emotions are likely to result from thinking about the economic crisis, they selected the appraisals of uncertainty, uncontrollability and efficacy in relation to the economic crisis. However, the authors did not fully use the possibilities offered by the appraisal theories of emotions: to predict the potential attitudinal and behavioral changes. In

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[1] Even though different appraisal theories differ in nomenclature and the number of appraisals, they all share certain similarity (Cornelius, 1996). While some scholars speak about "appraisal dimensions" constituting an appraisal (e.g., Scherer, 2001), others call them "appraisals" in plural (e.g., Smith & Kirby, 2011).

research on PRD, Smith et al., (2008) suggested four appraisals, which are likely to result from disadvantaged social comparisons causing PRD. These appraisals are, according to the authors, responsible for the emotional reactions linked to perceived relative deprivation: (1) illegitimacy of the process causing relative deprivation perceptions, (2) responsibility of another agent or agents for the disadvantaged situation, (3) one's perceived capability to change the situation, and (4) the evaluation whether the situation will improve or deteriorate (Smith et al., 2008). In accordance with Scherer's structural model of appraisal (2001, 2005), these components translate, consequently, into appraisals of (1) external standards compatibility, (2) cause by an agent, (3) coping potential (control and power), and (4) outcome probability check. In our analysis, we use the first three appraisals and exclude the appraisal of outcome probability, since we address the instances of relative deprivation which have already happened and not their potential negative fallout. Besides, this appraisal does not help to differentiate between negative distinct emotions, which we aim to predict with using selected appraisals (see Scherer, 2001, pp. 114-115). We now present the three selected appraisal dimensions in relation to PRD and populism.

  Appraisal of external standards compatibility. Scherer (2001) in his appraisal theory of emotions differentiates between internal standard compatibility (compatibility of the event with individual's norms) and external standards compatibility (judgement about the event based on group norms) of an appraised event. Since we address PRD felt for others, the second appraisal, of external standards compatibility, is of relevance to us. As already mentioned, unless the disadvantaged condition is perceived as illegitimate, no PRD can occur. Perceived illegitimacy causing PRD relates to perceived entitlement and deservingness (Smith et al., 2012). The appraisal of external standards compatibility under other labels has been used to explain populism. For instance, Pettigrew (2017) argues that people supported Trump due to the disappointing comparisons of what individuals expected to acquire in life relative to what they erroneously think "less deserving" social groups possess. People sensible to injustice happening

to them were more prone to support the populist right (Rothmund et al., 2020). Therefore, emotions associated with a low level of external standards compatibility are likely to activate populist attitudes.

Appraisal of external causality. The appraisal of *external causality* reflects the perceived responsibility of an agency for a disadvantaged condition (Scherer, 2001). Knowing who people hold responsible for the relative deprivation condition predicts the target of individuals' actions to tackle the source of injustice (Smith et al., 2012). This appraisal has received more attention in populism research (Hameleers & Schmuck, 2017, Hameleers, Bos, de Vreese, 2018, Hameleers, Bos, de Vreese, 2020). Spruyt et al. (2016) suggested, that by adopting populist attitudes or supporting populists, individuals try to shift away their personal responsibility for a disadvantaged condition (as in case of PRD) to outgroups, such as the elites or outsiders. Blaming the elites or immigrants was found to enhance populist attitudes (Hameleers & Schmuck, 2017; Hameleers et al., 2017). Magni argued that populists "depict the establishment as the cause of the problems and the obstacle that needs to be removed to redress the unfairness" (2017, p. 94). By doing so, populists provide people with a way to improve their situation; thus, populists become more attractive to people (Magni, 2017). Therefore, one can expect that emotions characterized by the appraisal of external causality is likely to activate populist attitudes (see also Hawkins & Rovira Kaltwasser, 2018).

Appraisal of coping potential. For clarity, we denote the third appraisal as *coping potential*. It corresponds to the appraisal dimensions of control (whether anything can at all be changed and how probable it is to prevent the disadvantaged condition) and power (individual's capability to influence a controllable event) according to Scherer (2001) and problem-focused coping potential according to Smith and Kirby (2009). Smith and Kirby's definition of problem-focused coping potential as an "assessment of the individual's ability to act on the situation to increase or maintain its desirability" (2009, p. 1357) is closest to what Smith et al. (2008) used as an antecedent of relative deprivation perceptions. In populism research, powerlessness is treated

as one of explanations of populism (e.g., Salmela & von Scheve, 2017; Magni, 2017): populism is attractive for individuals who feel powerless within the existing political system, since populists offer them empowerment and actions outside of the system (Magni, 2017). Magni suggests that efficacious people who strive for a change support the mainstream opposition, while inefficacious people support populists. On the contrary, Rico et al. (2020) claim that a close to powerlessness concept of internal political efficacy, defined as people's perceived competence to understand, take part in politics and achieve desired outcomes using available resources, is a prerequisite for adopting populist ideas. They argue: "by challenging the authority of politicians and experts in the name of the people, populists are implying that people are competent to understand politics and make appropriate political decisions" (p. 799). Despite the controversial findings on the effect of the concepts close to the appraisal of coping potential (see also Spruyt et al., 2016), we assume that a high level of coping potential is likely to activate populist attitudes.

Having selected the appraisals relevant for the experience of an instance of relative deprivation, we rely on Scherer's predicted appraisal patterns for modal emotions and his empirical research (2001) to inform our selection of emotions. We use several appraisal theories and research on emotions to formulate the hypotheses on how emotions are likely to affect populist outcomes. We argue that people are likely to appraise an instance of relative deprivation as low in compatibility to external standards, think that the disadvantaged condition is caused by the establishment and perceive themselves incapable to change the disadvantaged situation. Therefore, we may expect them to experience such emotions as anger (characterized by low compatibility with an external standard, external causality, and high control and power), contempt (very low compatibility with an external standard and external causality), fear (very low power), and sadness (very low control and power). We also add disgust, found by Scherer to be characterized by external causation (2001, p. 116; see also Russell & Giner-Sorolla, 2011), and shame which accounts for the possibility that individuals may blame themselves or their

ingroup (e.g., Haidt, 2003) for a disadvantaged condition of others. In the following section, we predict how the emotions selected (anger, disgust, contempt, sadness, fear, and shame) affect populist attitudes.

4.2.4. Emotional Reactions and Populism

First, we assume that emotions associated with the appraisal dimensions of low compatibility with external standards, external causality, and high level of coping potential are likely to enhance populist attitudes. So are anger, disgust and contempt (see Scherer, 2001). The importance of the normative component of emotions experienced when individuals' personal goals are not affected, can be stressed when referring to Haidt's concept of "moral emotions". These are the emotions, which not directly benefit or harm the person who experiences them, but benefit other people or seek to preserve the integrity of the social order (Haidt, 2003). In particular, anger, disgust, and contempt are directed at the actors who violate social order (Haidt, 2003). Let us address the role of each of these discrete emotions.

Anger is considered to be the main diver of populism (e.g., Rico et al., 2017; Vasilopoulos et al., 2019). Its core relational theme is "other-blame" (Smith & Lazarus, 1993). Smith with colleagues suggested that anger is targeted at the system causing inequality (2012). Characterized by a high level of coping potential (Scherer, 2001), it is aimed to remove the source of harm (Smith & Lazarus, 1990) and danger in the present (Hutcherson & Gross, 2011), motivates people to seek change (Magni, 2017), and protest (Smith et al., 2008).

Contempt is aimed to avoid harm by reducing exposure to both present and past behavior (Hutcherson & Gross, 2011). According to Haidt, contempt relates to hierarchies: it reflects the perception that a person does not level up to one's position or level of prestige. There is also an "upward contempt" of the non-elites to the elites (Haidt, 2003). *Contempt* is linked to the threat of incompetence: the person causing such a violation is perceived as unintelligent (Hutcherson & Gross, 2011).

Disgust is targeted at the person who is perceived as morally untrustworthy and is causing a moral violation (Hutcherson & Gross, 2011). It relates to the threat to morality and, same as contempt, tries to avoid harm by reducing exposure to both present and past behavior (Hutcherson & Gross, 2011).

Second, we suggest that emotions characterized by the appraisal dimensions of internal causality, low coping potential, and absence of incompatibility with social norms are likely to deactivate the support for populist ideas. So are fear, sadness, and shame (see Scherer, 2001). Low coping potential demotivates people to make change or react to a situation of injustice, whereas internal causality makes people consider that the self or the ingroup are responsible for a disadvantaged situation.

Fear, which has a core relational theme of "threat" or "danger", is characterized by the appraisal of low capability to change the undesired condition for the better (Smith & Lazarus, 1993, Scherer, 2001). Fear results in the desire to defend oneself, especially through withdrawal from the situation (Öhman, 2008), as well as taking precautions, and different types of risk-aversive behaviors, such as conciliation or prevention (Rico et al., 2017). While fear after the Paris terror attacks of 2015 was negatively related to voting for the populist right (Vasilopoulos et al., 2019), fear about the economic crisis in Spain was unrelated to populist outcomes (Rico et al. 2017, see also Rhodes-Purdy et al., 2021).

Sadness has as a core relational theme - "irrevocable loss or helpless about loss" (Smith & Lazarus, 1993, p. 239). It motivates people to seek help or disengage from harmful situations (Smith & Pope, 1992; Smith & Kirby, 2011). Sadness was found to be unrelated to populist attitudes (Rico et al. 2016).

Shame is characterized by internal causality. As Haidt writes, it is "elicited by the appraisal that there is something wrong or defective with one's core self, generally due to a failure to measure up to standards of morality, aesthetics, or competence" (2003, p. 860). Shame motivates people to withdraw (Haidt, 2003, but cf. Salmela & von Scheve, 2017).

CHAPTER 4: PERCEPTIONS OF RELATIVE DEPRIVATION, EMOTIONS, POPULISM

Summarizing the assumptions derived from addressing the selected appraisal dimensions and emotions*, we expect that PRD resulting in anger, disgust, and contempt will increase the level of individuals' populist attitudes (H2).* On the contrary, *PRD resulting in fear, sadness, and shame will decrease the level of populist attitudes (H3).* Before we present the studies, we introduce research context and clarify that we do not expect all people to be affected by encountering instances of relative deprivation in the same way.

4.2.5. Attitude Polarization

Our studies were conducted during a highly turbulent time in the UK. On June 23rd, 2016, a tight majority of population (51.9%) decided in a referendum (called as Brexit) that the country should leave the EU (BBC, n.d.). At the time of our fieldwork in 2019, several political crises occurred including the resignation of the British Prime Minister Teresa May and the Parliament shutdown declared by the new Prime Minister Boris Johnson.

The referendum campaign and its fallout led to the development of two salient opinion groups of Brexit supporters ("Leavers") and opponents ("Remainers"), resulting in opinion-based polarization (Hobolt et al., 2021). *Leavers* were mostly conservatives (Hobolt et al., 2021, Hobolt, 2016). They felt insecure, marginalized and detached from the elites. They were "losers of globalization", who dreaded rapid social, cultural, and economic changes (Goodwin & Heath, 2016). Leavers were especially concerned about the growing immigration and multiculturalism and were afraid of their country losing national identity (Hobolt, 2016). On the contrary, *Remainers* were predominantly liberals. They were "winners of globalization", cared most about economic stability and feared negative economic consequences of Brexit (Hobolt, 2016, Hobolt et al., 2021; Goodwin & Heath, 2016). Both Remainers and Leavers identified with their ingroups, treated each other as outgroups, and demonstrated evaluative bias in judgements and decision making, which spilled over on non-political issues. This cleavage cut across the traditional party divide, was stable and even stronger than the cleavage caused by partisanship (Hobolt et al., 2021).

In Study 2, we account for the evaluative bias in perceptions of Remainers and Leavers, when encountering instances of relative deprivation. According to the theory of motivated reasoning (Taber & Lodge, 2006), individuals engage in confirmation bias (confirming their initial beliefs), disconfirmation bias (taking extra time to contest contra-arguments disapproving of their initial position); they evaluate arguments congruent with their initial views as stronger, and arguments incongruent with their views as weaker (Taber & Lodge, 2006). We present our expectations on the difference between the reactions to instances of relative deprivation between Remainers and Leavers when describing Study 2.

4.3. Research Design

To explore how PRD affect populist attitudes, and whether emotions mediate this process, we ran two online experiments involving PRD in the socio-economic (Study 1) and socio-cultural (Study 2) contexts. In both studies, we used a one-factor (relative deprivation) between-subject design. For experimental manipulations, we employed mass media-based articles adjusted for length and arguments made. While in the treatment condition, people were exposed to instances of relative deprivation, in the control condition, respondents received an article on the same topic framed in a neutral way.

Important to stress, by a single manipulation of PRD, we did not expect to turn respondents into populists. However, we assumed that people would sway towards a more populist position in the treatment condition compared to the control condition. We expected these effects to be short-term and rather weak. In contrast, we suppose that a cumulative media exposure to such articles could significantly affect individuals' attitudes or behaviors in a long-time perspective. Showing even small effects due to a one-shot manipulation would, however, demonstrate whether PRD on behalf of others and the emotional reactions resulting from them can activate populist attitudes.

Respondents for the studies were recruited via the Internet platform "Prolific" (Palan & Schitter, 2018). They all lived in the UK and held its citizenship. We pre-registered our

hypotheses and analyses (https://osf.io/erywa/ for Study 1 and https://osf.io/jexwf for Study 2). The studies were approved by the Ethics Committee of the Constructor University.

Study 1

In the first study, we explored how PRD in a socio-economic context influenced populist attitudes, and whether emotions mediated this relationship.

Participants. Data were collected in late May-June, 2019. Resulting sample included 589 respondents: 301 in the treatment and 288 in the control condition. Men and women were equally represented. Overrepresented were younger participants from middle class with left views (see Appendix 3C.4).

Procedure and Materials

Pretest. To select suitable stimuli for the treatment and control conditions, we prepared 12 pairs of articles from British mass media; each pair was devoted to one topic and either contained an instance of relative deprivation or not. For the pretest, 80 participants were recruited via the online platform "Prolific". Each person had to rate six different articles on how just and relevant the situation described in the article was, on a scale from "1" (lowest) to "7" (highest level). A scenario describing reduction of social benefits for single-parents' households coupled with an income tax cut for wealthiest households was rated as most unjust ($M_{injustice}$ = 5.4, SD = 1.6; $M_{relevance}$ = 4.4, SD = 1.92), It was selected for the treatment condition. In the control condition, the reader was presented with general information ($M_{injustice}$ = 3.3, SD =1.61; $M_{relevance}$ = 5.17, SD = 1.53) on the income tax cut (see Appendix 3C.1.1).

Main Study. Participants were invited to participate in a study "Feelings and Attitudes towards Societal Processes" via the online recruitment platform "Prolific" and redirected to the platform "Unipark" where the study was hosted. They received information about the study and filled the informed consent form. Upon agreement, they proceeded to instructions and were randomly assigned to an experimental condition. After reading an article, respondents were asked about their emotional reactions, presented with questions on populist attitudes,

manipulation checks and controls. At the end of the study, respondents were debriefed and could provide us with their feedback.

Materials and Measures

Manipulation. We manipulated PRD. As *manipulation checks*, we use appraisals of injustice and importance measured on a 7-point Likert scale (Scherer & Meuleman, 2013). The article manipulating PRD was perceived as more unjust (M=5.61, SD = 1.53) than the article in the control condition (M = 2.97, SD = 1.52; t (587) = 21.006, p=0.000).

Independent Variable. We treated exposure to the treatment condition as a measure of PRD. It was coded so that "1" stands for "perceptions of relative deprivation", and "0" for "absence of relative deprivation".

Dependent Variables. *Populist attitudes* were measured with a scale by Schulz et al. (2018) capturing three components of populist attitudes - anti-elitism, homogeneity, and popular sovereignty. The scale was selected given its internal coherence, external validity, and conceptual breadth (Castanho Silva et al., 2020). All items were measured on a 5-point Likert scale, where 1 stands for "completely disagree", 5 -for "completely agree"[2]. However, in contrast to Schulz et al. (2018), we use the three dimensions of populism separately. Upon confirmatory factor analysis with anti-elitism, homogeneity, and popular sovereignty as first-order factors, and populist attitudes as a second-order factor, we found that popular sovereignty contributed significantly more than other first-order factors to the factor of populist attitudes. Considering this and further literature (e.g., Oliver & Rahn, 2016), we decided to use three components of populist attitudes separately, without a second-order factor of populist attitudes. The resulting model had a good fit: X^2=166.554, df =51, p = 0.0000, RMSEA = 0.062, p-close =0.029, CFI =0.948, TLI = 0.933, SRMR = 0.049. Factor scores were extracted for anti-elitism, homogeneity, and popular sovereignty.

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[2] All items were positively framed. Inclusion of additional reversely-framed items rendered similar results for all the analyses in Studies 1 and 2.

Mediators. *Emotions* were measured with the Geneva Emotion Wheel 3.0 (Scherer & Meuleman, 2013; Sacharin et al., 2012). In this measure, twenty distinct emotion families are organized in a wheel shape and their intensity is measured on a scale from "1" (lowest) to "5" (highest salience). Respondents could select one, several, or no emotions, and mark their intensity. Of all the emotions, we pre-registered and analyzed the data for anger, disgust, contempt, sadness, shame, and fear, and which were among the most salient emotional reactions.

Control variables. We compared our samples in the treatment and control conditions using sociodemographic and manipulation controls. There were significant differences in three variables, which we included as controls. *Perceived trustworthiness* of the article ("How much did you trust the article you read at the beginning of the study?") was measured on a scale from "1" ("do not trust at all") to "7" ("trust completely"). *Perceived neutrality of the article* ("Do you think the author of the article was neutral or was pushing a certain view?") was recoded so that "1" stands for "very opinionated" and "5" for "very neutral". Self-placement on the left-right scale was measured with the item "Where do you place yourself on this scale, where 1 means the left and 11 means the right?"

Results

Analytical Strategy. To test whether PRD enhanced populist attitudes, we run OLS regressions with the statistical program R. We then performed mediation analysis with bias corrected bootstrap (bootstrap number of draws was 10000) standard errors and confidence intervals (Fritz & MacKinnon, 2007) using Mplus 8.5 software, which allowed to perform mediation analysis in one step (Muthén & Muthén, 1998-2012, p. 37). To evaluate statistical significance, we relied on 95% confidence intervals. In case a confidence interval crosses "0", the effect is non-significant. We used STDY standardization, since the independent variable PRD is binary (Muthén, Muthén, & Asparouhov, 2017). Mediation models with and without controls rendered similar results.

Populist Attitudes. The levels of anti-elitist and homogeneity attitudes were higher in the treatment than in the control condition (see Figure 4.1), whereas there was no difference in the level of popular sovereignty.

Figure 4.1

The level of anti-elitism, homogeneity, and popular sovereignty across experimental conditions
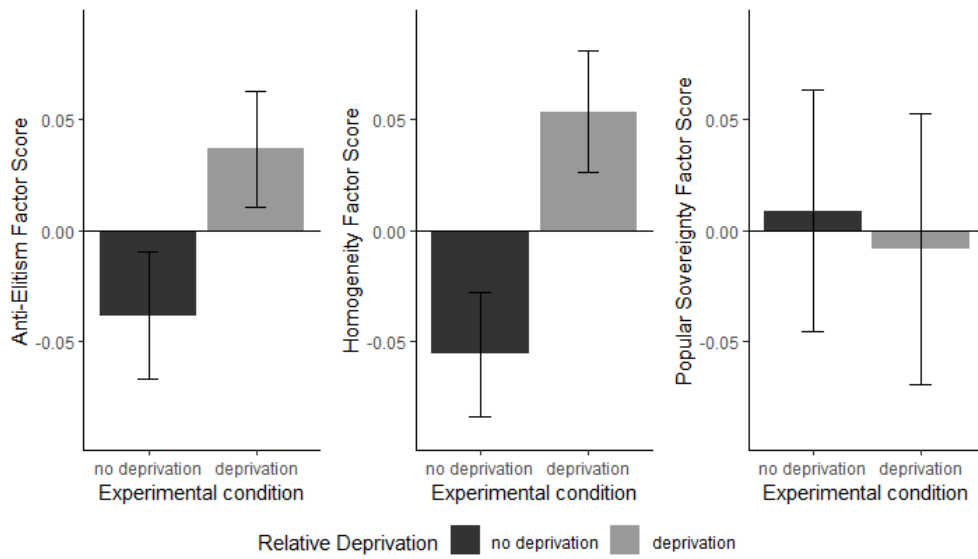
Regression analysis with controls (See Table 4.1) showed that exposure to a relative deprivation instance slightly enhanced the level of anti-elitism and homogeneity, but did not affect the level of popular sovereignty.

Table 4.1

Results of regression analysis. The effect of perceptions of relative deprivation on populist attitudes

	Dependent Variable:		
	Anti-Elitism	Homogeneity	Popular Sovereignty
Relative deprivation	**0.09*** (.04)	**0.13****(.04)	0.01 (.09)
Article trustworthiness	-0.02 (.02)	0.01 (.02)	-0.02 (.03)
Article neutrality	-0.01 (.02)	0.01 (.02)	-0.00 (.04)
Left-right scale	0.01 (.01)	**0.02*** (.01)	0.01 (.02)
(Constant)	0.02 (.08)	**-0.24****(.09)	0.02 (.19)
Observations	572	572	572
R^2 / R^2 adjusted	0.013 / 0.006	0.030 / 0.023	0.001 / 0.006

Note: Cell entries are unstandardized regression coefficients, standard errors are given in brackets.

Emotions. In the treatment condition, negative emotions were more salient compared to the control condition (see Figure 4.2). Respondents exposed to a relative deprivation instance experienced anger (81%), disgust (73%), and sadness (73%). Significantly less respondents felt contempt (34%), shame (28%), or fear (24%).

Figure 4.2

Frequencies of emotions across the treatment and control conditions
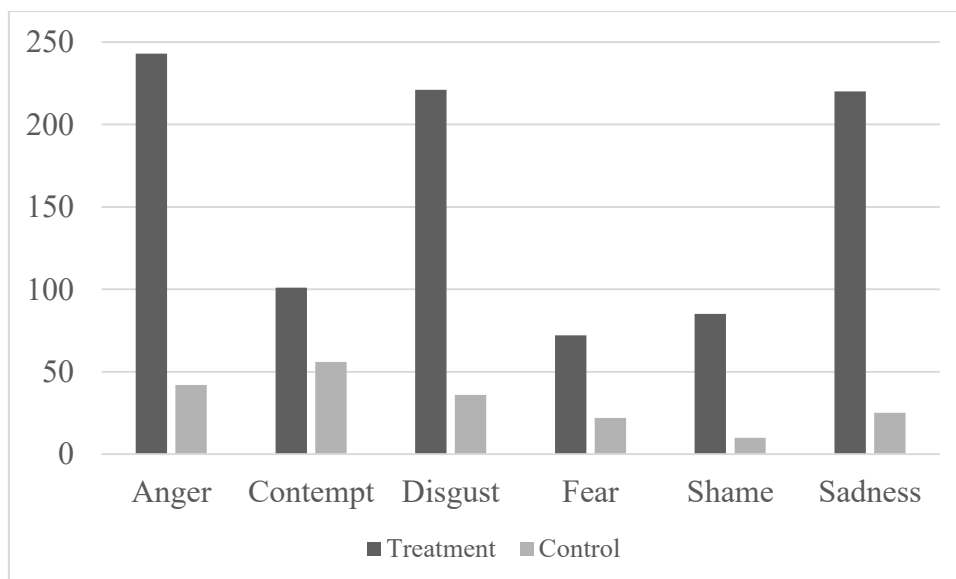
Mediation Analysis. Disgust fully mediated the relationship between PRD and anti-elitism (see Figure 4.3), enhancing the latter by 33% of a standard deviation (*B* = 0.15, *SE* = 0.055, *β* = 0.33, *p* = 0.006, *95%CI* [0.06, 0.26]), and sadness partially mediated the relationship between PRD and popular sovereignty, leading to a 29% increase of a standard deviation of popular sovereignty (*B* = 0.29, *SE* = 0.10, *β* = 0.29, *p*=0.002, *95%CI* [0.12, 0.50]). That means if people's PRD resulted in disgust, they opposed elites, whereas if they felt sad, they wanted ordinary people to do politics rather than politicians. No emotions mediated the relationship between PRD and homogeneity.

Figure 4.3

Mediation model for study 1. Trustworthiness of the article, neutrality of style, and left-right self-placement were controlled for
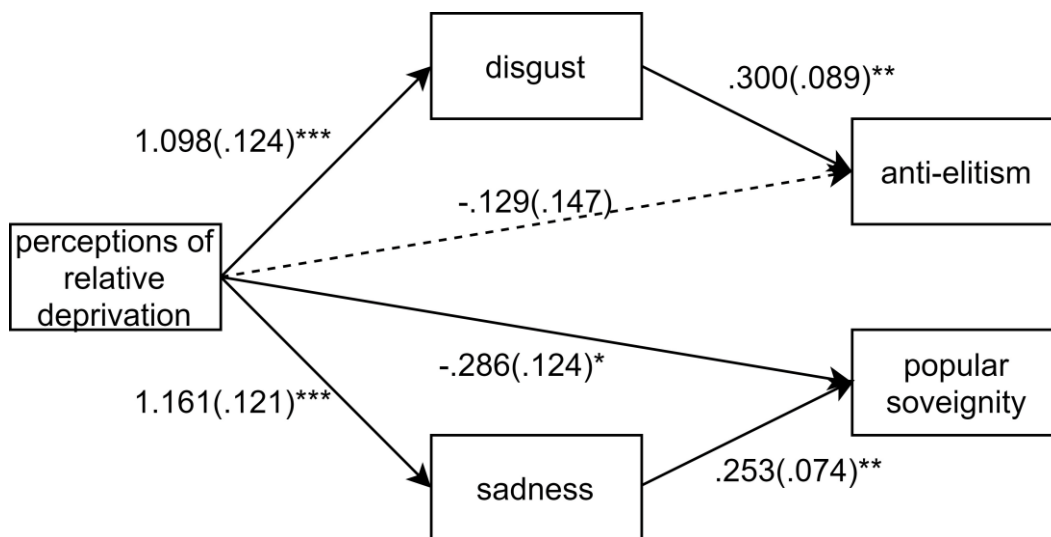
Note. Standardized coefficients are plotted. For paths leading from PRD, STDY standardization was used

'***' indicates *p*<0.001; '**' for *p*<0.005; '*' for *p*<0.05; '+' for *p*<0.1

Summarizing the results of Study 1, there is a partial confirmation for the first hypothesis: PRD enhanced anti-elitist and homogeneity attitudes. Our hypotheses were only partially confirmed: contrary to expectations, both emotions, disgust and sadness resulting from

PRD in the socio-economic context enhanced populist attitudes. Potentially, this effect can be explained by the fact that both emotions were highly correlated with each other (r=0.516). Moreover, different populist attitudes functioned in a different way: there was a direct effect of PRD on anti-elitism and homogeneity, whereas emotions mediated the relationships of PRD with anti-elitism and popular sovereignty.

Study 2

We further manipulated PRD in the cultural context and accounted for attitude polarization using opinion on Brexit as a proxy for political ideology. We selected the topic of illegal immigration, which was one of the main arguments for voting Leave in the Brexit referendum (Hobolt, 2016; Tammes, 2017). Therefore, we assumed that the experimental manipulation containing an instance of relative deprivation linked to migration was congruent with the views of Brexit supporters (Leavers), and incongruent with the position of its opponents (Remainers). That is why we expected confirmation bias in the first case, and disconfirmation bias in the second. We sampled Leavers and Remainers separately using a screening filter for participant recruitment on "Prolific", and compared these two groups. Otherwise, the study had the same design and procedure as Study 1.

Participants. Data were collected in December 2019. The resulting sample comprised 626 participants with men and women being equally represented. Given respondents' attitudes on Brexit in December 2019, our sample consisted of Leavers (N=287), Remainers (N=290), and people with a different or no opinion on this topic (N=49).

Materials and Measures

Manipulation. We manipulated PRD. We used a measure of relative deprivation (Smith et al., 2008) as a manipulation check. The manipulation worked well: in the treatment condition, the level of relative deprivation was higher ($M_{treatment} = 0.78$, $SD = 0.86$) compared to the control condition ($M_{control} = -0.83$, $SD = 0.90$; t(624)=22.806, p=0.000). Independent variable and mediators were same as in Study 1.

Dependent Variables. Identically to Study 1, results of confirmatory factor analysis with the scale of populist attitudes by Schulz et al. (2018) suggested treating the three components of populist attitudes separately. The model had a good fit: $X^2 = 193.745$, $df = 51$, $P\text{-}Value = 0.000$, $RMSEA = 0.067$, $CFI = 0.947$, $TLI = 0.931$, $SRMR = 0.047$.

Control Variables. There were significant differences in perceived trustworthiness and neutrality of the article between the treatment and the control conditions. Since these two variables were highly correlated ($r=0.543***$), in order to avoid multicollinearity, we included *perceived trustworthiness of the article* as a control in our analysis.

Procedure

Pretest. The pretest ($N=160$) aimed to select materials for manipulation was conducted in a similar way as the pretest for Study 1. Additionally, we separately sampled respondents whose views we expected to be more (supporters of the populist right-wing party UKIP, $N=80$) and less (supporters of other than UKIP parties, $N=80$) congruent with the contents of the articles used to manipulate PRD. The article selected for the treatment condition compared illegal migrants cheating on the UK welfare system with British citizens facing social benefit cuts (see Appendix 3C.1.2). This scenario was perceived as the most unjust one ($M = 4.84$, $SD = 2.08$). In the control condition, neutral information on entitlement of illegal migrants to benefits compared to native British was presented; it was perceived as less unjust ($M = 3.42$, $SD = 1.51$).

Main Study. 322 respondents were randomly assigned to the treatment and 304 to the control condition. The procedure was same as in Study 1.

Results

Analytical Strategy. Similarly, to Study 1, we performed OLS regressions and mediation analysis. Mediation analysis was performed for the whole sample and separately Brexit supporters and opponents. Mediation models with and without controls rendered similar results.

Populist Attitudes. We firstly plot the means of populist attitudes across the experimental conditions among those who supported and opposed Brexit (See Figure 4.4). Exposed to an

instance of PRD Remainers scored lower on popular sovereignty, showing some evidence of disconfirmation bias. When in an OLS regression perceived trustworthiness of the article was accounted for, this effect became insignificant, which also speaks in favor of disconfirmation bias (the effect of experimental manipulation on popular sovereignty was partialled out by a measure of trustworthiness of the article; in other words, Remainers did not trust the information they read, so they demonstrated a decrease of popular sovereignty attitudes).

Figure 4.4

The level of populist attitudes across the treatment and control conditions among Leavers and
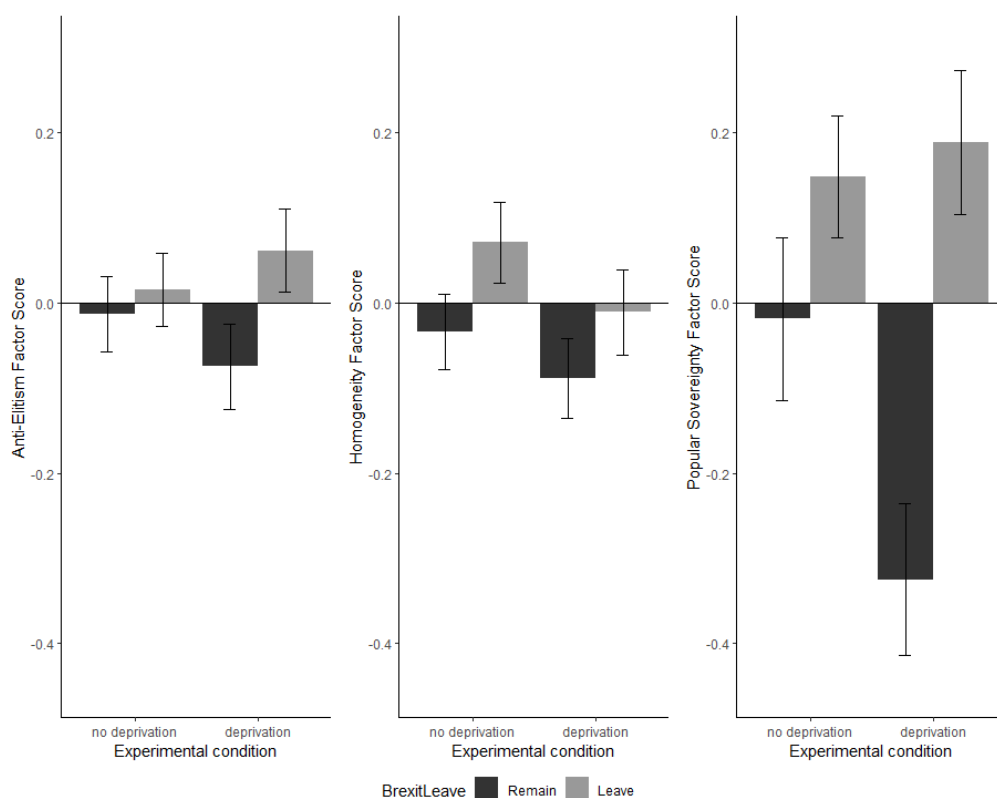
Remainers

Based on OLS regression analysis (see Table 2), PRD did not enhance populist attitudes. No effects of PRD on populism were found with regressions run among Remainers and Leavers separately (see Appendix 3C.5).

Table 4.2

Results of regression analysis. The effect of relative deprivation perceptions on populist attitudes

	Dependent variables:		
	Anti-Elitism	Homogeneity	Popular Sovereignty
Relative Deprivation	-0.02 (.05)	0.02 (.05)	-0.04 (.09)
Article trustworthiness	0.01 (.02)	**0.08***** (.02)	**0.10***** (.03)
Constant	-0.05 (.07)	**-0.33*****(.07)	**-0.38**** (.14)
Observations	626	626	626
R^2 / R^2 adjusted	0.003 / -0.001	0.051 / 0.048	0.027 / 0.024

Note: Cell entries are unstandardized regression coefficients and standard errors.

Emotions. Negative emotions were more salient in the treatment than in the control condition among both Remainers and Leavers (see Figure 4.5). In general, respondents facing relative deprivation experienced anger (77%) and disgust (69%). Some felt contempt (44%) or sadness (43%), and significantly less felt shame (21%) or fear (15%).

Figure 4.5

Frequency of emotions across the treatment and the control conditions among Leavers and Remainers
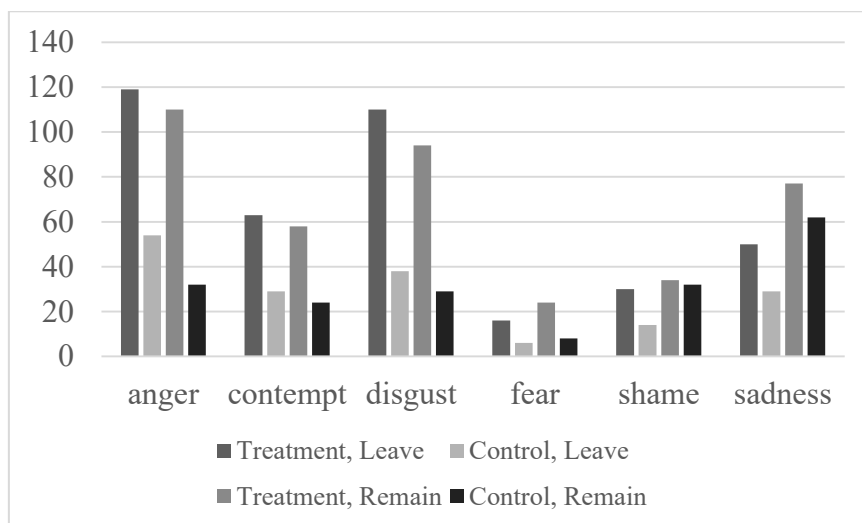
Mediation Analysis. In the model with the overall sample (see Figure 4.6), anger and contempt mediated the relationship between PRD and populist attitudes. Particularly, contempt

resulting from PRD increased by 16.3% of a standard deviation the level of anti-elitism (B = 0.09, SE = 0.034, $β$ = 0.16, p = 0.016, $95\%CI$ [0.03, 0.18]), and by 11.7% of a standard deviation the level of popular sovereignty (B = 0.12, SE = 0.06, $β$ = 0.12, p = 0.056 [0.02, 0.27]). Anger enhanced the level of homogeneity by 8.1% of a standard deviation (B = 0.05, SE = 0.02, $β$ = 0.08, p = 0.059, $95\%CI$ [0.002, 0.099]), and popular sovereignty by 10.4% of a standard deviation (B = 0.11, SE = 0.049, $β$ = 0.10, p = 0.028, $95\%CI$ [0.02, 0.22]). Therefore, there is a confirmation for hypothesis 2 that anger and contempt experienced in reaction to a relative deprivation instance activate populist attitudes.

Figure 4.6

Mediation Model for Study 2 (N=626). Trustworthiness of the article and self-placement on the left-right scale were controlled for
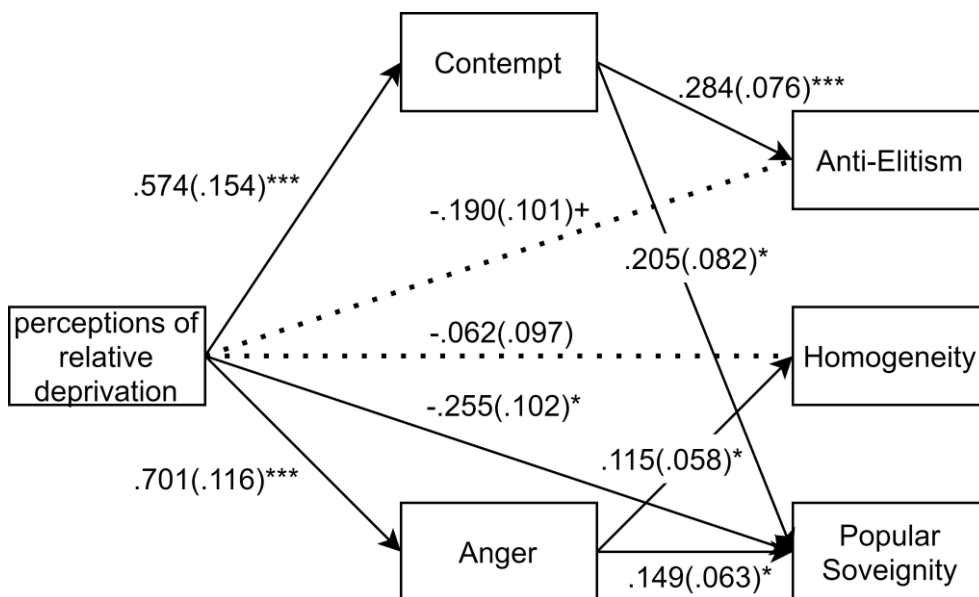
Note. Standardized coefficients are plotted. For paths leading from PRD, STDY standardization was used

'***' $p<0.001$; '**' for $p<0.005$; '*' for $p<0.05$; '+' for $p<0.1$

We next checked whether emotions mediated the relationship between PRD and populist attitudes among separately Leavers (N = 288) and Remainers (N = 290). Only among Brexit

supporters, the indirect effect of emotions was of significance (See Figure 4.7). Anger mediated the relationship between PRD and anti-elitism ($B = 0.09$, $SE = 0.045$, $ß = 0.16$, $p = 0.045$, $95\%CI$ [0.02, 0.20]), leading to an increase of anti-elitism by 16% of a standard deviation. Besides, anger mediated the relationship of PRD and popular sovereignty ($B = 0.18$, $SE = 0.07$, $ß = 0.19$, $p = 0.012$, $95\%CI$ [0.07, 0.35]), increasing the level of popular sovereignty by 19% of a standard deviation. Disgust mediated the relationship between PRD and homogeneity ($B = 0.08$, $SE = 0.04$, $ß = 0.14$, $p = 0.049$, $95\%CI$ [0.01, 0.18]), causing an increase of homogeneity by 14% of a standard deviation. Absence of direct effects of PRD on anti-elitism and popular sovereignty shows that the reaction to the relative deprivation instance among Brexit supporters was foremost affective. The findings imply that disgust and anger enhanced populist attitudes, which is consistent with hypothesis 2, but only when the message used for the experimental manipulation was congruent with individual's views.

Figure 4.7

Mediation model for Brexit supporters (N=287). Trustworthiness of the article is included as a control variable
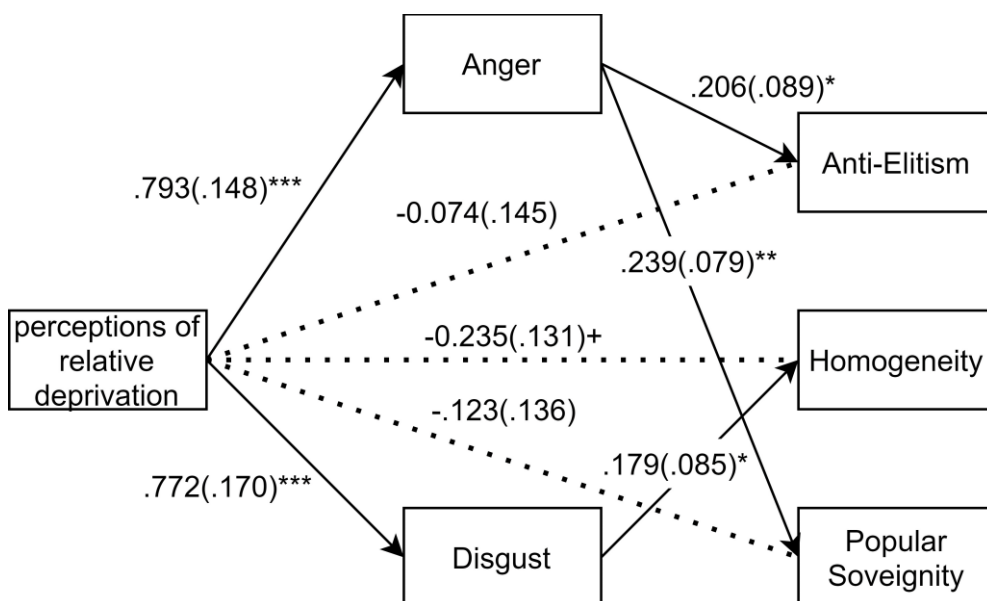
Note. Standardized coefficients are plotted. For paths leading from PRD, STDY standardization was used. '***' $p<0.001$; '**' for $p<0.005$; '*' for $p<0.05$; '+' for $p<0.1$

Results of Study 2 render partial confirmation of the hypotheses. We found that PRD did not enhance populist attitudes directly, as suggested by Hypothesis 1. Instead, the effect occurred via moral emotions and only among Leavers, confirming Hypothesis 2.

4.4. Discussion

This study explored whether PRD experienced on behalf of others increased populist attitudes in the socio-economic (Study 1) and cultural (Study 2) contexts. In contrast to existing literature, we suggested that the effect of PRD on populist outcomes happens via emotional reactions. We did not find a strong support for a direct effect of PRD on populist attitudes in Study 1 and there was no direct effect of PRD on populist attitudes in Study 2. Instead, negative emotions played a crucial role in driving populist attitudes. In Study 1, disgust resulting from PRD in the economic context made people oppose elites, whereas sadness made people support the idea that ordinary people should do politics instead of professional politicians. In Study 2, emotions played a prominent role among Brexit supporters: if PRD resulted in feeling of disgust, people were more likely to claim that the British are a homogeneous and virtue group of people, whereas if Leavers felt anger, they were more likely to oppose elites and believe that ordinary people should do politics. For the overall sample, contempt and anger caused by PRD activated populist attitudes. Among Brexit opponents, emotions did not mediate the relationship between PRD and populist attitudes. We explain this given the potential incongruence of the manipulation scenario and the socio-cultural context with the views of Remainers: there was some evidence of disconfirmation bias among Remainers (see also Hameleers et al., 2018).

Contrary to our expectations, sadness mediated the effect of PRD on popular sovereignty with a positive effect. All negative emotions in both studies were highly correlated. These findings suggest that there was a strong effect of a negative affective state resulting from PRD, and this state activated populist support. We conducted a robustness check, where one emotion was included as a mediator at a time. Results were similar: sadness enhanced the effect of PRD

on popular sovereignty in Study 1. This affect could be potentially different in diverse contexts among different groups: sadness did not mediate the effect of PRD on populism in Study 2. Our studies also assessed emotions which were hardly used in populist research, such as disgust or contempt. Contrary to Rico et al. (2017) who found no effect of sadness on populism, we showed that it can enhance popular sovereignty. Still, the effects of emotions were somewhat different across the studies. One should treat our findings with some caution and replicate them in future research.

Besides, in case of correlated mediators, suppression of effects may occur. However, results of mediation models with all emotions included at once were not substantially different from the mediation models with one emotion included at a time.

Next, we found that in both studies PRD and emotions affected the three components of populist attitudes (anti-elitism, homogeneity, and popular sovereignty) differently. We suggest in future research to analyze the effects on the components of populist attitudes separately, as done in several scales measuring populist attitudes (e.g., Casthano Silva et al., 2018; Oliver & Rahn, 2016). Given the evidence from our studies, there are reasons to question the coherence of the components of populist attitudes. Therefore, we suggest to revisit which components build populist attitudes (cf. Schulz et al., 2018). Indeed, there is no agreement in the literature what the populist core is comprised of: while some authors include homogeneity (e.g., Schulz et al., 2018), others stress the centrality of the Manichean divide between the people and the elites (e.g., Akkermann et al., 2014; Hawkins & Rovira Kaltwasser, 2018). Moreover, anti-elitism and homogeneity may be well analyzed within the dynamic of intergroup processes – as a juxtaposition of the ingroup of "good people" and the outgroup of "bad elites" (e.g., Schulz et al., 2020). In contrast, popular sovereignty, derived from Rousseau's concept of „volonté générale" (Mudde, 2004), may reflect individuals' general attitudes on political representation, which are unlikely to be affected by intergroup dynamics.

CHAPTER 4: PERCEPTIONS OF RELATIVE DEPRIVATION, EMOTIONS, POPULISM

Important to mark that in our study, we addressed two different contexts where PRD occurred – PRD of the poor compared to the rich and of native citizens compared to illegal migrants benefitting from the welfare system. While these two contexts tapped into existing debates in the British society (e.g., Hobolt, 2016) and were thus convenient to use, our findings should be replicated with different contexts and involving different dimensions and targets of social comparisons.

We used attitudes to Brexit as a proxy for attitude polarization, but only in the socio-cultural context. In Study 2, we found only limited support of attitude polarization. Even though the opinion on Brexit was shown to capture the ideological divide better than partisanship (Hobolt et al., 2021), it would be beneficial to compare Brexit as a proxy for political ideology with other measures of political ideology, especially, given that our studies were conducted more than three years after the Brexit referendum.

Another consideration refers to the stimuli used to induce PRD. Even though the texts which respondent read were based on articles taken from mass media, and the experimental setting paralleled the situation of a daily encounter with mass media, our manipulations were still artificial. We combined several sources in manipulation materials, and we could not consider the diverse sources of information which respondents used on a daily basis. The manipulation happened at one time point; and we did not gain strong effects. Our design did not allow to control for how long the manipulation effects persisted, and how strong and continuous an encounter with instances of relative deprivation should be to make people stick to short-term shifts in populist views. We encourage future researchers to develop a theory and provide evidence on the cumulative media exposure sufficient for development of a permanent change in attitudes towards populism. Additionally, it would be beneficial in future studies to include other than self-reported measures of emotions (e.g., Kappas, 2001).

Last, even though we tested for a causal relationship, we cannot rule out the possibility that populists make people more sensible to instances of relative deprivation (e.g., Hameleers,

Bos, de Vreese, 2018), or that exposure to populist rhetoric reinforces appearance of particular emotional reactions (e.g., Wirz, 2018). We encourage researchers to investigate the causality of PRD, populism and emotions in a longitudinal perspective (cf. Filsinger, 2023).

Having said that, to our knowledge, our article, showed first evidence that the effect of PRD on populism occurs via emotions. This is a causal effect, which was replicated in two studies addressing PRD in two different contexts. Given that all discrete negative emotions enhanced the effect of PRD on populist attitudes, there are reasons to believe that there is a generalized affect driving populist support. In addition, it was shown that it is important to consider individual's political views: a manipulation or a context may be congruent or incongruent with individual's views, which affects whether people will appraise an instance of relative deprivation with emotional reactions that can result in populist support.

5. Perceived Existential Insecurity or Relative Deprivation: What Drives Populism under Threat?

Abstract

The paper addresses how the perceptions of relative deprivation and existential insecurity directly and via emotions affected populism in the context of the coronavirus pandemic. We used three different layers of emotional reactions, and accounted for the attitude polarization between those who supported and opposed Brexit. An online experiment was conducted in the UK in August, 2020 (*N*=756). Perceptions of relative deprivation enhanced the level of anti-elitism only among Brexit proponents. Perceptions of existential insecurity did not affect any populist outcomes. Anger resulting from the perceptions of relative deprivation among Brexit opponents enhanced their level of anti-elitism, while fear increased their level of popular sovereignty. Brexit supporters responding with anger to the perceptions of relative deprivation scored higher on anti-elitism and popular sovereignty. If the perceptions of existential insecurity made Brexit supporters feel sad, their levels of anti-elitism and popular sovereignty increased. Discrete emotions did not mediate the relationship between the perceptions of existential insecurity and populism for Brexit opponents. Above all, our results hint at a prominent role of the appraisal of problem-focused coping potential resulting from perceived relative deprivation in enhancing populist attitudes among Brexit supporters.

Keywords: populism, perceived relative deprivation, perceived existential insecurity, emotions, COVID-19, Brexit, attitude polarization

CHAPTER 5: POPULISM UNDER THREAT

5.1. Introduction

We have an interest in the role that emotions play in the developing or modifying populist beliefs (e.g., Rico, et al., 2017; Abadi, et al., 2021). One of the challenges of testing this experimentally is linked to finding an ecologically valid context. Here, we employ the context of the coronavirus pandemic, which was one of the deadliest in recorded history (Koole & Rothermund, 2022) and which made the world face a novel and life-threatening disease caused by an invisible but omnipresent virus (Abadi et al., 2021). It significantly affected all aspects of our lives including politics. Thus, we set out to test whether perception of relative deprivation in the context of challenges posed by the pandemic would affect populist beliefs.

It has been widely suggested that in a threatening situation, such as wars or international crises (Mueller, 1970), terror attacks (e.g., Hetherington & Nelson, 2003; Huddy et al., 2005) people tend to "*rally around the flag*" – their trust in the president (Mueller, 1970; Lambert et al., 2010; Hetherington & Nelson, 2003), government, and identification with the president's party increases (Hetherington & Nelson, 2003). Trust in incumbent elites also increased due to COVID-19 (e.g., Herrera et al., 2020; Schraff, 2021; Dietz et al., 2021).

At the same time, cultural backlash theory (Norris & Inglehart, 2019, see also Inglehart & Norris, 2017), motivated social cognition theory (e.g., Jost et al., 2003; Porat et al., 2019), and some other studies (e.g., see Lambert et al., 2010; Huddy et al., 2005) suggest that under threat, people are likely to make conservative shifts, leaning to the political right. According to the cultural backlash theory, — which we employ here—when facing existential insecurity, people care about their survival values, which leads to outgroup derogation and blaming elites for cosmopolitan values endangering the survival of the ingroup (e.g., Norris & Inglehart, 2019). In fact, researchers assumed that in the context of the pandemic, people may become more supportive of populism (e.g., Inglehart, 2020, April 10). Several authors showed that the coronavirus pandemic as a threatening event resulted in an 'anti-democratic reflex' (Reeskens et al., 2021) and increased support for policies restricting civic liberties (Arceneaux et al., 2020,

Vasilopoulos et al., 2023). Anxiety about COVID-19 was positively related to populist attitudes (Abadi, et al., 2021). However, other studies showed no significant effect of the pandemic on populism (Wondreys & Mudde, 2022), or that populist support decreased due to the pandemic (Foa et al., 2022). We are interested to test whether perceptions of existential insecurity can enhance populism, as suggested by cultural backlash theory.

The pandemic has increased not only threat perceptions, but was also found to worsen existing social inequalities within and across countries (e.g., Bhaskar et al., 2020). We are interested to explore how perceived inequality in the context of the pandemic affects populism. We capture such concerns with the help of the relative deprivation theory (Pettigrew, 2017; Smith et al., 2012). According to it, people may feel that the ingroup is unfairly deprived of resources necessary for survival, which they think the outgroup possesses, and they blame the elites for their disadvantaged condition (e.g., Pettigrew, 2017; Urbanska & Guimond, 2018). Perceptions of relative deprivation were found to enhance populist support in different contexts (Marchlewska et al., 2018; Filsinger, 2022), but not in a life-threatening situation, which we address here.

We employ a specific issue which allows to test the effect of perceived existential insecurity and relative deprivation on populism – vaccination. Of special importance during COVID-19 as a public health emergency was equity in access to health-related measures aimed to rescue lives and prevent the spread of the virus (e.g., Kelley et al., 2020). Vaccination is the most efficient way in preventing morbidity and mortality, since it could help the community become immune to the virus (develop herd immunity – see, e.g., Randolph & Barreiro, 2020). Thus, equal access to vaccination is of crucial importance (Shen et al., 2021). We assume that people could be anxious about both: concerns that the vaccination would be ineffective[1] and a possible inequality in the distribution of vaccine.

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[1] At the time of the fieldwork, development of vaccines was still in the early stage; no trials begun yet.

CHAPTER 5: POPULISM UNDER THREAT

The paper contributes to literature in several ways. First, we test whether perceptions of existential insecurity enhance populism, employing cultural backlash theory in an experimental setting for the first time. To our knowledge, cultural backlash theory has only been tested with cross-sectional data (Norris & Inglehart, 2019; Inglehart & Norris, 2017), and has not been tested in relation to the coronavirus pandemic (Inglehart, 2020, April 10). Second, we are interested to replicate the effect of the perceptions of relative deprivation on populism in relation to a life-threatening situation. Research on causality of perceptions of relative deprivation for populism is still rare (Marchlewska et al., 2018; Filsinger, 2022). One can assume that the perceptions of relative deprivation may play a more important role in relation to resources necessary for survival than in relation to economic insecurity. Third, we consider that people react to instances of existential insecurity (e.g., Abadi et al., 2021; Vasilopoulos et al., 2023; Dietz et al., 2021; see also Chapter 6) and relative deprivation (e.g., Rico et al., 2017; Vasilopoulos et al., 2019; see also Chapter 4) with strong emotional reactions, which affect their attitudes and behavior. In populism research, the emotions caused by instances of relative deprivation (but for Kappas & Lytkina, in progress) and existential insecurity have not been studied, which we do here. Fourth, to our knowledge, all studies on emotions and populism have employed discrete emotions (e.g., Rico et al., 2017; Vasilopoulos et al., 2019), or suggested that there is a general affect underlying emotional reactions linked to right-wing populism, such as ressentiment (Salmela & von Scheve, 2017; Salmela & Capelos, 2021). We use three different layers of emotional experience, which enables us to better estimate their role in shaping populism. Characterizing affective processes via *appraisals* of a situation enables us to account for specific cognitions which elicit emotions in a particular context (Smith & Kirby, 2001). Appraisals are immediate, intuitive, and direct reactions, predominantly outside of individuals' awareness (Kappas, 2001) that determine which emotions people may experience (Smith & Kirby, 2011; Scherer, 2001). Furthermore, appraisals address motivational functions of emotions and their role in coping (Smith & Kirby, 2001). A focus on *discrete emotions* allows to account for respondents' emotional reactions in the way

people conceive of them (Smith & Ellsworth, 1985). Lastly, *Emotional dimensions* (valence, arousal, and dominance) correspond best to the underlying aspects of the experience of emotion avoiding the complexity of emotion terms. In the present study we are measuring them with a non-verbal tool—the Self-Assessment Manikin (SAM—Bradley & Lang, 1994). There are various reasons to use different levels of operationalizing emotions, as they contribute in different ways to understand affective processes (Harmon-Jones, Harmon-Jones, & Summerell, 2017). Fifth, we account for attitude polarization, since people with different political views may perceive a threatening or disadvantaged situation differently (e.g., Jost et al., 2003; Porat et al., 2019). We use attitudes towards Brexit as a proxy for attitude polarization (e.g., Hobolt, 2016; Hobolt, Leeper, & Tilley, 2021).

Our study was conducted in the UK in August 2020, between the first and the second wave of the coronavirus pandemic. During the first wave of COVID-19, UK had the largest absolute death toll in Europe (Ritchie et al., 2020). Besides, it was among the few countries, where the "rally effect" disappeared just in several weeks after the pandemic outbreak (Herrera et al., 2020). In the next sections, we present our theoretical framework and hypotheses. Results are firstly presented for the impact of the perceptions of relative deprivation on emotions and populism, and then for the existential insecurity perceptions. They are followed by general conclusions and a discussion.

5.2. Theoretical Framework

5.2.1. Existential Insecurity Perceptions and Populism

Similar to other threatening situations, such as wars, military conflicts and crises (Mueller, 1970), and terror attacks (Hetherington & Nelson, 2003), the coronavirus pandemic was found to trigger support for incumbent politicians in many European societies (Herrera et al., 2020; De Vries et al., 2020; Foa et al., 2022). However, COVID-19 was different from such "rally"-events as terrorism or wars. While terror attacks involved identifiable organizers having an intent (Lambert et al., 2010), the coronavirus pandemic represented an abstract threat, which

lacked intentionality and was not targeted against anyone in particular (Dietz et al., 2021).

People facing a life-threatening situation caused by the omnipresent virus could seek

empowerment and support not only among incumbents, but also populists. Following the

ideational approach to populism, we use Mudde's definition of populism as "an ideology that

considers society to be ultimately separated into two homogenous and antagonistic groups, 'the

pure people' versus 'the corrupt elite', and which argues that politics should be an expression of

the …general will of the people" (2004, p. 543). Serving as a set of ideas, populism adopts

contents of other ideologies, on the political right, left, or center depending on the existing

societal grievances (Hawkins & Kaltwasser, 2018; (Mudde & Kaltwasser, 2013). According to

the ideational approach, people have different levels of populist attitudes, which are defined as

"a latent demand [for populism] that must be activated through context and framing" (Hawkins

& Kaltwasser, 2018, p.7).

We suggest that during the pandemic, the discourse related to existential insecurity could

serve as a frame for inducing populist support. The pandemic brought uncertainty and

unfamiliarity, while people were anxious about the potential negative fallout of COVID-19, such

as threat to health and economy (Kruglanski et al., 2021). As suggested by the "cultural backlash

theory" – perceived insecurity may enhance support for authoritarian populism (Inglehart, 2020,

April 10, Inglehart & Norris, 2017, Norris & Inglehart, 2019). Even though Inglehart and Norris

explained populism through backlash towards cultural change and economic insecurities, their

theory seems even more applicable to the pandemic. When facing insecurity, people perceive

that their basic survival values are endangered: "survival is such a central goal that when it is

threatened, it dominates people's life strategy" (Inglehart & Norris, 2017, p. 443). Insecurity

triggers an authoritarian reflex, resulting in support for strong leaders, ingroup solidarity,

conformity to ingroup norms, defense of traditional values and beliefs, and derogation of

outsiders (Inglehart & Norris, 2017; Norris & Inglehart, 2019). The authoritarian component

makes people blame outgroups for their threatened social status and endangered survival of their

ingroup, and the populist component, which is of key relevance here, makes people blame elites for the higher social status and their cosmopolitan values (Norris & Inglehart, 2019). Since during the pandemic survival was perceived as a 'zero-sum struggle between "us" and "them"' (Inglehart, 2020, April 10, para. 5), given access to resources such as access healthcare necessary for survival, existential insecurity was likely to cause the rise of authoritarianism and xenophobia (Inglehart, 2020).

Several theories and studies on threat perceptions would predict similar effects of threatening situations to the cultural backlash theory (Jost et al., 2003; Lambert et al. 2010; Porat et al., 2019). Perceived threat, through its impact on authoritarianism, was found to enhance prejudice, intolerance, and support for punitive actions towards the outgroup; it fostered ingroup solidarity and support for the powerful and forceful political candidates (e.g., Huddy et al., 2005). In the relation to the pandemic, Kruglanski et al. (2021) suggested that the uncertainty about which goals and with which means one can attain due to COVID-19 could result in a loss of the sense of significance, cause feelings of self-doubt. That could motivate people try to restore self-assurance and self-respect by identifying themselves with an extremist group, which offers clear norms, hierarchy, homogeneity, and a tight consensus (Kruglanski et al., 2021; see also Hogg, 2012). Populism fits well into this description.

However, despite some predictions that the coronavirus pandemic could enhance populism (e.g., Inglehart, 2020, April 10; Bruni, 2020; see also Manow, 2020), some studies have suggested that populist support either did not change (Wondreys & Mudde, 2022; Manow, 2020) or even decreased (Foa et al., 2022) during the coronavirus pandemic. In opinion polls conducted in 27 European countries from March to June 2020, Wondreys and Mudde (2022) found that support for the populist right did not significantly change. Its level was slightly different depending on the position of populists in relation to the government. Support for *populists in government* in Poland and Hungary slightly increased, which is consistent with the 'rally effect' (an increase of 2% in April and May compared to March). Support for *populists in*

governmental coalitions almost did not change (a maximum increase of 0.8% in May). The average support for *populists in opposition* insignificantly decreased, ranging from a highest support drop of 7% for Forum for Democracy (Forum voor Democratie, FvD) in the Netherlands to a small increase of support of small populist parties like "Enough" ("Chega!") in Portugal (1%) and "Brothers of Italy" (Fratelli d'Italia, FdI) in Italy (2%). Foa et al. (2022) upon a large sample of different countries suggested that for populist leaders, the "rally-effect" was short-term and there was a 10% decrease of the approval of populist leaders from the second quarter of 2020 until the end of 2021; the support of the handling of pandemic by populist governments dropped by 16% by the end of 2020. Besides, in 16 countries out of 19 from 2019 to 2021, the level of populist attitudes decreased.

Since we are interested in the relationship between the perceptions of existential insecurity and populism, and not in explaining party performance, we expect in accordance with the cultural backlash theory *the perceptions of existential insecurity to enhance people's support of populist views (H1)*.

5.2.2. Relative Deprivation Perceptions and Populism

Turning to the second pathway to populism addressed here, we define perceptions of relative deprivation as individuals' perceptions that their ingroup is disadvantaged compared to some reference individual or group, and this disadvantage is perceived as being unfair (Smith et al., 2012). Perceived relative deprivation was found to better predict populism than the objective deprivation (e.g., Spruyt et al., 2016; Pettigrew, 2017). For instance, supporters of the populist US president Trump were economically better off compared to the voters of the democratic candidate Clinton in the 2016 election; Trump's voters were also less likely to be unemployed, or have part-time jobs (Pettigrew, 2017). Reasons for supporting populists were disappointing upward social comparisons to relevant referents, erroneous perceptions that "less deserving" social groups possess more, and the discrepancy between one's status and one's hopes and expectations (Pettigrew, 2017; Urbanska & Guimond, 2018). Populists made use of the relative

deprivation perceptions in their rhetoric to mobilize voters (Pettigrew, 2017; Urbanska & Guimond, 2018). For instance, Front National in France advocated favoritism for the French over non-citizens in housing, employment, and state benefits (Urbanska & Guimond, 2018), while Trump pleaded for returning to times when governmental affirmative action programs were benefitting white males (Pettigrew, 2017).

Apart from experiencing a personal disadvantage, people may feel for others who are deprived, even if people's own interests are not affected. In this case, via a mentalizing process, people imagine others whom they feel empathy towards; they mirror their thoughts and emotions and perceive the disadvantaged situation happening to them as unfair (Blader et al., 2013).

The context of the coronavirus pandemic allows us to replicate the effect of the perceptions of relative deprivation on populism, addressing the perceived relative deprivation of resources necessary for people's survival. In such case, perceptions of relative deprivation can be seen as a disadvantaged position in a "zero"-sum game in the redistribution of resources between the ingroup and the outgroup. The cost of such a perceived disadvantage is significantly higher than in case of a perceived economic relative deprivation, which is typically studied in relation to populism (e.g., Urbanska & Guimond, 2018; Marchlewska et al., 2018). *We expect the perceptions of relative deprivation to increase people's support of populist ideas (H2)*. However, the effect of perceptions of relative deprivation on populism can be mediated via emotions (see Chapter 4; see also Smith & Pettigrew, 2014, Smith et al., 2008). In the next section, we introduce emotions and their role in activating populist attitudes (e.g., Hawkins & Kaltwasser, 2018).

5.2.3. The role of emotions

The dominant emotional reaction in the situation of COVID-19 was arguably fear or anxiety (Abadi, et al., 2021; see also Chapter 6). Fear was found to enhance trust towards elites (Vasilopoulos et al., 2023); it made people follow measures to prevent the spread of the pandemic (Harper et al., 2020; Winter et al., 2023; Abadi et al., 2021), support policies which

restrict civil liberties (Vasilopoulos et al., 2023); it also increased the level of populist attitudes, conspiracy mentality and made people blame the government (Abadi et al., 2021).

To understand why fear in relation to the coronavirus pandemic may lead to mutually exclusive reactions such as higher level of support of the government and, on the contrary, blame attributions to the government, one needs to provide a systematic account of emotional reactions to existential insecurity and relative deprivation instances. For doing so, we consider the appraisal dimensions related to these stimuli and underlying discrete emotions. An *appraisal* in this context is the response to a stimulus regarding "an evaluation of what one's relationship to the environment implies for personal well-being" (Smith & Lazarus, 1993, p. 234). Appraisals prepare people to cope with harm or benefit triggered by a stimulus in order to adapt to it and bring the situation in accordance to one's goals (Smith & Lazarus, 1993). Appraisals can be fast and automatic and they can be reflexive and conscious (Kappas, 2006).

Even though appraisals are not made in isolation (e.g., Scherer, 2001; Mikula, Scherer, Athenstaedt, 1998), we focus on the appraisals of problem-focused coping potential and self and other-accountability, which we hold for crucial for explaining how the experience of existential insecurity and relative deprivation affects populism in the context of the pandemic. We rely on the appraisal theory by Smith and colleagues (Smith & Kirby 2011; Smith & Lazarus, 1993).

Appraisal of problem-focused coping potential (PFCP) stands for an "evaluation of one's ability to act on the situation directly to bring it more in line with one's desires" (Kirby et al., 2022, p. 3). It involves considerations of the effort needed to make the situation more desirable for an individual in relation to one's perceived abilities to do this effort. Appraised PFCP is low if the effort needed exceeds one's perceived abilities (Smith & Kirby, 2009), or no immediate solution to a problem is available (Kappas, 2001). As any natural disaster, COVID-19 made people believe there was not much they could do to improve their situation (e.g., Abadi et al., 2021). Besides, given the novelty of the coronavirus and its fallout, people lacked mastery

experience in dealing with the pandemic. So, we can expect the level of the appraisal of PFCP in the context of the coronavirus to be low.

PFCP is crucial in determining how well people can cope with a threatening situation. During the early phase of COVID-19, PFCP was positively related to better coping and lower levels of perceived stress. Particularly, one's confidence in the ability to meet physical needs was positively related to physical and mental health, and negatively—to pain and fatigue; confidence to meet social needs was positively related to mental health (Kirby et al., 2022).

It was suggested that PFCP determined whether fear emerging due to the coronavirus pandemic resulted in avoidant behavior, such as the approval of and following of hygiene measures against the virus, or attacking behavior, such as blaming the government (Abadi et al., 2021). Even though the appraisal of PFCP has not been addressed in research on populism, it was argued that perceptions of powerlessness (Salmela & von Scheve, 2017) and a low level of internal political efficacy (Magni, 2017) enhance populism. Rico, Guinjoan, and Anduiza (2020) argued that a high level of internal political efficacy is a pre-requisite of adopting populist attitudes: unless people feel themselves confident to understand and participate in politics, they would not endorse popular sovereignty of the people. On the contrary, Magni (2017) suggested that people striving for a change with a high level of internal political efficacy support the political opposition, while those with a low level of internal political efficacy—populists. Populists are attractive to inefficacious people, since they offer the powerless people empowerment outside of the existing political system. We follow Abadi et al. (2021) and Kruglanski et al. (2021) that due to the pandemic, people felt powerless. We follow Rico et al. (2020) and hypothesize: *if the perceptions of relative deprivation or existential insecurity result in a lower level of the appraisal of PFCP, people are less likely to support populist views (H3a).*

Another appraisal which we address is the *appraisal of accountability*: of importance is whether the events are controlled by the subject, other people, or external circumstances (Smith & Ellsworth, 1985). This appraisal directs what or who should the coping efforts be targeted at

(Smith & Lazarus, 1993). While the pandemic was a natural disaster without a particular target to blame (World Health Organization, 2020, March 26), people could reappraise it and gain a sense of control and certainty over the situation by blaming others for negative outcomes related to the pandemic (e.g., Abadi et al., 2021). Indeed, Wondreys and Mudde (2022) found that populist leadership blamed China, the Chinese, immigrants, and ethnic minorities for spreading the virus, governments for slow policies against the disease, opposition for thwarting the government response to COVID-19, and EU for endangering national sovereignty in fighting the pandemic.

Hawkings and Kaltwasser (2018) suggested that populist rhetoric can activate populist attitudes via ascribing blame attributions to elites. The appraisal of accountability translates to one of the key components of populist outlook—anti-elitism. Populism portrays elites as the vicious and corrupt outgroup (Mudde, 2004). Blame attributions to elites enhanced individuals' level of populist attitudes: elites are blamed for not representing people's will and not caring about people's interests (Hameleers & Schmuck, 2017). Additionally, right-wing populism envolves blaming outgroups, such as migrants, for the negative outcomes in relation to the ingroup (Mudde & Kaltwasser, 2013; Hameleers & Schmuck, 2017). We hypothesize if the *perceptions of existential insecurity or relative deprivation result in blaming leaders or ethnic outgroups for negative outcomes, people are likely to increase their support of populist views*. In contrast, *if people hold no one responsible for the endangering or disadvantaged situation, they are unlikely to adopt populist ideas (H3b)*.

Appraisals determine which emotions individuals may experience based on their perception and interpretation of an event or object (e.g., Smith & Kirby, 2011; Scherer, 2001). We are focusing here on appraisals that are crucial for emotional reactions resulting from the perceptions of relative deprivation and existential insecurity in the context of the coronavirus pandemic. Based on appraisal theory one can predict that feelings that other people are responsible for the disadvantaged or threatening situation, are likely to result in anger, disgust or

contempt. The core relational theme of anger is accountability of other agents for harm (Smith & Lazarus, 1990), while the level of appraised human control and other-accountability of contempt and disgust are close to those of anger (Smith & Ellsworth, 1985; see also Scherer, 2001). Anger targets coping efforts towards who is blamed for the undesired situation and motivates people to remove the cause of harm (Smith & Lazarus, 1990). Disgust motivates people "to shut out and get away from" (Smith & Ellsworth, 1985, p. 833) its cause. While Smith and Ellsworth (1985) suggested that contempt does not make people involve into or avoid the situation related to the stimulus, Hutcherson and Gross (2011) suggested that the function of contempt is to "diminish interaction with individuals who cannot contribute in a meaningful way to the group, especially those individuals judged to be lower or less capable than the self" (p. 721). Therefore, we expect that that *if perceptions of relative deprivation or existential insecurity result in anger, disgust, or contempt, they will amplify individuals' endorsement of populist views (H4a).*

By contrast, when an individual appraises a situation of relative deprivation as something they cannot control, and there is no obvious other individual or group accountable, they are likely to experience sadness and fear. Sadness is characterized by a low level of PFCP (Smith & Lazarus, 1990). Both, sadness and fear are characterized by a lack of human agency and "situational control", meaning that the situation is controlled by circumstances and not by any external agency (Smith & Ellsworth, 1985; Lerner & Keltner, 2000). Sadness motivates people to seek help and disengage from the harmful situation it is caused by, while fear, or anxiety motivates people to be cautious and try to avoid the harmful situation (Smith & Kirby, 2011; Smith & Lazarus, 1990). We expect *fear and sadness resulting from the exposure to instances of existential insecurity and relative deprivation to decrease individuals' endorsement of populist views (H4b).*

Lastly, we also assess emotional reactions in terms of core affective dimensions, specifically, valence (positive or negative emotions), arousal (degree of excitement), and dominance (feeling of perceived control dimensions of affective reaction to stimuli; Bradley &

Lang, 1994). Including core affect allows us to triangulate the results gained with other layers of emotions—appraisals and discrete emotions at the most basal level. We expect the emotional reactions to the instances of insecurity and deprivation to be negative in valence, which is likely to lead to more pessimistic judgements (Lerner & Keltner, 2000) about the situation. Negative affect may motivate people to punish incumbents or try to change the undesired situation by adopting populist ideas. In the context of the pandemic, we expect that individuals would feel they cannot control the situation. The low level of dominance among individuals facing existential insecurity or relative deprivation is likely to decrease populist support (e.g., Rico et al., 2020).

5.2.4. *Attitudes to Brexit as a Proxy for Attitude Polarization*

People react to the same events differently due to individual differences in emotional appraisal (e.g., Smith & Kirby, 2011). We account for people's ideological views, which are likely to cause evaluation bias: people are eager to confirm their pre-existing political views and disconfirm the views of their political opponents (Taber & Lodge, 2006). Particularly, we expect that conservatives and liberals will differently appraise instances of existential insecurity and relative deprivation.

We assume that instances of existential insecurity will produce a higher impact on people equipped with conservative values. For people with a conservative worldview, survival values and striving for a collective security of the in-group play a crucial role (Norris & Inglehart, 2019). According to the motivated social cognition theory, people adopt a conservative ideology to reduce uncertainty and anxiety, to avoid change, and preserve the stable social order (Jost et al., 2003). People who feel that the world is a dangerous place score higher on conservatism (e.g., Leeuwen & Park, 2009).

We expect instances of relative deprivation to produce a higher impact on liberals. Questions of fairness and justice are crucial to differentiate between liberals and conservatives: while liberals strive for egalitarianism, conservatives tolerate inequality (Jost et al., 2003;

Leeuwen & Park, 2009). Haid and Graham (2007) suggested that liberals rely on two moral foundations of fairness/reciprocity and harm/care, whereas the moral motivations of conservatives are guided by five moral foundations, with fairness being only one of them and, thus, playing a less important role. When redistributing scarce resources that were necessary for survival, liberals showed the highest level of support for egalitarian values (Skitka & Tetlock, 1993).

As a proxy for the liberal-conservative divide, we use attitudes on Brexit at the time of the fieldwork. After the referendum of 2016, opinion-based groups formed by individuals' attitudes towards Brexit worked better than partisanship to account for attitude polarization in the UK (Hobolt et al, 2021). Even in February, 2022, more than five years after the referendum, individuals' position on Brexit was found to capture the key societal divide (Tilley & Hobolt, 2023). *Remainers* are represented by the "winners" of globalization, supporting integration and multi-culturalism, and *Leavers* by the globalization "losers", feeling threatened by immigration and loss of national identity (Hobolt, 2016). We treat here Remainers as a proxy for liberalism and Leavers as a proxy for conservatism (e.g., Hobolt et al., 2021, Hobolt, 2016). We run most of analyses for Brexit opponents and supporters separately.

5.3. Study

We test whether the perceptions of existential insecurity and relative deprivation increase populist attitudes in the context of the coronavirus pandemic. We believe that both people's feelings that the ingroup is endangered and the perceptions that the ingroup does not get what they believe they deserve are likely to cause emotions, which affect people's agreement with populist views (see Chapter 4). In addition, we account for attitude polarization. We first present the effects of perceptions of relative deprivation and emotions on populism, and then the effects caused by perceptions of existential insecurity.

Participants. The study was conducted in August 2020 among the UK citizens born and at the time of fieldwork living in the country. Half of participants were women (N_{women}=383,

N_{male}=371), the majority were born and lived England (84%, with the rest born and living in Scotland, Wales, and Northern Ireland), had a Bachelor degree (40%) and found it easy to buy what they needed (51%). The average age was 41 years. In a potential referendum on the EU membership at the time of the study, 48% of respondents would wish the UK to be an EU member; 43% would approve of Brexit; 9% would not vote or refused to express their opinion.

5.3.1. Procedure and materials

Pretest. In the main study, we presented participants with a brief newspaper style article that was constructed to represent the manipulation of perceptions of existential insecurity or relative deprivation. To select the stories for the main study, we constructed six sets of three mass media articles each. Every set was devoted to one topic and comprised one text with an instance of relative deprivation, one text with an instance of existential insecurity, and one text representing the control condition. Articles were adjusted for length and arguments made. In a pretest (*N*=142), respondents recruited via the online platform "Prolific" (Palan & Schitter, 2018) were randomly assigned to a balanced[2] subsample of 6 articles. They rated how endangering and unjust the situations described in each text were, using a scale from '0' (the lowest level) to '7' (the highest level). We used the screening criteria for recruitment available on the platform "Prolific", individual's position on Brexit, to make Brexit supporters and opponents equally represented. For both groups, the stimulus selected for manipulation of perceptions of relative deprivation was perceived as most unjust (*M*=4.84, *SD*=2.17, compared to the control condition: *M*=3.15, *SD*=1.31); the stimulus for perceptions of existential insecurity was rated as one of the most endangering (*M*=4.84, *SD*=1.38, compared to the control condition: *M*=3.57, *SD*=1.55).

Main Study. Respondents were recruited for a 15-minutes study on "Attitudes towards societal processes and the coronavirus pandemic" via the online platform "Prolific". We used the screening criteria for recruitment available on "Prolific" for gender, citizenship (UK), current

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[2] All sets were divided into 6 subsamples of stories. Each subsample had two instances of relative deprivation, two instances of existential insecurity, and two control conditions taken from different sets and devoted to different topics. Subsamples were randomly distributed between the participants. On average, each story was rated by 24 people. The stories within each subsample were presented in a random order.

place of residence (UK), and attitudes to Brexit in 2016. Upon interest, participants were redirected to the online survey platform "Unipark" where the study was hosted. After reading the information about the study, data protection, and upon agreement with the informed consent form, participants were randomly assigned to one of the three conditions: 1) relative deprivation, 2) existential insecurity, and 3) control condition. They read instructions, were presented with a text, followed by questions on emotional reactions, manipulation checks, measures of populism, attention checks, and controls. At the end of the study, respondents were fully debriefed and given an opportunity to provide feedback. The study was approved by the Ethics Committee of Constructor University. All measures, hypotheses, and the analysis strategy were preregistered (https://osf.io/27kp4/).

5.3.2. Materials and Measures

Manipulation. We manipulated the perceptions of relative deprivation and existential insecurity. The resulting sample (N=756) consists of three groups: respondents presented with a manipulation of existential insecurity (N=237), relative deprivation (N=269), and the control condition (N=250).

Manipulation checks. *Perceptions of existential insecurity* were measured by the question "To what extent do you feel your life is endangered by the situation you've read about?" *Perceptions of relative deprivation* were measured as an index comprised by the arithmetic sum of three items: "To what extent do you think the British will be in a worse condition compared to Germans regarding access to the vaccine?", "To what extent do you think poor people will be in a worse condition compared to wealthy people regarding access to the vaccine?", "To what extent do you think poor countries will be in a worse condition compared to wealthy countries regarding access to the vaccine?" All variables were measured on a scale from 1 to 9, from the lowest to the highest level.

Independent variables. *Perceptions of relative deprivation* and *perceptions of existential insecurity* were captured by two dummy variables, where "1" stands for exposure to a,

correspondingly, relative deprivation or existential insecurity instance, and "0" – exposure to the control condition.

Attitude polarization was measured by *attitudes towards Brexit*. We run the analysis separately among Brexit supporters (Leavers) and opponents (Remainers), based on their attitudes to a potential referendum in August 2020.

Dependent variables. We used two measures of populism – populist attitudes and voting for a populist candidate.

Populist attitudes consisted of three components—*anti-elitism*, *homogeneity*, and *popular sovereignty* (Schulz, Wirth, & Müller, 2018)—each measured with three items on a 5-point Likert scale ("1" stands for "completely disagree", "5" for "completely agree"). Due to theoretical considerations (Lytkina & Kappas, in preparation), we analyzed the three populist components separately. The model revealed a good fit (X^2 = 196.93, *df* = 51, *p-Value* = 0.000, *RMSEA* = 0.061, *CFI* = 0.956, *TLI* = 0.943, *SRMR* = 0.036).

In an exploratory way, we introduced a measure of *voting for a populist candidate* (cf. Bakker, Schumacher, & Rooduijn, 2021), pretested before the fieldwork (*N*=142). Respondents read speeches of two "candidates", an "extreme populist", and an "extreme non-populist", and indicated whom of the two they would vote for. The "speeches" were comprised of opposite statements on concepts related to populism: popular sovereignty ("I will do what my constituents want—I have the courage to take unpopular decisions if and when they are necessary"), anti-elitism ("I always rely on people's opinions in my decision-making"—"I rely on experts and scientists in my decision-making"), homogeneity ("99 per cent of all British think the same"—"We, the British, are all different"), support for direct democracy ("I will organize referendums. Citizens should have the final say on important issues!"—"The elected representatives of the House of Commons should decide on all issues in the national interest. That's how we can make sure that all interests are accounted for"), blame attribution ("China is responsible for the large number of deaths of our citizens due the coronavirus pandemic!"—"China suffered like any

other country from the pandemic"), and support for a strong leader ("We need a strong leader taking the full control of the situation"—"We need a leader who listens to other politicians and experts to make a well-thought-out decision"). Respondent's choice was dummy coded, so that "1" represented choosing a populist, and "0"—a non-populist candidate.

Mediators. Respondent's *emotional reactions* were measured in three different ways: via selected appraisals, discrete self-reported emotions, and with a non-verbal pictorial measure of emotional dimensions.

Appraisal of problem-focused coping potential (PFCP) was captured by three items: general PFCP, capability to meet one's physical and social goals (Kirby et al., 2022)[3]. *Appraisals of self- and other-accountability,* were measured as blaming political leaders, blaming nature or fortune, blaming the ingroup (self or the British), and blaming the outgroups (migrants, refugees, and ethnic minorities). All appraisals were measured on a 9-point scale from the lowest (1) to the highest (9) level.

Discrete (self-reported) emotions included anger, contempt, disgust, fear, and sadness. Their intensity was measured on a 9-point Likert scale, from extremely low (1) to extremely high (9).

As the *non-verbal pictorial measure of emotional dimensions,* we employed the self-assessment Manikin (SAM, see Figure 5.1), which uses pictures to capture the intensity of valence (from the most negative to most positive emotional reaction), arousal (from the most apathic to most excited), and dominance (from being in no control to being in full control of the situation) (Bradley & Lang, 1994).

As *controls* we included education (measured on a 9-point scale from 1—"early childhood education" to 9—a "doctoral degree"), age (measured in years), left-right self-placement (measured on an 11-point scale from 1— "extreme left" to 12— "extreme right"),

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[3] Kirby et al. (2022) used a fourth indicator – confidence about avoiding virus exposure to the virus. In our data, it had the lowest factor loading (B=0.291, SE=0.037) and was excluded from the measure of PFCP. Cronbach's alpha for a four-item scale was α=0.72, and for a three-item scale α=0.8, which is close to the reported α=0.81 by Kirby et al. (2022).

trust in information respondents read (measured on a 7–point scale from 1—"do not trust at all"
to 7—"trust completely"), belief in vaccinations (measured on a 9–point scale from 1— "not at
all" to 9— "completely"), and whether the respondent was exposed to COVID-19 ("1"—yes,
"0"—no). We also used manipulation and attention checks.

Figure 5.1

*The Self-Assessment Manikin (SAM) used to rate the affective dimensions of valence (top panel),
arousal (middle panel), and dominance (bottom panel)*
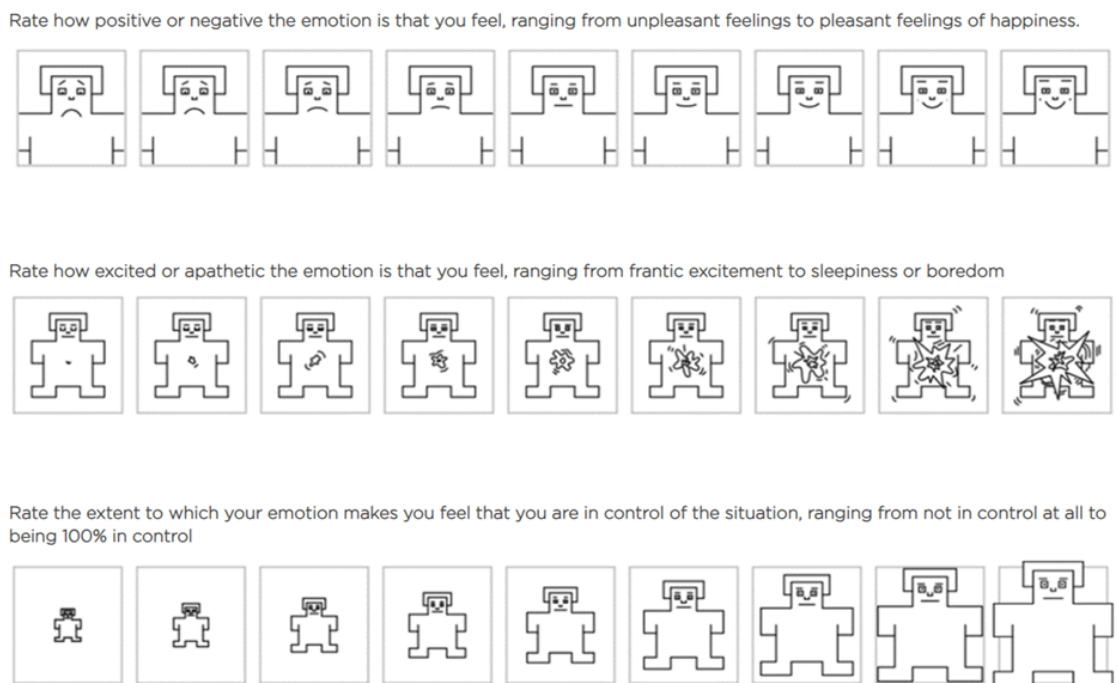
Source: Toet, A., Houtkamp, J. M., & Vreugdenhil, P. E. (2016). Effects of personal relevance
and simulated darkness on the affective appraisal of a virtual environment. *PeerJ*, *4*, e1743.
https://doi.org/10.7717/peerj.1743

Analysis strategy. We ran *t*-tests to assess whether the manipulation worked and whether
there were differences in socio-demographics across the experimental conditions. We used OLS
regressions to test for direct and interaction effects, when populist attitudes were used as
outcome variables and logistic regression, when voting for a populist candidate was used as a

dependent variable. We employed the statistical program R (version 3.6.1). Next, we performed

mediation analysis with bias corrected bootstrapping (10 000; see Fritz & MacKinnon, 2007).

Furthermore, we employed MPLUS 8.5, which allows to perform mediation analysis in one step

(Muthén & Muthén, 1998-2012). We used STDY standardization, since the independent

variables – perceptions of relative deprivation and existential insecurity – were binary (Muthén,

Muthén, & Asparouhov, 2017, p. 69). We relied on bias corrected bootstrapped confidence

intervals to evaluate statistical significance.

5.4. Results

Manipulation checks. Manipulation checks demonstrated effects in the expected

directions. In the relative deprivation condition, people felt significantly more deprived ($M =$

7.121, $SD = 1.619$) compared to the control condition ($M = 5.603$, $SD = 1.809$, $t(500)=10.000$,

$p=0.000$). In the existential insecurity condition, people felt more endangered ($M = 4.949$, $SD =$

2.164) compared to the control condition ($M = 4.204$, $SD = 1.985$, $t(485) = 3.964$, $p=0.000$).

However, the level of perceived insecurity in the existential insecurity condition was not

significantly different from that of the relative deprivation condition ($t(504) = 1.252$, $p=0.211$) .

Therefore, we analyzed the data of the two experimental conditions separately.

Socio-demographics. In the existential insecurity condition, respondents showed a

significantly lower level of belief in vaccinations ($M=5.42$; $SD=1.898$) compared to the control

condition ($M=6.54$, $SD=1.648$, $t(468) = 6.902$, $p=0.000$). In the relative deprivation condition,

participants trusted information they read significantly less ($M=4.14$, $SD=1.366$) compared to the

control condition ($M=4.40$, $SD=1.242$, $t(517) = 2.250$, $p=0.025$). We control for these two

variables in data analysis of the corresponding treatment conditions.

5.4.1. The effect of the perceptions of relative deprivation on emotions and populism

Emotions. When experiencing relative deprivation (see Figure 5.2), both Remainers and

Leavers felt lower capacity to change the disadvantaged situation, were less likely to blame

nature or fortune, the ingroup or the ethnic outgroup for the disadvantaged situation. The decrease of the appraised PFCP among Leavers was more prominent (M=-0.406, SD=0.98; control condition: M=0.61, SD=0.9, t(221)= 8.005) than among Remainers (M=-0.226, SD=1.00; control condition: M=0.171, SD=1.00, t(255)= 3.172). In contrast, Remainers were significantly more prone than Leavers to blame political leaders for the disadvantaged situation (M=0.896, SD=1.14; control condition: M=0.401, SD=1.56, t(239)=2.923).

The experience of relative deprivation significantly increased the level of negative discrete emotions among both Brexit opponents and supporters. Remainers reported slightly higher levels of negative emotions than Leavers: their level of all negative emotions was above the scale mid-point of "5" (see Figure 2): anger (M=7.17, SD=1.88; control condition: M=2.96, SD= 2.14, t(254)=16.76), disgust (M=7.13, SD=1.7; control condition: M=2.25, SD=1.92, t(255)=21.42), sadness (M=6.92, SD=1.97; control condition: M=4.23, SD=2.26, t(253)=10.21), contempt (M=5.98, SD=2.37; control condition: M=3.03, SD=2.14; t(255)=10.47, and fear (M=5.43, SD=2.34; control condition: M=3.91, SD=2.11, t(255)=5.48). Among Leavers, most salient were (in descending order): sadness (M=6.44, SD=2.21; control condition: M=3.68, SD=2.07, t(221)=9.518), anger (M=6.4, SD=2.28; control condition: M=2.16, SD=1.60, t(218)=16.23), disgust (M=6.38, SD=2.36; control condition: M=1.9, SD=1.47; t(210)=17.34), and contempt (M=5.54, SD=2.47; control condition: M=2.44, SD=1.86, t(220)=10.65).

The emotional experience of Remainers (M=3.0, SD=1.28; control condition: M=5.17, SD=1.4, t(255)=13.01) and Leavers (M=3.39, SD=1.41; control condition: M=5.51, SD=1.53, t(221)=10.75) facing an instance of relative deprivation was negative in valence. Respondents were not more aroused due to the exposure to an instance of relative deprivation. In addition, Leavers experienced a significant drop of their reported level of dominance (M=3.24, SD=2.44; control condition: M=4.48, SD=2.27, t(221)=3.891), meaning that due to the exposure to an instance of relative deprivation they perceived significantly less control over the situation.

Figure 5.2

Means for emotion measures for Remainers and Leavers in the relative deprivation condition compared to the control condition

Note. While discrete emotions and the non-verbal measure of emotional dimensions were measured on a scale from 1 to 9, appraisals were measured as indexes.

Populism. We tested with OLS regressions whether perceptions of relative deprivation enhanced populist attitudes and voting, controlling for trust in information. Perceptions of relative deprivation increased only the level of anti-elitism (Table 5.1, Model 1, B=0.143, $SE = 0.052$). However, when we run regression among Brexit supporters and opponents separately, perceptions of relative deprivation raised the level of anti-elitism only among Leavers (Model 1a, B=0.259, SD=0.091).

Table 5.1

The effect of the perceptions of relative deprivation on populism

	Anti-elitism	Anti-elitism, Leavers	Homogeneity	Popular Sovereignty	Vote populist *Odds Ratios*
	Dependent variable:				
	(1)	(1a)	(2)	(3)	(4)
Perceptions of relative deprivation	**0.143**** (0.052)	**0.259***** (0.091)	-0.027 (0.050)	0.098 (0.088)	1.187 [0.744, 1.902]
Trust in information	-0.011 (0.020)	-0.004 (0.034)	0.023 (0.019)	-0.010 (0.034)	0.842+ [0.708, 1.002]
Constant	-0.023 (0.095)	-0.226 (0.167)	-0.080 (0.091)	-0.021 (0.161)	0.376* [0.165, 0.829]
Observations	519	223	519	519	519
R^2 / Adjusted R^2	0.016 / 0.012	0.038 / 0.029	0.004 / 0.0001	0.003 / 0.001	R^2 Nagelkerke 0.015

Note. Unstandardized regression coefficients, and for voting for a populist candidate–odds ratios are displayed.

*p<0.1; **p<0.05; ***p<0.01.

Mediation analysis

Next, we explored how emotional reactions mediated the relationship between the perceptions of relative deprivation and populist outcomes. We ran the analysis separately among Remainers and Leavers controlling for trust in information of the articles used for manipulation[4].

Among Remainers (see Figure 5.3), the *appraisal* of accountability of the political leadership mediated the relationship between the perceptions of relative deprivation and anti-elitism, so that it enhanced the level of anti-elitism by 13.3% of a standard deviation ($B = 0.07$, $BSE = 0.02$, $\beta = 0.13$, $t = 2.71$, $p = 0.007$, *95%CI* [0.02, 0.12]). Blaming nature or fortune for the disadvantaged situation also mediated the relationship between the perceptions of relative deprivation and anti-elitism, decreasing the level of anti-elitism among people not holding nature

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[4] Due to the lack of space, we only describe indirect effects. All direct effects with significance levels are plotted. Detailed results can be acquired on request.

or fortune responsible for the undesired situation by 13.5% of a standard deviation (B = -0.07, BSE = 0.03, β = -0.14, t = 1.96, p = 0.050, $95\%CI$ [-0.14, -0.002]). Blaming nature mediated the relationship between the perceptions of relative deprivation and popular sovereignty, making people who were less likely to think that nature was responsible for the disadvantaged situation more prone to claim that ordinary people should do politics by 17.7% of a standard deviation (B = 0.18, BSE = 0.08, β = 0.18, t = 2.23, p = 0.03, $95\%CI$ [0.03, 0.34]). Holding the ingroup responsible for the disadvantaged situation mediated the relationship between the perceptions of relative deprivation and popular sovereignty: the perceptions that the ingroup was not responsible for the disadvantaged situation decreased the level of popular sovereignty of Remainers by 10.4% of a standard deviation (B = -0.10, BSE = 0.04, β = -0.10, t = 2.54, p = 0.01, $95\%CI$ [-0.20, -0.04]).

Figure 5.3

The effect of the perceptions of relative deprivation on populist attitudes mediated via appraisals of blaming leaders, blaming nature or fortune and blaming the ingroup among Remainers
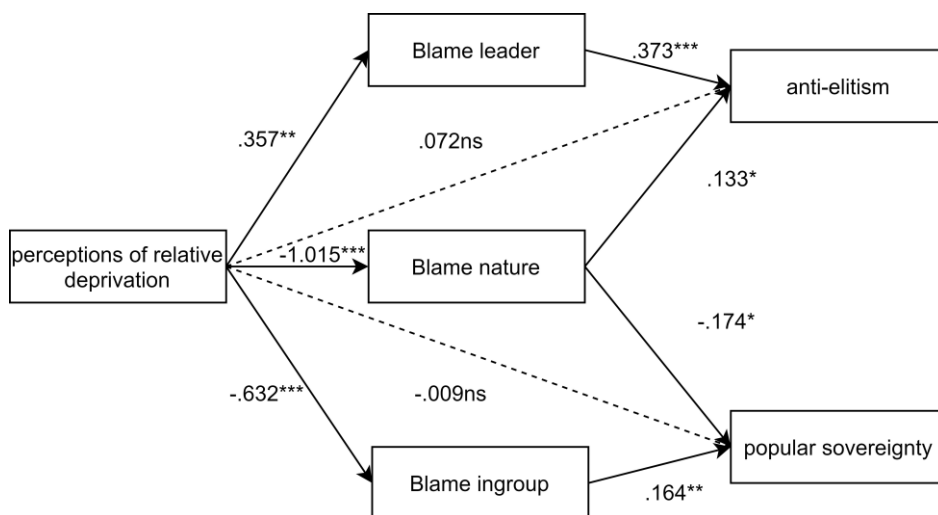
Note. N=257. Controlled for trust in information.

Standardized coefficients are plotted. Here and further, paths from perceptions of relative deprivation were standardized with the STDY standardization

*p<0.1; **p<0.05; ***p<0.01.

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Having in mind the significant decrease of the perceived capability of Leavers feeling deprived to change the disadvantaged situation, we indeed find that the appraisal of PFCP mediated the effect of the perceptions of relative deprivation on anti-elitism, with a positive effect of 21% ($B = 0.14$, $BSE = 0.051$, $\beta = 0.21$, $t = 2.74$, $p = 0.006$, $95\%CI$ [0.05, 0.26]), and the effect of the perceptions of relative deprivation on popular sovereignty (See Figure 5.4), with a positive effect of 28.1% of a standard deviation ($B = 0.29$, $BSE = 0.08$, $\beta = 0.28$, $t = 3.61$, $p = 0.000$, $95\%CI$ [0.15, 0.47]). That means that exposure to instances of relative deprivation made people think that they are less capable to affect the disadvantaged situation, whereas a lower level of the appraisal of PFCP activated anti-elitist and popular sovereignty attitudes. The appraisal of accountability of nature or fortune mediated the relationship between the perceptions of relative deprivation and popular sovereignty with a positive effect: a lower level of attribution of the disadvantaged situation to nature or fortune led to a higher level of popular sovereignty by 11.2% of a standard deviation ($B = 0.11$, $BSE = 0.05$, $\beta = 0.11$, $t = 2.10$, $p = 0.036$, $95\%CI$ [0.02, 0.23]). This effect was, therefore, mutual for Leavers and Remainers.

Figure 5.4

The effect of the perceptions of relative deprivation on populist attitudes mediated via appraisals

of PFCP and blaming nature and fortune among Leavers
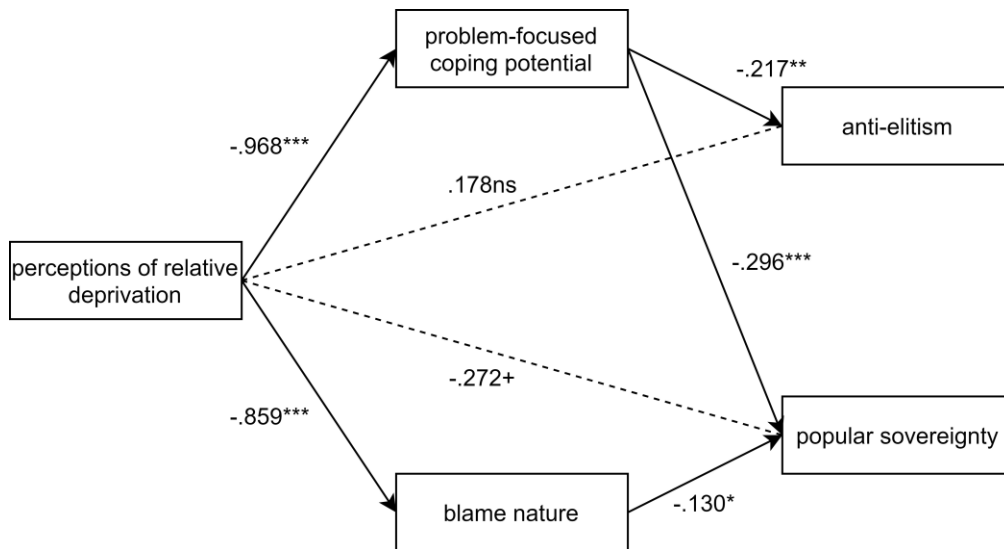
Note. N=223. Controlled for trust in information.

Standardized coefficients are plotted.

*p<0.1; **p<0.05; ***p<0.01.

Next, we included *discrete emotions* as mediators. Among Remainers, anger mediated

the relationship between the perceptions of relative deprivation and anti-elitism (See Figure 5.5):

it made people oppose elites more by 69.4% of a standard deviation ($B = 0.34$, $BSE = 0.06$, $\beta =$

0.69, $t= 5.49$, $p=0.000$, *95%CI* [0.23, 0.47]), which is a medium to strong mediation effect

(Cohen, 1992). Besides, fear mediated the relationship between perceptions of relative

deprivation and popular sovereignty: fear made Remainers more prone to think that ordinary

people should do politics by 13.8% of a standard deviation ($B = 0.14$, $BSE = 0.05$, $\beta = 0.14$, $t =$

2.84, $p=0.005$, *95%CI* [0.06, 0.25]), which is a small effect. While the effect of anger on anti-

elitism was in line with literature (Rico et al., 2017), the positive mediation effect of fear is more

interesting: it could reflect Remainers' search for empowerment by holding ordinary people for capable to do politics in the threatening situation.

Figure 5.5

The effect of the perceptions of relative deprivation on populist attitudes mediated via anger and fear among Remainers
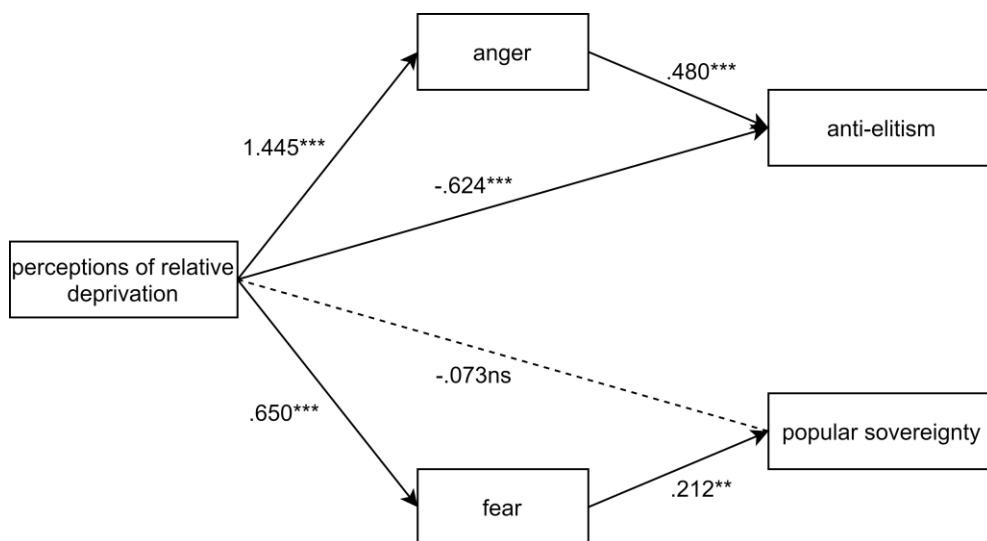
Note. N=257. Controlled for trust in information.

Standardized coefficients are plotted.

*p<0.1; **p<0.05; ***p<0.01.

Among Leavers (See Figure 5.6), anger played a prominent role: it mediated the relationships between the relative deprivation perceptions and anti-elitism, and the relative deprivation perceptions and popular sovereignty. Anger enhanced respondents' level of anti-elitism by 60.6% (*B* = 0.40, *BSE* = 0.11, *β* = 0.61, *t* = 3.64, *p* = 0.000, *95%CI* [0.21, 0.64]), and their level of popular sovereignty by 60.3% of a standard deviation (*B* = 0.62, *BSE* = 0.17, *β* = 0.60, *t* = 3.61, *p*=0.000, *95%CI* [0.31, 0.99]). Both indirect effects were medium to strong.

Figure 5.6

The effect of the perceptions of relative deprivation on populist attitudes mediated via anger

among Leavers
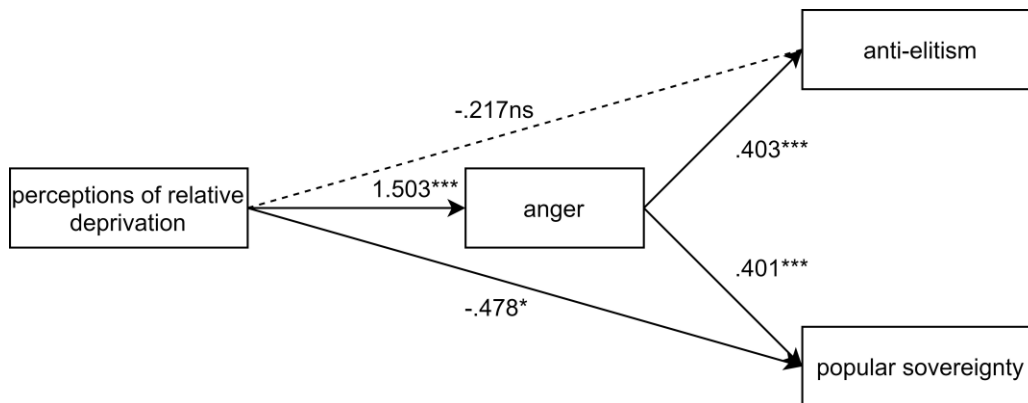
Note. N=223. Controlled for trust in information.

Standardized coefficients are plotted.

*p<0.1; **p<0.05; ***p<0.01.

In an exploratory way, we tested whether discrete emotions mediated the relationship

between the perceptions of relative deprivation and voting for a populist candidate. Since the

outcome variable is binary, the estimation of mediation models involved logistic regression

(Muthén et al., 2017); the paths leading to populist attitudes were assessed with odds ratios, and

their significance – via confidence intervals, which should not contain "1". We found (See

Figure 5.7) that among Leavers, disgust mediated the relationship between the perceptions of

relative deprivation and voting for a populist candidate: disgust made Brexit supporters 2.2 times

more prone to vote for a populist candidate (*OR* = 2.212, *SE*=1.15, *95%CI* [1.05, 5.15]).

Figure 5.7

The effect of the perceptions of relative deprivation on populist voting mediated via disgust

among Leavers
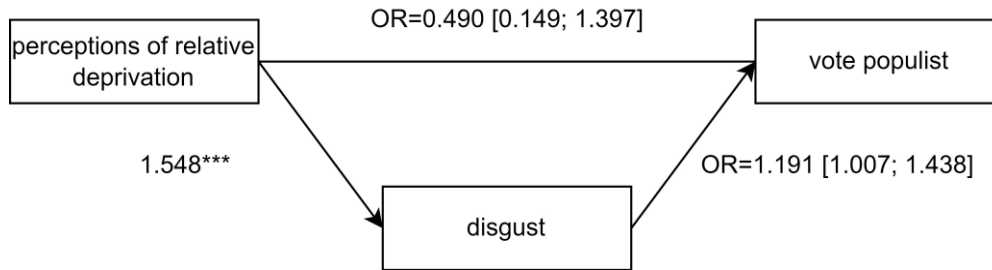
Note. N=223. Controlled for trust in information.

STDY standardized coefficient is used for the path between perceptions of relative deprivation and disgust. Odds ratios are used for the paths leading to voting for a populist candidate.

*p<0.1; **p<0.05; ***p<0.01.

Last, we checked whether *valence, arousal and dominance* mediated the relationship between the perceptions of relative deprivation and populist attitudes. For Remainers (See Figure 5.8), valence mediated the relationship between the perceptions of relative deprivation and anti-elitism – experience of negative emotions increased the level of anti-elitist attitudes by 41.1% of a standard deviation ($B = 0.20$, $BSE = 0.05$, $\beta = 0.41$, $t = 4.11$, $p = 0.000$, *95%CI* [0.11, 0.31]).

Figure 5.8

The effect of the perceptions of relative deprivation on populist attitudes mediated via valence

among Remainers
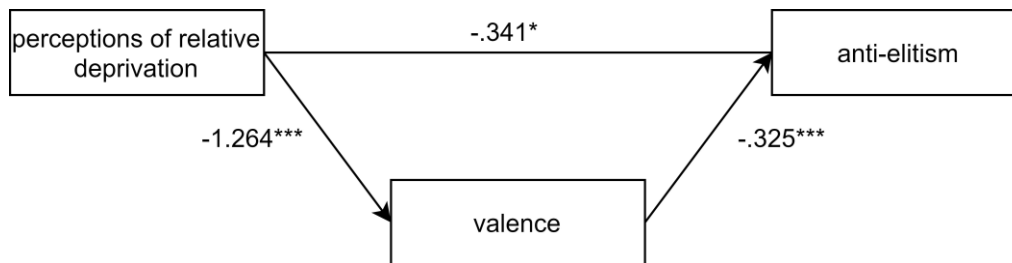
Note. N=257. Controlled for trust in information.

Standardized coefficients are plotted.

*p<0.1; **p<0.05; ***p<0.01.

For Leavers (See Figure 5.9), valence also mediated the relationship between the

perceptions of relative deprivation and anti-elitism: negative emotions increased the level of anti-

elitism by 25% of a standard deviation (*B* = 0.17, *BSE* = 0.07, *β* =0 .25, *t* = 2.39, *p* = 0.02,

95%CI [0.04, 0.32]). Dominance mediated the effect of the perceptions of relative deprivation on

homogeneity: the feeling of loss of control over the situation led to a decrease of the perception

that the British are one unity by 12.5% of a standard deviation (*B* = -0.07, *BSE* = 0.03, *β* = -0.13,

t = 2.34, *p* = 0.02, *95%CI* [-0.15, -0.02]).

Figure 5.9

The effect of the perceptions of relative deprivation on populist attitudes mediated via valence

and dominance among Leavers
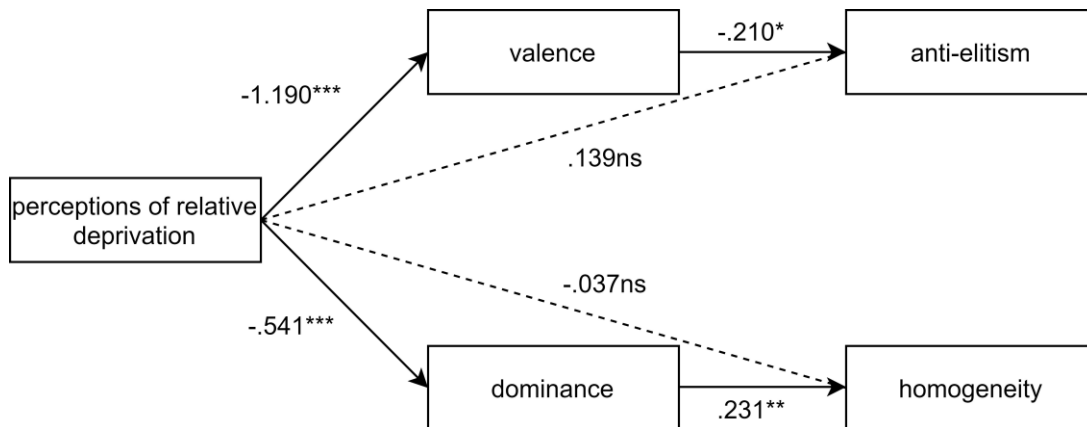
Note. N=223. Controlled for trust in information.

Standardized coefficients are plotted.

*p<0.1; **p<0.05; ***p<0.01.

5.4.2. The effect of the perceptions of existential insecurity on emotions and populism

Emotions. Leavers showed a significant decrease of their level of PFCP (see Figure 5.10) due to the experience of existential insecurity (M=-0.066, SD=1.156; control condition: M=0.461, SD=0.964; t(200)=3.509), they were significantly less likely to blame political leadership for the threatening situation (M=-1.118, SD=2.038; control condition: M=-0.418, SD=1.782; t(200)=2.592). Remainers were significantly more likely to hold nature or fortune responsible for the instance of existential insecurity (M=0.835, SD=1.465; control condition: M=0.395, SD=1.525; t(237)=2.254).

Perceptions of existential insecurity resulted in significantly higher levels of sadness and fear among both Remainers (sadness: M=6.23, SD=2.10; control condition: M=4.23, SD=2.26; t(237)=7.044; fear: M=5.49, SD=2.27 ; control condition: M=3.91, SD=2.11; t(237)=5.548) and Leavers (sadness: M=6.31, SD=2.41 ; control condition: M=3.68, SD=2.07; t(200)=8.312; fear: M=5.49, SD=2.39 ; control condition: M=3.69, SD=2.11; t(200)=6.00). Among both Remainers

and Leavers, the experience of existential insecurity resulted in negative affect (valence among Remainers: $M=3.38$, $SD=1.17$; control condition: $M=5.17$, $SD=1.40$; $t(237)=10.595$; Leavers: $M=3.39$, $SD=1.46$; control condition: $M=5.51$, $SD=1.53$; $t(200)=10.08$). Remainers felt significantly less emotional arousal when exposed to an existential insecurity instance ($M=3.97$, $SD=1.56$; control condition: $M=4.47$, $SD=1.42$; $t(237)=2.579$). Leavers exposed to the instance of existential insecurity felt that they had significantly less control over the situation (dominance: $M=3.25$, $SD=2.25$; control condition: $M=4.48$, $SD=2.27$ $t(200)=3.869$).

Figure 5.10

Means for emotion measures across Remainers and Leavers in the existential insecurity

condition compared to the control condition
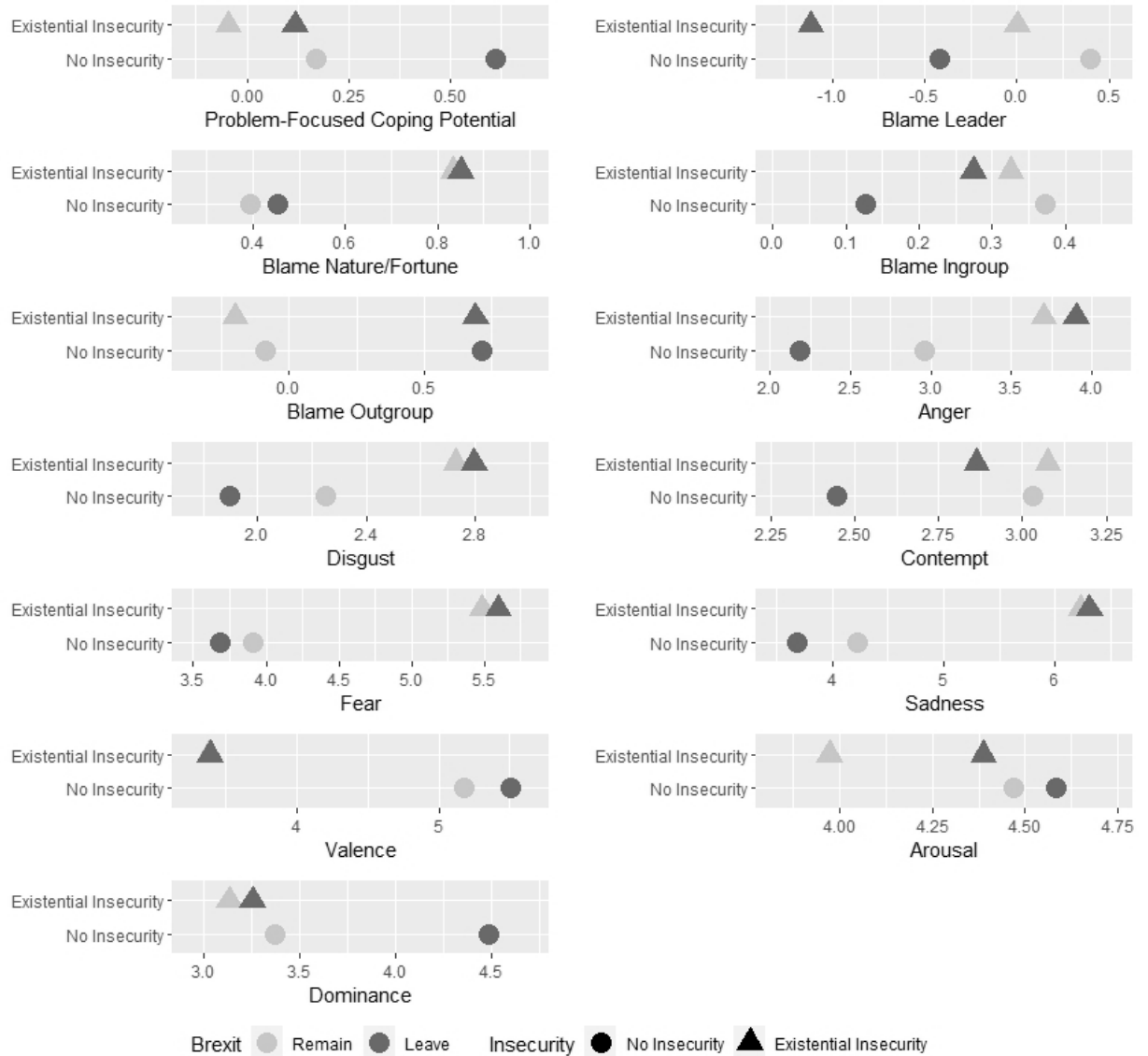
Note. While discrete emotions and the non-verbal measure of emotional dimensions were

measured on a scale from 1 to 9, appraisals were measured as indexes.

Populism. Using OLS and logistic regression analysis, and controlling for belief in

vaccinations, we found that the perceptions of existential insecurity did not affect the level of

populist attitudes and did not enhance the propensity of voting for a populist candidate (see

Table 5.2). No regression models among Remainers and Leavers separately rendered any

significant effects of the perceptions of existential insecurity on populism (See Appendix 4B.4).

Table 5.2

The effect of the perceptions of existential insecurity on populism

	Dependent variable:			
	Anti-elitism	Homogeneity	Popular Sovereignty	Vote populist (OR)
	(1)	(2)	(3)	(4)
Existential insecurity	-0.015	-0.016	0.016	0.830
	(0.059)	(0.054)	(0.095)	[0.492, 1.392]
Belief in vaccinations	-0.067***	0.012	-0.072***	0.730***
	(0.016)	(0.014)	(0.026)	[0.638, 0.832]
Constant	0.368***	-0.053	0.409**	1.284
	(0.111)	(0.101)	(0.179)	[0.537, 3.062]
Observations	487	487	487	487
R^2 / Adjusted R^2	0.038 / 0.034	0.002 / 0.002	0.018 / 0.014	R^2 Nagelkerke 0.077

Note. Unstandardized regression coefficients are displayed, and for populist vote – odds ratios.

*p<0.1; **p<0.05; ***p<0.01.

Mediation models

Next, we checked, whether emotions mediated the relationship between the perceptions

of existential insecurity and populism. The *appraisal* of blaming political elites mediated the

effect of the perceptions of existential insecurity on anti-elitism among Remainers (See Figure

5.11): people not holding the political leadership responsible for the threatening situation scored

lower on anti-elitism by 10.7% of a standard deviation (B = -0.06, *BSE* = 0.03, β = -0.11, t =

1.96, *p*= 0.05, *95%CI* [-0.12, -0.01]).

Figure 5.11

The effect of the perceptions of existential insecurity on populist attitudes mediated via the

appraisal of blaming political leaders among Remainers
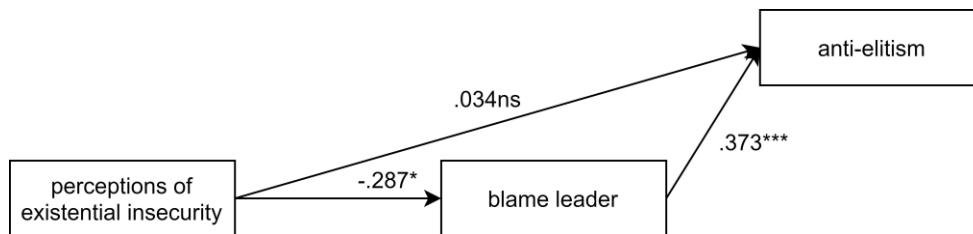
Note. N=239. Controlled for belief in vaccinations.

Standardized coefficients are plotted.

*p<0.1; **p<0.05; ***p<0.01.

Among Leavers, blaming leaders (See Figure 5.12) also mediated the relationship

between the perceptions of existential insecurity and opposition to elites with a similar effect: a

lower level of the perceived accountability of politicians resulted in a lower level of anti-elitism

by 9.1% of a standard deviation ($B = -0.06$, $BSE = 0.03$, $\beta = -0.09$, $t = 2.03$, $p = 0.04$, *95%CI* [-

0.14, -0.02]). Blaming the leadership also mediated the relationship between the perceptions of

existential insecurity and popular sovereignty: people who did not hold politicians responsible

for the threatening situation were by 9% less likely to believe that ordinary people can do politics

better than politicians ($B = -0.09$, $BSE = 0.04$, $\beta = -0.09$, $t = 2.20$, $p = 0.03$, *95%CI* [-0.20, -

0.03]). Moreover, PFCP mediated the relationship between the perceptions of existential

insecurity and homogeneity with a negative mediation effect of 9.5% of a standard deviation (B

$= -0.06$, $BSE = 0.03$, $\beta = -0.10$, $t = 2.13$, $p = 0.03$, *95%CI* [-0.12, -0.02]). That implies that an

exposure to an existential insecurity instance resulted in a decrease of people's appraisal that

they can affect the threatening situation, whereas the appraisal of PFCP activated homogeneity

attitudes.

Figure 5.12

The effect of the perceptions of existential insecurity on populist attitudes mediated via

appraisals of blaming leaders and PFCP among Leavers
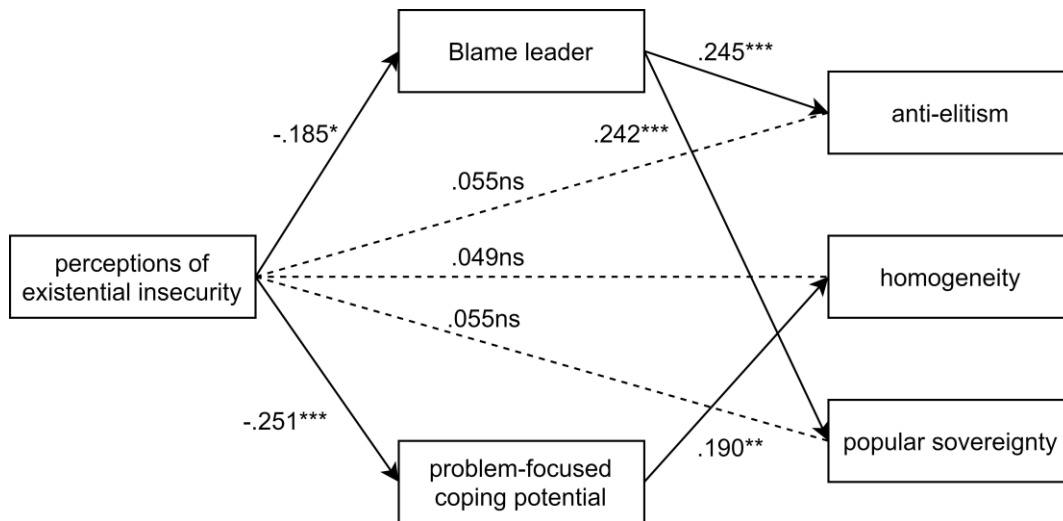
Note. N=202. Controlled for belief in vaccinations.

Standardized coefficients are plotted.

*p<0.1; **p<0.05; ***p<0.01.

Among Remainers neither *discrete emotions,* nor *emotional dimensions* captured via

SAM mediated the relationship between the perceptions of existential insecurity and populist

attitudes. On the contrary, among Leavers, sadness (see Figure 5.13) mediated the relationship

between the existential insecurity perceptions and anti-elitism, and the existential insecurity

perceptions and popular sovereignty: it enhanced the level of anti-elitism by 26.4% ($B = 0.19$,

$BSE = 0.06$, $\beta = 0.26$, $t = 3.13$, $p = 0.002$, *95%CI* [0.08, 0.32]) and popular sovereignty by 18.9%

of a standard deviation ($B = 0.20$, $BSE = 0.089$, $\beta = 0.19$, $t = 2.22$, $p = 0.027$, *95%CI* [0.04,

0.39]). Besides, anger mediated the relationship between the perceptions of existential insecurity

and voting for a populist candidate among Leavers (see Figure 5.14): anger made Leavers 1.34

times more prone to vote for a populist candidate ($OR = 1.34$, $SE = 0.17$ [1.08, 1.74]). Lastly,

among Leavers, valence (see Figure 5.15) mediated the relationship between the perceptions of

existential insecurity and anti-elitism: experience of negative emotions enhanced people's level of anti-elitism by 30.4 % of a standard deviation ($B = 0.21$, $BSE = 0.07$, $\beta = 0.30$, $t = 2.91$, $p = 0.004$, $95\%CI$ [0.08, 0.37]).

Figure 5.13

The effect of the perceptions of existential insecurity on populist attitudes mediated via sadness

among Leavers
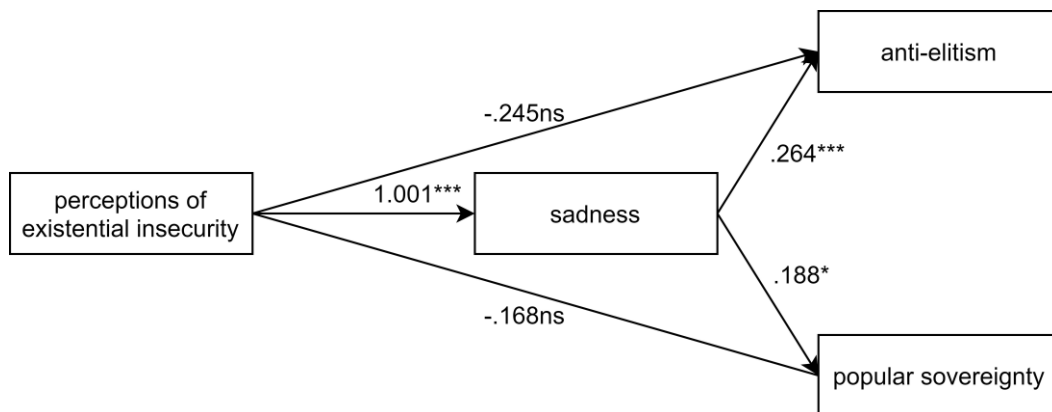
Note. N=202. Controlled for belief in vaccinations.

Standardized coefficients are plotted.

*p<0.1; **p<0.05; ***p<0.01.

Figure 5.14

The effect of the perceptions of existential insecurity on populist voting mediated via anger[5]

among Leavers
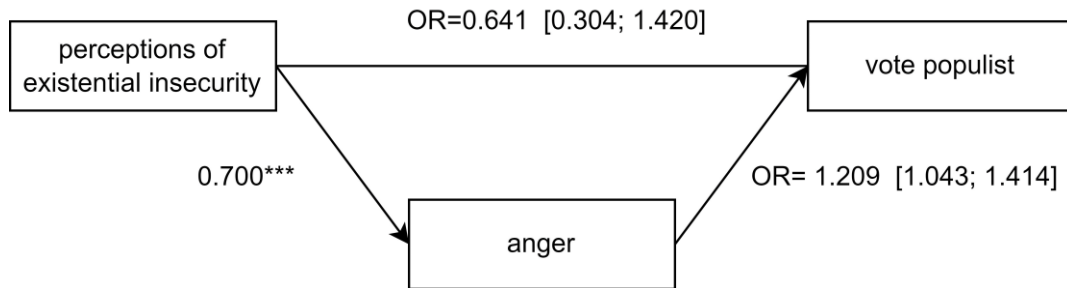
Note. N=202. Controlled for belief in vaccinations.

STDY standardized coefficient is used for the path between perceptions of existential insecurity

and anger. Odds ratios are plotted for the paths leading to voting for a populist candidate.

*p<0.1; **p<0.05; ***p<0.01.

Figure 5.15

The effect of the perceptions of existential insecurity on populist attitudes mediated via valence

among Leavers
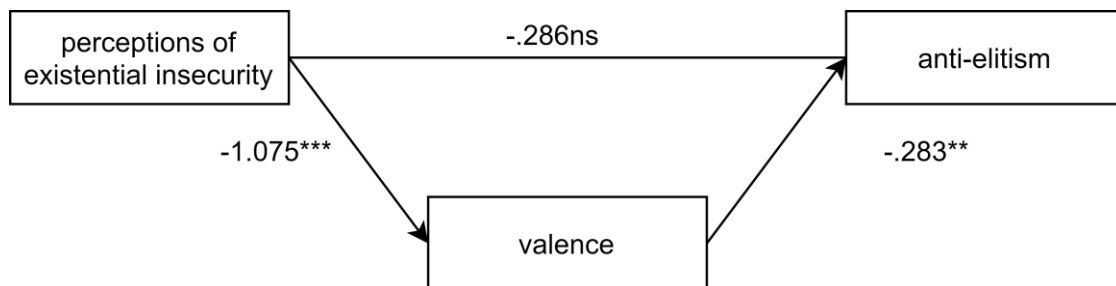
 Note. N=202. Controlled for belief in vaccinations.

Standardized coefficients are plotted.

*p<0.1; **p<0.05; ***p<0.01.

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[5] Disgust also mediated the relationship between the perceptions of relative deprivation and voting for a populist candidate: the indirect effect was significant and positive (*OR*=1.18; *SE* = 0.10 [1.04, 1.45]), the direct (*OR*=0.73, *SE*=0.28 [0.38, 1.49]) and total (*OR*=0.87, *SE*=0.33 [0.44, 1.76]) effects were insignificant.

Conclusions and discussion

The study aimed to demonstrate the impact of the perceived relative deprivation and existential insecurity on populist outcomes mediated by emotions. We employed the context of the coronavirus pandemic and accounted for the role of attitude polarization using respondent's opinion on Brexit. We found that the perceptions of relative deprivation indeed enhanced people's level anti-elitism, however, this effect was present only among Brexit supporters. This was not in line with our expectations, since the issue of justice is believed to play a higher role for liberals, and not conservatives (e.g., Haidt & Graham, 2007). One could explain thus finding by assuming that Brexit proponents, who believed in vaccination, were concerned about the survival of their ingroup in the pandemic, which made them consider equal access to vaccination as a prerequisite for it. One could also hypothesize that in a threatening context, Leavers cared more about others. In favor of this argument is that in our data Leavers' blame attributions to the ethnic outgroup decreased when Leavers were exposed to an instance of relative deprivation. Therefore, people's likelihood of participating in outgroup derogation decreased. Another explanation could be that the pandemic made Leavers lose the perceived control over the situation, which resulted in a search for empowerment by opposing elites (e.g., Magni, 2017). Perceptions of relative deprivation did not affect the level of Remainers' populist attitudes, even though the manipulation contained an instance of injustice.

There was no direct effect of the perceptions of existential insecurity on populism among both, Leavers and Remainers. This is in line with the results of Wondreys and Mudde (2022), who found that during the pandemic, the level of right-wing populism did not change (see also Manov, 2021). At the same time, since, to our knowledge, we made the first attempt to use the cultural backlash theory in an experimental design, it is vital to replicate our results across different contexts and societies using different research paradigms. In addition, the timeline of the pandemic could matter: existential insecurity perceptions could play a primary role in driving populist support in the first months of the pandemic. Moreover, the control condition we

employed, though in a neutral way (as shown by manipulation checks), also addressed the context of the pandemic.

We already know that the perceptions of relative deprivation affect populist outcomes via emotions (see Chapter 4). We found further confirmation for it in this study: anger mediated the relationship between the perceptions of relative deprivation and anti-elitism among Remainers, and the relationship of the perceptions of relative deprivation with anti-elitism and popular sovereignty for Leavers – all with a positive effect. Fear mediated the effect of the perceptions of relative deprivation on popular sovereignty for Remainers, enhancing the latter. Moreover, feeling of disgust mediated the relationship between the perceptions of relative deprivation and voting for a populist candidate among Leavers, with a positive effect. All these findings show that all negative discrete emotions enhanced the level of populist attitudes. While most of the effects were in the expected direction, the positive effect of fear among Remainers needs further attention (but see Chapter 4). A possible explanation is that Remainers feeling afraid were searching for empowerment by endorsing popular sovereignty attitudes, that ordinary people can do politics better than politicians. Another reasoning could be that, since discrete negative emotions were highly correlated with each other, there was a generalized negative affect underlying the reaction to the instance of relative deprivation. The positive mediation effect of the relationship between the perceptions of relative deprivation and anti-elitism by emotions negative in valence among both Leavers and Remainers – renders support for this assumption.

Emotional reactions to the existential insecurity exposure – as expected – produced an effect on predominantly Leavers: sadness mediated the relationship of the perceptions of existential insecurity and anti-elitism, and the perceptions of existential insecurity and popular sovereignty, increasing both of them. This was contrary to our expectations. Anger resulting from the perceptions of existential insecurity enhanced the likelihood of voting for a populist candidate. Emotions negative in valence mediated the relationship between the perceptions of existential insecurity and anti-elitism among Leavers with a positive effect. The results can be

interpreted in the same way as the reaction to the perceptions of relative deprivation: people facing an instance of existential insecurity experienced a generalized affect, which activated populist attitudes only among Leavers.

Next, there is evidence on a prominent role of the appraisal of PFCP for Leavers. Not only did the level of the appraisal of PFCP significantly drop due to the exposure to an instance of relative deprivation among Leavers, but a low level of PFCP made Leavers seek empowerment by opposing elites and supporting ordinary people as decision-makers. To compare, the significant decrease of the appraisal of PFCP caused by the perceptions of existential insecurity did not activate populist attitudes of Leavers. Feelings of powerlessness both due the exposure to an instance of relative deprivation (lower level of dominance) and the perceptions of existential insecurity (a lower level of the appraised PFCP) decreased the level of homogeneity among Leavers: they did not search empowerment in solidarizing with other people. In contrast, PFCP did not play any role for Remainers exposed to the relative deprivation or existential insecurity manipulations.

If both Leavers and Remainers were less likely to think that nature or fortune was responsible for the perceived relative deprivation, they were more likely to endorse popular sovereignty. Possibly, they were coping with the disadvantaged situation via supporting ordinary people in doing politics. There was also some variation in the way the appraisal of other-accountability worked among Remainers and Leavers. Experiencing relative deprivation Remainers were less likely to think that the ingroup was responsible for the disadvantaged situation, which decreased their level of popular sovereignty. Blaming leaders for the relative deprivation instance activated anti-elitist attitudes among Remainers, but had no effect on the support of populist attitudes among Leavers. In contrast, when facing existential insecurity, both Remainers and Leavers were less likely to blame leaders, which decreased the level of anti-elitism among both groups, and reduced the level of popular sovereignty among Leavers.

CHAPTER 5: POPULISM UNDER THREAT

An important contribution of our study was addressing three different layers of analysis of emotions (discrete emotions, appraisals, basic dimensions). We could benefit from the different approaches by triangulating our results, while the appraisals revealed important evidence complementary to that of discrete emotions. Employing discrete emotions and the emotional dimensions gave evidence in favor of a generalized negative affect underlying the perceptions of relative deprivation and existential insecurity: **all negative emotions enhanced the level of populist outcomes**. Using appraisals was particularly helpful for understanding the differences in the way instances of existential insecurity and relative deprivation instances were appraised. Moreover, one could trace that people with opposing political views (Remainers and Leavers) made appraisals differently. An exposure to an instance of relative deprivation decreased the attribution of responsibility for the disadvantaged situation to the nature, ingroup and the outgroup, resulted in a significant decrease of PFCP for all respondents, and made Remainers blame political leadership more. Appraisals of instances of existential insecurity made Remainers blame nature or fortune more, and made Leavers less prone to blame the political leaders. Leavers also felt a significant decrease of the PFCP appraisal.

An interesting question for future research would be to see how these different layers of emotions – especially, appraisals and discrete emotions, —relate to each other in different contexts. Moreover, it would be very important to study emotions not only with self-reported measures (e.g., Kappas, 2001). Another question which needs further testing – how robust is the opinion on Brexit as a proxy for ideological differences and attitude polarization (cf. Hobolt et al., 2021, Tilley & Hobolt, 2023).

A limitation of the study is that we should not generalize our findings to other contexts and populations without further data. We studied the proposed mechanism using the context of the coronavirus pandemic with a convenience sample of the UK citizens at a particular point of time and using one topic–vaccination. Even though during the pretest, the scenario used in the main study was rated as relevant and inducing perceptions of insecurity and injustice more than

other scenarios, one needs to replicate our findings with different scenarios and contexts.

Besides, the coronavirus pandemic was different from other threat-inducing situations, such as

terrorism or war (e.g., Dietz et al., 2021): when nature is not responsible for a threatening

situation, blaming outgroups could play an important role, which was not the case in the current

study.

An interesting direction for further research is the role of the appraisal of PFCP. In this

study, it mediated the effect of perceptions of relative deprivation and existential insecurity only

among Leavers, but with opposing effects. Of importance is to understand how the

characteristics of an appraised situation and people's personality traits and beliefs inform

people's appraisal of PFCP, and why this appraisal plays an important role only for Leavers.

The main evidence of the study is that emotions are vital in understanding the impact of

the perceptions of relative deprivation and existential insecurity on populism. It is crucial to use

different layers of emotions to get a better understanding of the role of emotions and to

triangulate results. We suppose there is a general negative affect underlying people's reaction to

instances of relative deprivation and existential insecurity and leading to populist outcomes.

When facing relative deprivation, Leavers suffered from the lack of PFCP and sought

empowerment in opposing elites and supporting ordinary people as policy-makers, while

Remainers were punishing elites. When both Remainers and Leavers did not hold nature or

fortune responsible for the disadvantaged situation, they sought empowerment in endorsing

popular sovereignty.

6. Rally around the Government or a Populist Response? How Concerns about COVID-19 and Emotional Responses Relate to Institutional Trust and Support for Right-Wing Populism

This article is co-authored with Tim Reeskens
Ekaterina Lytkina is the corresponding author of the paper

Abstract

Recent studies have shown that the coronavirus pandemic not only temporarily increased support for incumbent politicians and trust in experts but also triggered an authoritarian response. Because the pandemic has significantly affected individuals' goals, needs, and control over their lives, we expect that it has generated emotional reactions. In this article, we study how concerns about COVID-19 relate to institutional trust (trust in political institutions and experts) and a preference for populist right parties—directly and indirectly—via emotions. Our theoretical framework relies on the 'rally around the flag' hypothesis, the cultural backlash theory, as well as appraisal theories of emotions. We analyze a novel data set collected as part of the Longitudinal Internet Studies for the Social Sciences (LISS) Panel Survey for the Netherlands at the beginning of the second wave of the pandemic (October 2020). Our findings reveal that concerns about COVID-19 are positively related to institutional trust but unrelated to preferences for right-wing populism. The relationship between concerns about the coronavirus crisis and trust in political institutions is mediated via fear and sadness; these emotions also explain opposition to right-wing populist parties. We interpret our findings in relation to research on the rally around the flag effect, right-wing populism, and emotions and discuss the implications of our results in the context of the coronavirus pandemic and other 'rally'-inducing events.

Keywords: COVID-19, emotions, concerns about the coronavirus, institutional trust, rally around the flag effect, right-wing populism

CHAPTER 6: RALLY-EFFECT OR POPULIST RESPONSE?

6.1. Introduction

At the beginning of the first wave of the coronavirus pandemic, many advanced economies and emerging markets showed a high increase in governmental approval (Herrera et al., 2020; see also Bol et al., 2021; Cardenal et al., 2021). Simultaneously, scholars warned of anti-democratic or authoritarian tendencies in response to the pandemic, with populations being inclined to relinquish their civil liberties (e.g., Arceneaux et al., 2020; Vasilopoulos et al., 2023). While the majority of the literature links the increased support and trust in incumbent institutions at the beginning of the pandemic to macro-factors, such as COVID-19 incident rates (Schraff, 2021) and lockdown measures (Herrera et al., 2020), in this article, we are interested in how micro-level factors—concerns about the coronavirus crisis (e.g., Lieberoth et al., 2021) and emotions (e.g., Dietz et al., 2021)—relate to increased trust in political institutions and experts and a preference for right-wing populist parties (cf., e.g., Abadi, Arnaldo, & Fischer, 2021).

COVID-19 was a large-scale international and dramatic event, and responses to the pandemic have culminated in a "rally around the flag effect" (Mueller, 1970), meaning enhanced support for ruling elites, and potentially other institutions, such as health authorities, scientists, or broader experts, to whom people delegate responsibility for managing and finding redemption from the life-threatening pandemic. Several studies confirmed that, at the onset of the pandemic, populations had more trust in national institutions, such as governments (Herrera et al., 2020; Schraff, 2021), healthcare and educational systems (Reeskens et al., 2021), and science (Battiston et al., 2020). We extend the rally around the flag effect (hereafter: 'rally effect') from typical outcome variables, such as trust in government and parliament, to trust in the healthcare system and science, as these actors have played a crucial role in combatting the spread of COVID-19 and saving lives (e.g., Bicchieri et al., 2021).

In tandem with more support for incumbent leaders, the perceptions of threat and existential insecurity brought about by the pandemic might have caused populations to adopt a conservative or materialist ideology, as suggested by research on threat (e.g., Lambert et al.,

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2010; Huddy et al., 2005) and cultural backlash theory (Norris & Inglehart, 2019). Some researchers have warned of an anti-democratic reflex to the coronavirus pandemic (Reeskens et al., 2021; Arcenaux et al., 2020) potentially giving rise to right-wing populism (Inglehart, 2020, April 10). In this vein, populism—defined as the opposition between the "virtuous" people and the "vicious" elites and the belief that the will of the people should guide politics (Mudde, 2004)—is often seen as a way of empowering the powerless, allowing people who perceive that they have no resources to improve their disadvantaged situation to hope for change (Magni, 2017; Rico, Guinjoan, & Anduiza, 2020).

While studies conducted at the beginning of the pandemic demonstrate that incumbents received increased support at the beginning of the pandemic (e.g., Herrera et al., 2020; Schraff, 2021; Bol et al., 2021), there is however less evidence on the impact of COVID-19 on support for the populist right. Inglehart (2020, April 10) expected populist support to increase. Wondreys and Mudde (2022) showed that among 27 European societies from March to June 2020, there was a slight increase of support for right-wing populists *in government* (but cf. Foa et al., 2022); among electorates, there was almost no change in levels of the preference for right-wing populists in *governmental coalitions* while the popularity of right-wing populists *in opposition* showed no uniform pattern. Foa et al. (2022) found that within two years of the pandemic, in general, the level of populist attitudes, approval ratings and electoral support of populist leaders and populist parties in opposition decreased. The authors explained the decline of populism foremost by inefficient response by populist governments to the pandemic, declined affective polarization (or hostility of representatives of different parties towards each other) hindering populists at mobilizing voters, and reduced support for populists among elderly, less educated and living in previously economically disadvantaged regions people (Foa et al., 2022).

In this article, we focus on the case of the Netherlands and seek to identify whether people concerned about COVID-19 trust incumbent institutions more (as the 'rally effect predicts), or rather trust populist leaders more (as cultural backlash theory suggests).

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Furthermore, we examine the role of emotions in shaping how concerns about COVID-19 relate to trust in incumbents and a preference for right-wing populism. Existing studies on the 'rally effect' have revealed that fear of the pandemic enhanced governmental support (Dietz et al., 2021), and that anxiety about COVID-19 was positively associated with populist attitudes (Abadi et al., 2021), while fear of terror attacks decreased support for the right-wing populism (Vasilopoulos et al., 2019).

We contribute to the literature in five ways. First, studies on the 'rally effect' generally only address trust in political leadership; we suggest that, in the case of the COVID-19 pandemic, studying trust in healthcare and science is important (e.g., Battiston et al., 2020); these experts have participated in decision-making and communicated the reasoning behind important decisions. Second, the 'rally effect' is usually studied at the macro level, with limited evidence on its psychological covariates, such as threat perceptions (Kritzinger et al., 2021) and emotions, such as fear (Dietz et al., 2021) and anger (Erhardt et al., 2021). We suggest that institutional trust (trust in political institutions and experts) is explained by concerns about COVID-19 because such concerns appeal to emotions; and emotions are central to how people make sense of the world (Dukes et al., 2021). We assess whether emotional reactions to the pandemic mediate the association between concerns about COVID-19 and institutional trust. Third, when facing an omnipresent and invisible virus, which people could get anywhere, they were likely to seek for help, a sense of safety and empowerment among not only incumbents and experts, but also populists (e.g., Inglehart, 2020, April 10). Support for populists is likely to be driven by other emotions than support for incumbents. We test here whether and which emotions mediate the relationship between COVID-19 concerns and support for right-wing populist parties. Fourth, compared to previous studies on the 'rally effect' (Dietz et al., 2021; Erhardt et al., 2021) and populist support (e.g., Rico, Guinjoan, & Anduiza, 2017), we deploy a larger range of emotions. While fear and anger have been studied in relation to the pandemic (Abadi et al., 2021; Vasilopoulos et al., 2023; Erhardt et al., 2021) and populism (cf. Rico et al., 2017; Vasilopoulos

et al., 2019), we also consider the roles of sadness, disgust, and hope. Fifth, we analyze the novel cross-sectional data collected as part of the Dutch fieldwork of the European Values Study, which was integrated into the LISS Panel (CentERdata, 2020; see Reeskens et al., 2021) and is representative of the Netherlands.

The Netherlands is an interesting case; it initially had a high average number of coronavirus cases (Ritchie et al., 2020) and demonstrated a high increase in governmental trust compared to the pre-pandemic level within a number of communities (Schraff, 2021; Cardenal et al., 2021). Moreover, with its self-proclaimed "intelligent lockdown," the government provided Dutch residents with some freedoms but also a lot of individual responsibility (de Haas, Faber, & Hamersma, 2020). The fact that not all people supported incumbent politics became apparent during an imposed curfew in January 2021. Riots in the cities of Eindhoven and Den Bosch (among others) on January 23, 2021, demonstrated that some emotional responses toward the pandemic existed as well. In addition, there are two right-wing populist parties in the Dutch political landscape (Otjes, 2021): the Freedom Party (*Partij voor de Vrijheid* or PVV) and Forum for Democracy (*Forum voor Democratie* or FvD); thus, a preference for right-wing populist parties could have been a reaction to threat and insecurity within the Dutch political system.

In the second section of this article, we present our theoretical framework by revisiting the 'rally effect' in relation to COVID-19 (e.g., Dietz et al., 2021), formulating hypotheses on how concerns about COVID-19 relate to trust in experts and political institutions (cf. Kritzinger et al., 2021; Lieberoth et al., 2021) and addressing the populist threat in the context of the pandemic (e.g., Abadi et al., 2021). Based on appraisal theories of emotions (e.g., Kirby & Smith, 2011), we later explain how specific emotions mediate the relationships between concerns about COVID-19 and trust toward political institutions and experts (cf. Erhardt et al., 2021; Dietz et al., 2021) and right-wing populism (cf. Abadi et al., 2021). In the third section, we describe the data and methodology used to answer our research questions. In the results section, we empirically test our hypotheses using data representative of the Netherlands. Finally, we

conclude our paper with the implications of our findings for studies on 'rally'-inducing events and research on populism and emotions.

6.2. Theoretical Framework

6.2.1. COVID-19, Rally Around the Flag, and Right-wing Populism

Trust in Political Institutions

At the onset of the pandemic, there was a significant increase in trust in government (Bol et al., 2021; Kritzinger et al., 2021) and parliament (Schraff, 2021), voting intentions for the prime minister or president, satisfaction with democracy (Bol et al., 2021), and support for the actions of the government (Dietz et al., 2021) compared to pre-pandemic levels in a considerable number of countries.

Some studies (Dietz et al., 2021; Herrera et al., 2020; Schraff, 2021) consider the coronavirus pandemic a '*rally'-inducing event*, a concept that captures increased trust in government and other institutions in the face of a life-threatening situation (e.g., Lambert et al., 2010; Huddy et al., 2005). In its original description, Mueller (1970) defined the *rally around the flag effect* as a boost in the popularity of a president due to exogenous international events that are dramatic and specific, involve the entire nation, and are of extreme relevance to average people. He considered military interventions; major military, diplomatic, and technological developments; the beginning of presidential terms; and the US–Soviet meetings, which he used to account for higher levels of presidential support in the US, to be 'rally'-inducing events (Mueller, 1970). One of the most prominent and well-researched 'rally' effects was triggered by the terrorist attacks on September 11, 2001, in New York and Washington DC; levels and increases of presidential approval were the highest and the 'rally effect' lasted the longest in US history (Hetherington & Nelson, 2003). Compared to other 'rally' events, the coronavirus pandemic lacked intentionality, specific targets, and a timeframe (Dietz et al., 2021).

In some countries, the 'rally effect' caused by COVID-19 lasted for months and had more than one peak (Dietz et al., 2021), whereas in others, it was short-term or did not happen at all

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(van Aelst, 2021; Herrera et al., 2020; Kritzinger et al., 2021; but cf. Foa et al., 2022). Similar to other 'rally effects', in the case of the coronavirus pandemic, support for incumbents varnished over time. This occurred due to an aversion to immediate danger, the return of normal critical assessments of the government by the opposition (Kritzinger et al., 2021), governmental mismanagement of the pandemic (Herrera et al., 2020), retrospective evaluation of governmental handling of the pandemic, and people growing accustomed to the "new normal" and gaining a sense of control over it (Dietz et al., 2021).

Thus far, the 'rally effect' has predominantly been studied at the macro level, for example, in approval ratings of presidents, governments, or party identification over time (e.g., Mueller, 1970; Hetherington & Nelson, 2003). In the case of the coronavirus pandemic, scholars explained increased levels of trust in the government by the weekly growth rate of COVID-19 infections (Schraff, 2021; Herrera et al., 2020), lockdowns (Bol et al., 2021), and governmental management of the pandemic (Herrera et al., 2020). However, Dietz et al. (2021) found that infection rates were unrelated to governmental support.

Regarding the micro perspective, the 'rally effect' of the coronavirus pandemic has been different from the 'rally effect' related to wars or terrorism. Events such as the 9/11 terrorist attacks involved intentionality—terrorism involved agency causing harm on purpose, which resulted in feelings of anger, which drove support for the US president and approval of the war against Iraq (Lambert et al., 2010, Studies 1-3). The coronavirus pandemic, in contrast, lacked intentionality and targets (Dietz et al., 2021); it resulted predominantly in feelings of fear, which enhanced governmental support (Dietz et al., 2021). Therefore, we should consider the differences in the crises causing the 'rally effect'. Moreover, in relation to the coronavirus pandemic at the micro level, Kritzinger et al. (2021) revealed that health threat perceptions were significantly and positively related to trust in government in Austria, but unrelated to trust in government in France; economic threat perceptions, in contrast, had no associations with trust in government in both countries. Dietz et al. (2021) suggested that threat appraisal and risk

perception can be the main drivers of the 'rally effect'. Lieberoth et al. (2021) showed that trust in governmental efforts to prevent the spread of COVID-19 had no associations with concerns about the coronavirus, as the strength of the association varied considerably across different countries. Since we are interested in understanding the psychological dynamics of the 'rally effect' (e.g., Lieberoth et al., 2021; Lambert et al., 2010), namely, the micro-level dynamics of this phenomenon, we expect that *concerns about the coronavirus crisis are positively associated with trust in political institutions (government and parliament; Hypothesis 1a).*

It is worth mentioning that some populist leaders, such as Donald Trump in the US and Jair Bolsonaro in Brazil, spread misinformation about COVID-19 (van der Linden, Roozenbeek, & Compton, 2020) and downplayed the severity of the pandemic (van Aelst, 2021). Populations rallied to a lesser extent or not at all around the leaders who did not acknowledge the threat of the pandemic. Support for Trump did not significantly increase when the pandemic began (van Aelst, 2021; Herrera et al., 2020), while support for Bolsonaro decreased (van Aelst, 2021) or demonstrated a less prominent 'rally effect' (Foa et al., 2022).

Denial of the coronavirus had diverse negative effects. Populist President Trump's downplaying of the pandemic led to the defiance of social distancing among people with faith in the president (Graham et al., 2020); higher trust in Trump had a positive association with acceptance of misinformation about the pandemic (Granados Samayoa et al., 2021). Similarly, misinformation and conspiracy thinking in different countries decreased compliance with health guidelines and readiness for vaccination intake (van der Linden et al., 2020).

Trust in Experts

We extend the 'rally effect' from political institutions to experts. Previously, some attention has been paid to increased support for institutions other than electoral incumbents (e.g., Reeskens et al., 2021), in particular science and public health authorities (Battiston et al., 2020; Bicchieri et al., 2021), who have played a crucial role in combatting the pandemic. Trust in experts has been found to predict knowledge about the coronavirus, support for COVID-19

containment measures (Battiston et al., 2020), and compliance better than trust in government (Bicchieri et al., 2021).

At the beginning of the pandemic in the Netherlands, trust in experts and the education and healthcare systems increased even more than trust in parliament and government (Reeskens et al., 2021). In Italy, trust in science and experts was also higher at the beginning of the pandemic; people were paying more attention to the coronavirus and sought information from scientists and health authorities. Levels of trust decreased after mid-March 2020. In severely affected areas, people were exposed to the pandemic without direct improvement, despite lockdowns and other unprecedented measures. In areas less affected by the disease, people perceived the threat less but faced strict containment measures (Battiston et al., 2020). Nevertheless, to account for the 'rally effect', we expect to find that *concerns about the coronavirus pandemic are positively related to trust in experts (Hypothesis 1b).*

In the case of the Netherlands, experts played an important role. The national government relied on the expertise of the Dutch National Institute for Public Health and the Environment (RIVM) to draft coronavirus policies (Pattyn, Matthys, & Van Hecke, 2021). Together, political institutions and experts have been considered beneficial for preventing the spread of the pandemic, creating a good case with which to study the 'rally effect'.

Support for Right-wing Populism

However, some people may not rally around political elites and experts but might turn to populist politicians. Anti-democratic tendencies were documented during the first wave of the pandemic (Reeskens et al., 2021; Arceneaux et al., 2020). Perceptions of threat have been found to increase authoritarianism, ingroup solidarity, outgroup derogation, and support for punitive measures aimed at the threatening groups (Huddy et al., 2005). The threat caused by the pandemic fits well into the discourse of authoritarian populists, as populism includes striving for "collective security" against a perceived threat toward an ingroup (Norris & Inglehart, 2019, p. 14), as well "politics of fear, anger and resentment" (Norris & Inglehart, 2019, p. 7). In this vein,

modernization theory (Inglehart, 1977) and cultural backlash theory (Norris & Inglehart, 2019) suggest that when confronted with existential insecurity, people turn to values that foster their survival, thwarting self-expression and values that express civil liberties (cf. Maslow, 1943; see also Norris & Inglehart, 2019). Populists offer solutions outside of an existing political system, they re-evaluate disadvantaged or threatening situations by indicating targets to blame and hold responsible for negative outcomes, and promise improvement by removing these targets (Magni, 2017; Rico et al., 2020). Under threat of COVID-19, people also turned to one-dimensional solutions, like populism and conspiracy mentality (Abadi et al., 2021). Following the cultural backlash theory, we hypothesize that *concerns about the coronavirus crisis are inversely related to a preference for right-wing populist parties (Hypothesis 1c)*. However, the key idea is that the relationships between concerns about the coronavirus pandemic and support for right-wing populism and institutional trust are mediated by a particular set of emotional responses (see also Lambert et al., 2010).

6.2.2. Emotions, Trust, and Populism

The role of emotions as drivers of the 'rally effect' has been suggested by several authors (e.g., Schraff, 2021; Dietz et al., 2021); however, thus far, only the role of fear and anger in relation to trust in political institutions has been studied (Erhardt et al., 2021; Vasilopoulos et al., 2023; Dietz et al., 2021). More evidence can be found in the literature on terrorism threats and emotions (e.g., Lerner et al., 2003; Vasilopoulos, 2018). In contrast, the link between emotions and populist responses has been thoroughly addressed (e.g., Magni, 2017; Rico et al., 2017; Vasilopoulos et al., 2019, Vasilopoulos, 2018).

In this study, we view emotions as "elicited by stimulus events" (Scherer, 2005, p. 700), which implies that an individual evaluates the significance of an internal or external stimulus and then responds to it. Emotions have motivational and adaptive functions (Smith & Kirby, 2011). For the derivation of our hypotheses, we explore them predominantly by relying on appraisal theories of emotions, as, compared with other theories of emotions (cf. Marcus, Neuman, &

MacKuen, 2000; Vasilopoulos et al., 2019), appraisal theories allow us to explain why particular emotional reactions occur, account for individual differences in emotional elicitation, consider the role of the context (Smith & Kirby, 2011), and help us to understand how people cope with stress and how emotional reactions affect attitudes and behaviors (Cervone et al., 2008).

When reflecting on an event, people process information, often unconsciously linking the event with their own situation—personal goals, needs, concerns, capability to adapt to the event, and other criteria. This process is called *appraisal* (Kappas, 2001). Appraisals answer the questions of whether the appraised event is relevant to one's wellbeing (*primary appraisal*) and whether and how individuals can change a situation to be the way they want it to be or, alternatively, adjust to it (*secondary appraisal*) (Smith & Kirby, 2011).

Applying appraisal theories of emotions (Kirby & Smith, 2011) to the relationship between concerns about the coronavirus pandemic and political preferences, we suggest that the coronavirus pandemic has affected everyone's wellbeing and hindered people from fulfilling their needs and achieving goals, thus resulting in stress. We conceptualize concerns about the coronavirus pandemic as a primary appraisal that reflects the importance of the situation for individuals' goals—if the situation was not of relevance and individuals did not feel they were in trouble, they would not react emotionally. While Abadi et al. (2021) viewed concerns about the coronavirus as one of the anxiety measures that is reappraised by other emotions, we believe that concerns about the coronavirus crises are a pre-condition for an emotional reaction as a primary appraisal of relevance of a situation is to a person (Smith & Kirby, 2011).

Another crucial component of appraisal is coping, which implies the possibility of changing an undesired condition in accordance with one's goals (*problem-focused coping potential*) or adjusting to it (*emotion-focused coping potential*). Coping affects individuals' emotional reactions, attitudes, and behaviors (e.g., Smith & Kirby, 2011). In the case of the coronavirus pandemic and its fallout, we expect that people have felt incapable of changing the negative situation to meet their desires, and we know from appraisal theory that when no

immediate solution to a problem is available, problem-focused coping potential is low (e.g., Kappas, 2001).

We argue that coping potential is crucial in predicting emotional reactions to the pandemic and its impact on people's attitudes. The most common emotional reaction to the COVID-19 threat has been *fear* (Abadi et al., 2021; Dietz et al., 2021). This parallels Smith and Kirby's (2011) proposition that a threat, as a situation, is characterized by appraisals of stress and a low possibility to adjust to negative outcomes, thus causing fear. A situation characterized by appraisals of stress and a low possibility of changing negative outcomes is denoted as harm and results in *sadness* (Smith & Kirby, 2011).

At the same time, concerns about the coronavirus crisis could lead to emotions other than fear and sadness. According to appraisal theory, when people blame others for a stressful situation, they experience *anger* (Smith & Kirby, 2011), which is characterized by a high level of coping potential (e.g., Scherer, 2001, p. 115). Indeed, blaming attributions were rather present in the right-wing populist discourse about the coronavirus pandemic: populists blamed the Chinese, immigrants, and minorities for spreading the virus, governments were blamed for a slow and late response, the EU for imposing measures against the pandemic and questioning national sovereignty, whereas non-populist opposition was blamed for thwarting the governmental response (Wondreys & Mudde, 2022). Additionally, if people were concerned about the pathogen threat, they were likely to have experienced *disgust* (Koole & Rothermund, 2022). If individuals were optimistic about a personally disadvantaged situation and thought they could improve it, they may have experienced *hope* (e.g., Smith & Kirby, 2011; Smith, Tong, & Ellsworth, 2014).

Before we review in more detail how these emotional reactions operate, we want to clarify why we view emotions as mediators. As mentioned, in accordance with appraisal theory, emotions occur in response to a particular stimulus in a specific situation. People have experienced diverse emotions as they have reacted to different aspects of the pandemic—for

example, governmental reactions to the pandemic, hygiene rule violations, or avoiding

contamination (Abadi et al., 2021; Koole & Rothermund, 2022). In addition, the same emotion

may lead to different outcomes depending on the appraised stimulus, context, and individuals'

characteristics (e.g., Abadi et al., 2021). For instance, fear about the coronavirus has had a

positive effect on the support of incumbents (Dietz et al., 2021), whereas anxiety in relation to

9/11 was negatively associated with presidential support (Huddy et al., 2005). We view emotions

in relation to concerns about the coronavirus crisis; emotions mediated relationships between

concerns about the coronavirus crisis and measures of trust and right-wing populism. Still, since

this is a correlational study, we formulated our hypotheses in terms of associations, not causality.

F*ear* "denotes dread of impending disaster and an intense urge to defend oneself,

primarily by getting out of the situation" (Öhman, 2008, p. 710). It is characterized by a very low

possibility of influencing a situation or adjusting to its undesired outcomes (Scherer, 2001). Fear

has been found to increase trust in the government (Erhardt et al., 2021) and support for the

government (Dietz et al., 2021). It has been positively associated with a willingness to sacrifice

civil liberties to protect public health, especially among people with low levels of trust in

government (Vasilopoulos et al., 2023). In addition, since the experience of fear is related to

searching for new information and reconsidering one's initial opinion in light thereof (Marcus et

al., 2000), we expect people who have felt afraid to have been more attentive to the opinions of

experts and trust them more. In relation to populism, studies have shown that fear after the Paris

attacks of 2015 reduced support for right-wing populism (Vasilopoulos et al., 2019; see also

Rico et al. 2017 for an application on populist attitudes and voting for left-wing populists).

Therefore, we also expect *fear to mediate the relationship between concerns about COVID-19*

and trust in political institutions and experts (the mediating effect will be positive) and a

preference for right-wing populist parties (the mediating effect will be negative; Hypothesis 2).

Sadness is typical if non-human factors are responsible for a negative situation, as in the

case of a natural disaster (Dunn & Schweitzer, 2005). It is characterized by "hopelessness about

harm or loss" (Smith & Pope, 1992, p. 43), low coping potential, and negative expectations

about the future (Smith & Lazarus, 1993). Sad people are the most likely to seek help or

disengage from harmful situations (Smith & Pope, 1992; Smith & Kirby, 2011). Although we

lack evidence on how sadness relates to trust in political institutions and experts, sad people have

been found to trust other individuals more than angry people (Dunn & Schweitzer, 2005).

Existing research has not uncovered any influence of sadness on populist attitudes or voting for

populist left parties (Rico et al., 2017). Because studies characterized sadness as a response to

the coronavirus threat by passivity and behavioral disengagement and, like fear, is associated

with low levels of coping potential, we assume that *sadness will mediate the relationship*

between concerns about COVID-19 and trust in political institutions and experts (with a positive

mediating effect) and support for right-wing populist parties (with a negative mediating effect;

Hypothesis 3).

Anger, by contrast, is characterized by other-accountability for a situation, causing

motivational incongruence (Smith & Lazarus, 1993). In cases of unjustified responses, anger

preserves self-esteem (Haidt, 2003). Anger motivates people to seek change (Magni, 2017) and

protest (Smith, Cronin, & Kessler, 2008). Studies uncovered anger decreased trust in government

due to blame attribution for negative circumstances related to COVID-19 (Erhardt et al., 2021),

but anger played a minimal role in shaping citizens' attitudes toward civil liberty restrictions

(Vasilopoulos et al., 2023). Anger is considered the main driver of populism (Rico et al., 2017;

see also Vasilopoulos et al., 2019). If people blamed government, outgroups, or people not

keeping to contamination rules for diverse negative outcomes, they were likely to feel angry

(e.g., Erhardt et al., 2021). Besides, concerns about the coronavirus pandemic could result in

different negative emotions, which could be reappraised and result in anger (e.g., Abadi et al.,

2021). In these cases, we can expect *anger to mediate the relationship between concerns about*

the coronavirus crisis and trust in political institutions and experts (with a negative mediating

effect). Since we hold anger to be crucial for populist support, we expect *anger to mediate the*

relationship between concerns about the coronavirus crisis and a preference for right-wing populist parties (with a positive mediating effect; Hypothesis 4).

Disgust, together with anger, belongs to the "other-condemning" family of emotions. Like anger, it serves to preserve social order from moral violations by other people (Haidt, 2003). Haidt (2003) argued that disgust is generally related to social violations; it helps to distinguish the in-group from the out-group and leads to the condemnation of out-groups. Its function is to preserve a conservative social order, and it implies "a motivation to avoid, expel, or otherwise break off contact with the offending entity" (Haidt, 2003, p. 857). Bakker et al. (2020) found that showing a picture of a leader of an opposing party elicited disgust. Similar to anger, we hypothesize that *disgust will mediate the relationship between concerns about COVID-19 and trust in political institutions and experts (with a negative mediating effect) and a preference for right-wing populist parties (with a positive mediating effect; Hypothesis 5).*

Hope is a positive stress-related emotion described as "fearing the worst but yearning for better, and believing a favorable outcome is possible" (Lazarus, 2001, p. 64). Being an opportunity-based emotion, it "orients a person toward attaining an as yet unrealized goal" (Smith et al., 2014, p. 21). Hope is related to optimism and expresses an expectation that the goal can be achieved, keeping people committed thereto and thus fostering their functioning and well-being (Smith et al., 2014). In the context of the coronavirus, hope has been found to be unrelated to attitudes toward civil liberty restrictions (Vasilopoulos et al., 2023). Given individuals' optimism and commitment to attainment in the face of obstacles, we propose that *hope will mediate the relationship between concerns about the coronavirus crisis and trust in political institutions and experts (with a positive mediating effect) and a preference for right-wing populist parties (with a negative mediating effect; Hypothesis 6).*

6.3. Data and Methodology

We used the Dutch part of the European Values Study (EVS, 2020) that was conducted in October 2020. In essence, the foundations of this data can be traced to the fifth wave of the EVS,

which was collected using a mixed mode strategy in 2017 (Luijkx et al., 2021). As part of a study to monitor stability and changes in values and attitudes (see Reeskens et al., 2021), respondents from the initial computer-assisted web interview (CAWI) data collection were re-approached with a limited questionnaire in May 2020. In a follow-up in October 2020, used for this study, the 1,606 respondents from the May data collection were asked to participate, resulting in a sample of 1,462 respondents. In addition to some core questions that were administered in the initial 2017 and May 2020 surveys, items relevant to this manuscript were added to the questionnaire. We applied post-stratification weights to correct for sampling bias regarding sex, age, education, and region.

Dependent Variables

We used three dependent variables. First, we constructed the index *trust in political institutions* as an extracted factor score upon confirmatory factor analysis of reversely coded measures of trust in governmental institutions ("How much confidence do you have in the parliament?" and "How much confidence do you have in the government?"). Confidence in government and parliament were used to measure political trust (e.g., van der Meer & Hakhverdian, 2017) and trust in political institutions (e.g., Schneider, 2017). Trust in government (Bol et al., 2021) and parliament (Schraff, 2021) have been employed in studies on the 'rally effect'. The index ranged from -1.37 to 0.631, with its highest level indicating higher levels of trust in the political elite. Second, *trust in experts* was an index also comprised of reversely coded items ("How much confidence do you have in the healthcare system?" and "How much confidence do you have in science?"). We treated scientists and healthcare system representatives as experts, as they provided the underlying logic for compliance with containment measures against the spread of COVID-19 (cf. Bicchieri et al., 2021). Individuals sought information from healthcare authorities and scientists at the beginning of the pandemic (Battiston et al., 2020), and these measures were closely aligned (Battiston et al., 2020). The index ranged from -1.816 to 0.805, with its highest level indicating higher levels of trust in

experts. Third, a measure of right-wing populism—*preference for right-wing populist parties*—combined supporters of the PVV and the FvD (Otjes, 2021) and was coded with 1, while those favoring other parties were coded with 0.[1]

Independent Variable

Concerns about COVID-19 were measured by the item "To what extent are you concerned about the coronavirus crisis in general?" on a 5-point scale, where 1 was "not at all" and 5 was "a great deal."

Mediating Variables

Emotional reactions to the coronavirus were examined with the following way question: "Which emotion comes to mind first when you think about the coronavirus?" Individuals could choose one emotion from a list or indicate that they experienced an emotion other than those provided. Here, we analyzed the data for the most often-mentioned emotions: fear, sadness, hope, disgust, and anger. As a robustness check, we included other emotions (if people selected the option "other emotion" or indicated rare emotional reactions [N < 15]) or an absence of emotion (option "no emotion," which was used as a reference category) in our models.

Control Variables

As controls in the regression analysis, we included age (captured by seven categories from young [1] to elderly [7]) and income, which was measured via categories for imputed net household income (from low [1] to high [10]). These variables are important for research on both the 'rally effect' and populism (Hegewald & Schraff, 2022; Inglehart & Norris, 2017). Following Inglehart and Norris (2017), we controlled for gender, distinguishing between women (reference category) and men (coded as 1), and level of education, which was measured with two dummy variables—low education (1: yes, 0: no) and high education (1: yes, 0: no); the middle level

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[1] As a robustness check, we added two variables to assess whether concerns about COVID-19 and emotions were differently related to voting for populist parties than voting for governmental and oppositional parties (for more details, see Appendix 5.4). The first one was *voting for governmental parties,* included voters of VVD, CDA, D66, and ChristenUnie and was coded as 1; other party supporters were coded with 0. Second, *voting for oppositional parties* comprised the supporters of the remaining parties (GroenLinks, SP, PvdA, Partij voor de Dieren, 50PLUS, SGP, and DENK) and coded in the same way.

served as a reference category. To account for proximity to the infection source, we controlled

for whether respondents' close relations and acquaintances (family, friends, acquaintances,

neighbors, colleagues as separate dummies; coded as 1 for knowing someone ill and 0 for not

knowing) had the coronavirus (Abadi et al., 2021).

6.4. Methods

To explore the relationship between concerns about COVID-19, emotions experienced in

relation to the pandemic, trust in political institutions and experts, and a preference for right-

wing populist parties, we ran bivariate correlations followed by multiple OLS or logistic

regressions performed with the statistical program R (version 3.6.1) using listwise deletion for

missing data. Mediation analysis was performed using a maximum likelihood estimator and bias-

corrected bootstrapping (10000) with the statistical program MPLUS 8.7. To account for the

significance of the associations estimated with logistic regression, we relied on confidence

intervals; if the value of 1 was crossed, the effect was insignificant.

6.5. Results

Bivariate Correlations

As Figure 6.1 shows, the most salient emotions regarding the coronavirus pandemic were

fear (experienced by 25% of the sample) and sadness (approximately 20%); hope, disgust, and

anger were less salient.

Figure 6.1

Distribution of emotional reactions salience
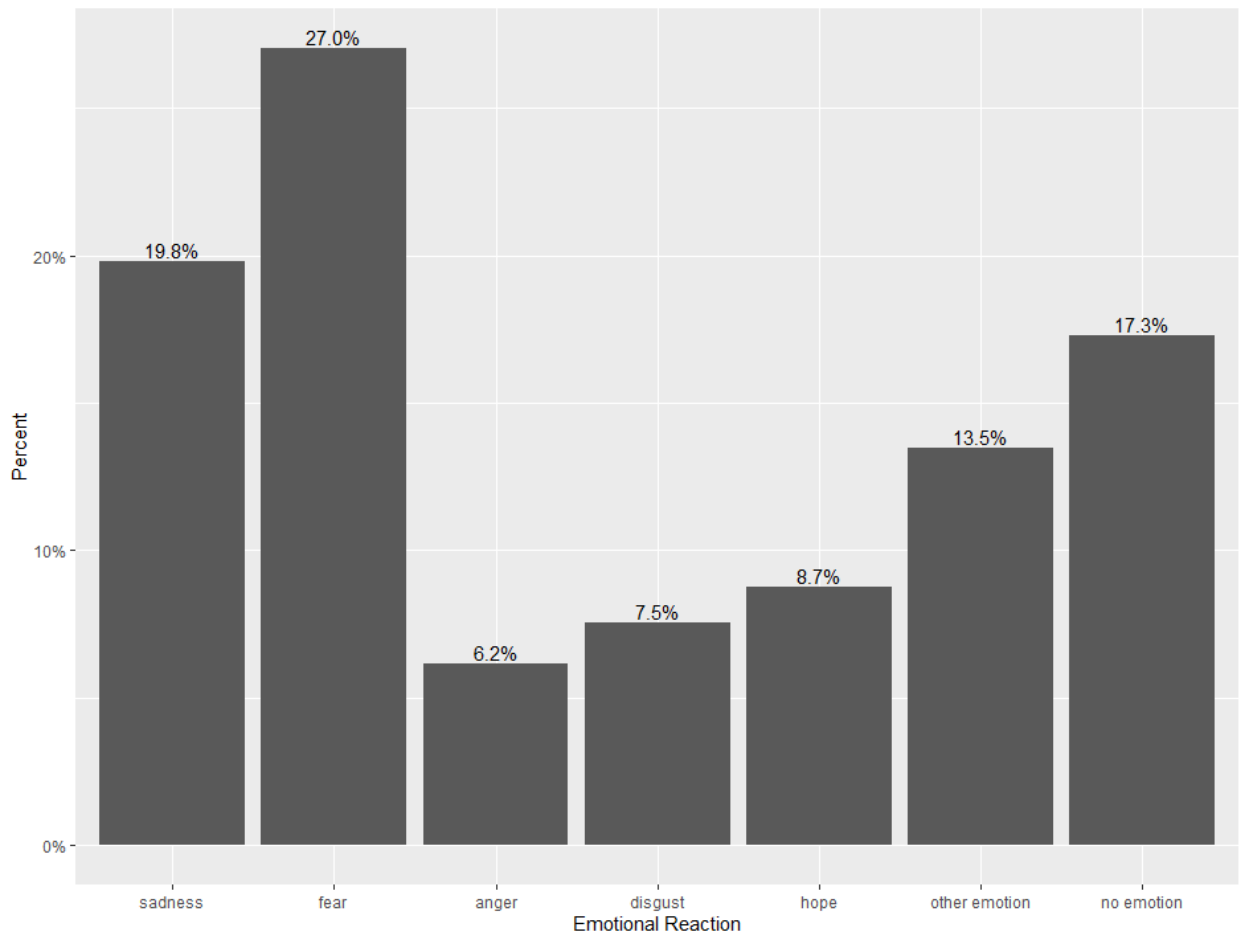
Note: Percentage of individuals choosing each emotion in a single response item.

We started our analyses with bivariate association between the variables of interest to gain a better understanding of the data (see Table 6.1). Trust in political institutions and experts were positively related but distinct from each other ($r = 0.448$), while a preference for right-wing populist parties was negatively related to trust in political institutions ($r = -0.435$) and experts ($r = -0.197$). Concerns about the coronavirus crisis were positively related to trust in political institutions ($r = 0.087$) and experts ($r = 0.140$) and unrelated to right-wing populism. People concerned about the pandemic were more likely to experience sadness ($r = 0.122$) and fear ($r = 0.217$).

Table 6.1

Associations between concerns about COVID-19, emotional responses, and measures of trust and right-wing populism

	Concerns about COVID-19	Trust in political institutions	Trust in experts	Preference for right-wing populist parties
M (SD)	3.52 (0.871)	0.00 (0.635)	0.00 (0.515)	-
Agreement Frequency (%)	-	-	-	186 (17.1%)
Concerns about COVID-19	-	-	-	-.027
Sadness	**.122***	**.060***	**.081****	-.036
Fear	**.217***	**.107****	.031	**-.086***
Anger	-.018	**-.180****	**-.114****	**.243****
Disgust	**-.052+**	-.043	-.032	-.026
Hope	.034	**.057***	**.060***	**-.058+**
Other emotion	**-.066***	.007	.008	-.042
Trust in political institutions	**.087****	1	**.448****	**-.435****
Trust in experts	**.140****	**.448****	1	**-.197****

Note. Pearson correlations are given. Gray cells are Cramer's V (phi) coefficients used for

association between dummy variables. *M* stands for means, *SD* stands for standard deviation

*** p < 0.001; ** p < 0.01; * p < 0.05, + p<0.1

Sadness, fear, and hope were positively associated with trust in political institutions ($r_{sadness} = 0.060$, $r_{fear} = 0.107$, $r_{hope} = 0.057$). Sadness and hope were positively related to trust in experts ($r_{sadness} = 0.081$, $r_{hope} = 0.060$). In contrast, fear and hope, though marginally significant, were negatively associated with a preference for right-wing populist parties ($\phi_{anger} = -0.086$, $\phi_{hope} = -0.058$). Anger had a negative correlation with trust in political institutions ($\rho = -0.180$) and experts ($\rho = -0.114$) and a positive association with a preference for right-wing populist parties ($\phi = 0.243$).

Multivariate Analyses

Turning to multivariate analysis (see Table 6.2), concerns about COVID-19 were positively related to trust in political institutions ($B^2 = 0.099$, $SE = 0.021$) and trust in experts ($B = 0.082$, $SE = 0.018$) and unrelated to a preference for right-wing populist parties ($OR = 1.098$, *95% CI* [0.875, 1.383]).

Table 6.2

Results of regression analysis with trust in political institutions, experts, and a preference for right-wing populist parties as dependent variables

Predictors	Trust in political institutions		Trust in experts		Preference for right-wing populist parties	
	Estimates	*SE*	*Estimates*	*SE*	*OR*	*95% CI*
(Intercept)	**-0.454*****	0.087	**-0.518*****	0.073	0.401	0.153 – 1.028
Concerns: COVID-19	**0.099*****	0.021	**0.082*****	0.018	1.098	0.875 – 1.383
COVID exposure-family	-0.001	0.049	**-0.089***	0.041	0.976	0.540 – 1.689
COVID exposure-friends	-0.054	0.053	-0.007	0.044	**0.479***	0.226 – 0.928
COVID exposure-acquaintances	-0.010	0.042	-0.001	0.035	0.654	0.389 – 1.068
COVID exposure-neighborhood	0.048	0.045	0.026	0.037	0.735	0.432 – 1.209
COVID exposure-colleagues	0.053	0.044	**0.085***	0.037	0.973	0.578 – 1.606
income	**0.027***	0.011	**0.030****	0.009	1.004	0.888 – 1.133
male	-0.041	0.037	**0.062***	0.031	**1.841****	1.233 – 2.773
low education	**-0.120***	0.047	**-0.090***	0.039	**3.444*****	2.213 – 5.441
high education	**0.199*****	0.043	**0.086***	0.036	**0.239*****	0.126 – 0.429
age	-0.004	0.011	0.017	0.009	**0.742*****	0.656 – 0.837
Observations	1212		1192		1057	
R^2 / R^2 adjusted	0.080 / 0.072		0.076 / 0.068		Pseudo R^2 Nagelkerke 0.200	

Note. Unstandardized coefficients are presented for models with trust in political institutions and experts as dependent variables and odds ratios for the model with a preference for right-wing populist parties. Bold results reached conventional statistical significance. *SE* = standard error, *OR* = odds ratios, and 95% *CI* = 95% confidence intervals.

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[2] Here and further, in accordance with the APA 7 citation style, we use '*B*' to refer to unstandardized regression coefficients. For details, see: American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.).

Hence, we see some evidence of the 'rally effect', as there was a positive relationship between being concerned about COVID-19 and trust in political institutions and experts, whereas concerns about the coronavirus were unrelated to support for right-wing populism.

Mediation Analysis

We now present three models in which we tested whether emotions mediated relationships between concerns about the coronavirus crisis and trust in political institutions and experts and a preference for right-wing populism. Since emotions were measured as binary variables, logistic regression was used to estimate the relationship between the independent variable and the mediators. In the model with a preference for right-wing populist parties as the dependent variable, which was dummy coded, all paths were estimated with logistic regression.

We first present the direct associations between concerns about the coronavirus crisis and emotions, which were the same for all models. We then present the associations between emotions and each outcome variable of interest, as well as the indirect effects.

To begin (see Figures 2–4), concerns about COVID-19 were positively related to sadness ($OR = 1.441$, *95% CI* [1.202, 1.747]) and fear ($OR = 1.844$, *95% CI* [1.497, 2.266]), negatively related to other emotions ($OR = 0.802$, *95% CI* [0.647, 0.988]), and unrelated to anger, disgust, or hope, compared to the absence of emotional reaction.

Sadness ($B = 0.181$, $SE = 0.067$), fear ($B = 0.214$, $SE = 0.070$) and hope ($B = 0.226$, $SE = 0.081$) were positively related to trust in political institutions, and anger ($B = -0.329$, $SE = 0.002$) was negatively related to trust in political institutions (see Figure 6.2). The relationship between concerns about the coronavirus crisis and trust in political institutions was fully mediated by emotions. Compared to the regression model (see Table 6.2), the association between concerns about the coronavirus crisis and trust in political institutions became insignificant ($B = 0.029$, $SE = 0.032$) when emotions were included. Mediation effects were small, albeit two were of significance—sadness ($B = 0.012$, $SE = 0.005$; $p = 0.023$, *95% CI* [0.004, 0.024]) and fear ($B = 0.028$, $SE = 0.011$, $p = 0.011$, *95% CI* [0.009, 0.052]). This indicates that people concerned about

the pandemic felt sadder and more afraid and trusted the political institutions more. Therefore, despite the small effects, the findings suggest that affect plays a role in why people rally around political institutions.

Figure 6.2

Mediation model with concerns about COVID-19 as the independent variable, emotions as mediators, and trust in political institutions as the dependent variable
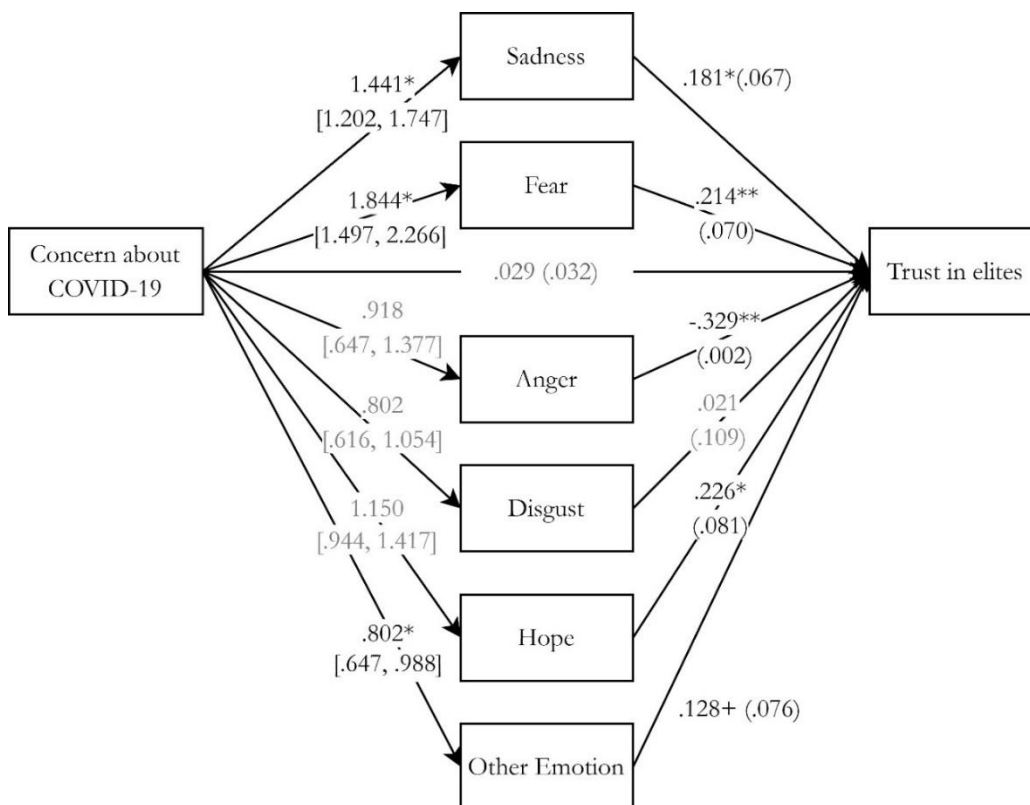
Note. Unstandardized coefficients with standard errors or odds ratios with confidence intervals are plotted.

'***' stands for p<0.001; '**' for p<0.005; '*' for p<0.05; '+' for p<0.1

In the model with to trust in experts as the outcome variable (see Figure 6.3), anger was inversely ($B = -0.179$, $SE = 0.082$), hope ($B = 0.143$, $SE = 0.072$), and sadness, though at a marginal significance ($B = 0.118$, $SE = 0.062$), positively related to trust in political institutions. Unlike trust in political institutions, fear was unrelated to trust in experts. With the inclusion of

emotions, the association between concerns about COVID-19 and trust in experts remained significant ($B = 0.067$, $SE = 0.029$). Only sadness showed a negligible positive indirect effect on trust in experts ($B = 0.007$, $SE = 0.004$, $p = 0.098$, 95% CI [0.001, 0.019]), which did not reach the conventional significance level. This could indicate different explanations for why people show more trust in experts and political institutions when facing life-threatening situations. It is possible that trust in experts results from rational choice and not affect.

Figure 6.3

Mediation model with concerns about COVID-19 as the independent variable, emotions as mediators, and trust in experts as the dependent variable
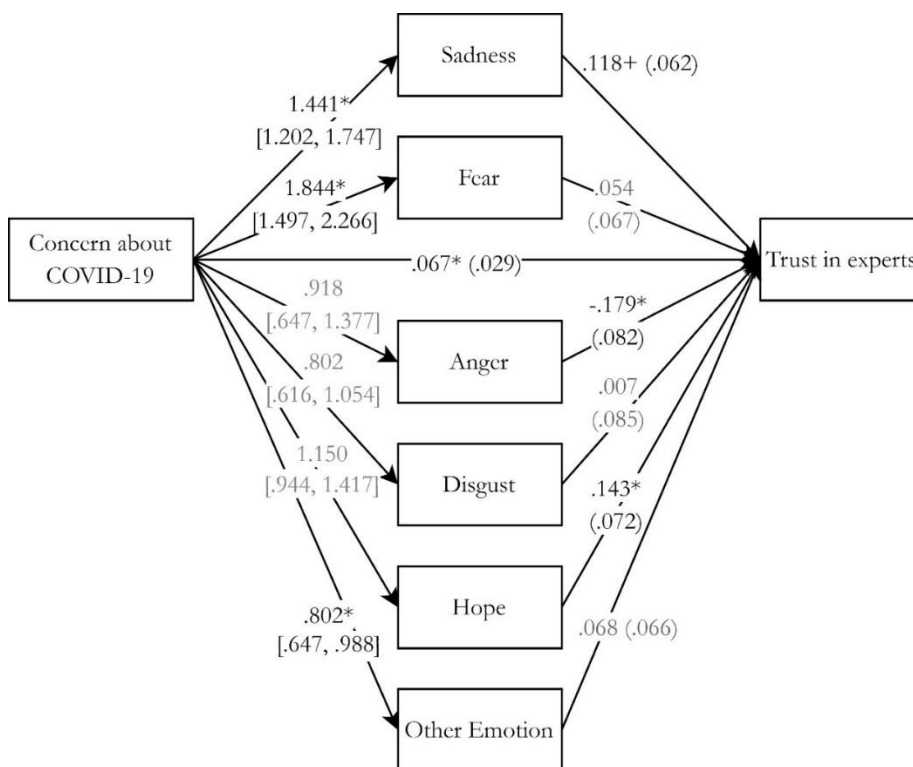
Note. Unstandardized coefficients with standard errors or odds ratios with confidence intervals are plotted.

'***' stands for p<0.001; '**' for p<0.005; '*' for p<0.05; '+' for p<0.1

Finally, sadness (*OR* = 0.509, *95% CI* [0.267, 0.973]), fear (*OR* = 0.377, *95% CI* [0.197, 0.727]), hope (*OR* = 0.355, *95% CI* [0.144, 0.798]), and other emotions (*OR* = 0.491, *95% CI*

[0.236, 0.996] were negatively related to a preference for right-wing populist parties, while anger ($OR = 3.775$, *95% CI* [1.626, 8.565]) was positively related thereto (see Figure 4). Sadness and fear mediated the relationship between concerns about COVID-19 and a preference for right-wing populist parties with significant negative effects ($OR_{sadness} = 0.964$, *95% CI* [0.917, 0.995], $OR_{fear} = 0.891$, *95% CI* [0.815, 0.956]). In contrast, the experience of other emotions, which had a small but significant and positive indirect effect ($OR = 1.022$, *95% CI* [1.003, 1.051]), suggests that future research could broaden the range of emotions studied. We did not find evidence of the authoritarian reflex, as suggested above. However, the preference for right-wing populist parties was positively related to anger (see Figure 6.4), but anger was unrelated to concerns about the coronavirus crisis. This implies that anger could be associated with stimuli other than concerns about the coronavirus crisis, such as blame attribution to political elites (e.g., Abadi et al., 2021).

Figure 6.4

Mediation model with concerns about COVID-19 as the independent variable, emotions as mediators, and a preference for right-wing populist parties as the dependent variable
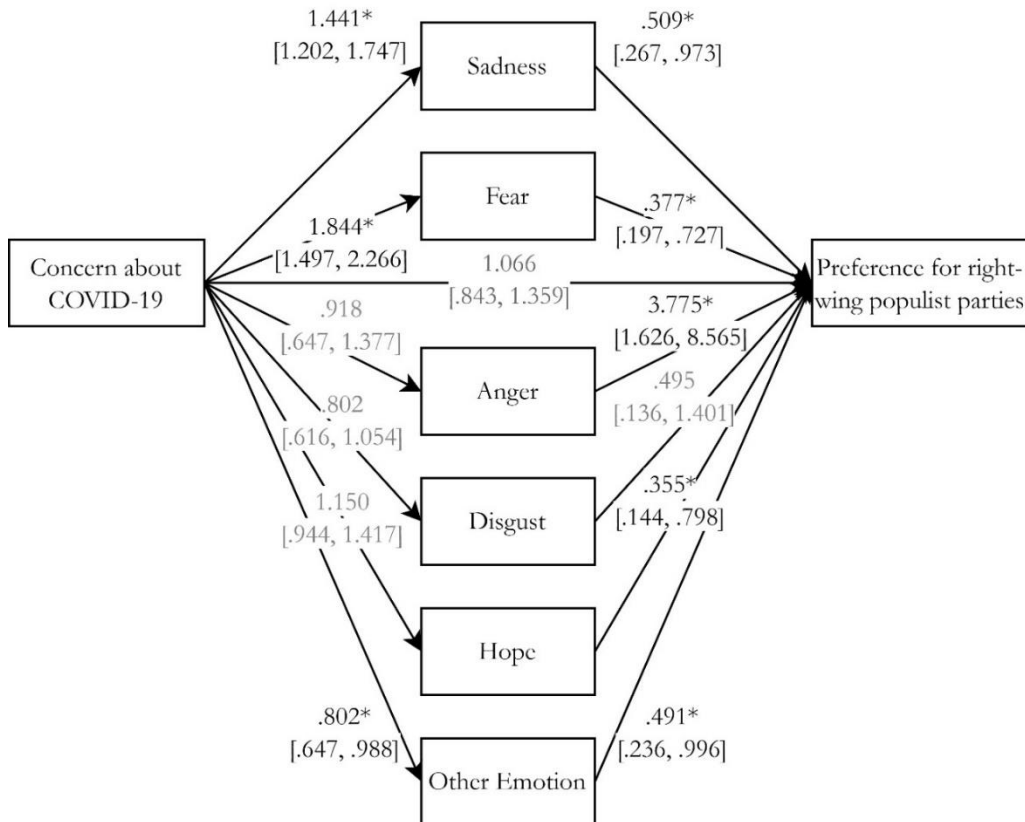
Note. Odds ratios with confidence intervals are plotted.

6.6. Conclusion

The aim of this study was to empirically test the micro-foundations of the 'rally effect', namely whether concerns about the coronavirus crises were related to support for political institutions and experts or, alternatively, to a preference for right-wing populist parties, as well as whether emotional responses to the pandemic mediated these relationships. We found that concerns about the coronavirus crisis were associated with the 'rally effect': people who felt concerned trusted political institutions and experts more. This implies that the 'rally effect' extends to institutions other than incumbent politicians, who, similar to healthcare authorities or scientists, participated in decision-making, communicating, and explaining policies and measures regarding the pandemic. At the same time, we did not find any relationship between

concerns about the coronavirus crisis and a preference for right-wing populist parties, which implies that in the Netherlands, right-wing populism is not related to people's appraisals of the importance of the pandemic for their lives and goals. On the one hand, this finding serves as a counterargument to researchers expecting an increase of populist support due to the pandemic (cf. Inglehart, 2020, April 10; Abadi et al., 2021). On the other hand, our results relate to Wondreys and Mudde (2022), who found that the Netherlands had a most significant decay of populist right support in Europe at the beginning of the pandemic, and to the results of Foa et al. (2022) that populist support declined due to the pandemic.

Next, we found evidence that emotions related, to a small extent, to trust in political institutions and, more strongly, to right-wing populism. In particular, fear and sadness proved to be emotions of obedience—they fully mediated the relationship between concerns about the coronavirus crisis and trust in political institutions, with small but significant positive effects. In addition, sadness and fear mediated the relationship between concerns about the coronavirus crisis and a preference for populist right-wing parties with a negative and significant effect. Whereas fear is known to enhance the 'rally effect' (e.g., Dietz et al., 2021; Erhardt et al., 2021) and decrease populist support (Vasilopoulos et al., 2019), we contribute by showing that sadness may play a similar role. It was positively associated with increased trust in political institutions and inversely related to populism (cf. Rico et al., 2017). However, the relationship between sadness and these variables needs to be replicated using causal designs across diverse societies and contexts other than the coronavirus pandemic.

The fact that the relationship between concerns about the coronavirus crisis and trust in experts was negligibly mediated by emotions may indicate that there are different reasons why people trust political institutions and experts. Trust in experts may be explained by a non-affective strategy: people decrease stress caused by threats by searching for information among scientists and healthcare authorities. We encourage future studies to test the extent to which and in what contexts the 'rally effect' is applicable for institutions unrelated to incumbents, such as

scientists or healthcare authorities, in a health-related 'rally' event.

Compared to a number of papers on COVID-19 using convenience samples, an important advantage of this study is the use of data from a population-wide survey (i.e., representative of the Netherlands). However, we can draw conclusions only for the Netherlands. Although there are parallels between the Netherlands and other European countries in how the coronavirus crisis has been managed, the particular appeal to individual responsibility, as highlighted by the use of the term "intelligent lockdown," might limit our findings to other contexts.

Our findings create room for further contributions in the field. Contrary to our expectations and research on threat and terrorism (Lambert et al., 2010), anger did not mediate the relationship between concerns about the coronavirus crisis, measures of trust and support for right-wing populist parties. We have indicated the differences between 'rally'-inducing events, such as the coronavirus crisis and terrorism. In events with a clearly identifiable target to blame, anger may be a driver of the 'rally effect' (Huddy et al., 2005), whereas concerns about the coronavirus do not imply the existence of such a target. However, blaming political institutions or experts for policies related to the pandemic could be negatively related to trust in institutions and positively associated with a preference for right-wing populist parties; in such cases, we would expect anger to mediate the relationship between blame attributions and measures of trust (with a negative mediation effect) and populism (with a positive mediation effect).

Our study lacked refined measures of emotion appraisals, even though we relied on appraisal theories of emotions. Apart from blame attributions, of special interest for a 'rally'-event could be appraisals of coping potential and uncertainty (e.g., Abadi et al., 2021). Future research should, as done by Abadi et al. (2021), examine the different aspects of a 'rally'-inducing event that individuals react to, such as blaming the government for slowly introduced policies or being worried about close ones not getting COVID-19. It will allow to better account for emotional reactions and how emotions can shape individuals' attitudes and behaviors. For instance, if people were asked about lockdown measures or individuals breaking hygiene rules

against the pandemic, they could react with anger and would be more prone to support populist right and oppose incumbents. On the contrary, if they thought about the end of the pandemic, they would feel hopeful and show stronger support for incumbents.

Another important implication relates to the role of trust. On the one hand, an increase in trust in political institutions and experts may be beneficial in a situation like the pandemic. If people under threat trust political institutions that issue important legislation and experts who explain why one should maintain various restrictions and precautions against a health-threatening virus, they are more likely to adhere to such policies (e.g., Bicchieri et al., 2021). This can save lives and give individuals a perception of certainty and control, thereby reducing distress. On the other hand, low levels of trust can be advantageous to democracies, as people critically assess institutions run by elites (Inglehart & Welzel, 2005). In the context of the coronavirus pandemic, high levels of trust may have caused non-compliance when trusted agents discouraged compliance, as well as slower policy responses from citizens (Devine et al., 2021). Future research should delve into what level of trust is sufficient for fostering compliance. Moreover, while feelings of fear and sadness may lead to higher levels of trust in political institutions and decreased support for right-wing populist parties, they can also result in disengagement from politics and passive obedience, which can be harmful to democracy.

It is important to mention that the timing of the fieldwork may have influenced the results of our study. The data were collected half a year after the beginning of the COVID-19 pandemic in the Netherlands and amid the start of a new set of lockdown measures (after measures were eased, from June 1, 2020, onwards); the rollout of the COVID-19 vaccines happened later and initially had problems in the Netherlands (Schaarf, 2021). It is beneficial to study events such as the coronavirus pandemic at multiple time points (e.g., Dietz et al., 2021), tracing the dynamics for measures of trust and populism and for how different covariates relate thereto.

A significant limitation of our study is the use of cross-sectional data. We cannot make causal claims, and our design also allowed for reversed causality. For instance, it was revealed

that by following a populist agenda, people were more prone to experiencing particular emotions (e.g., Wirz, 2018). Other research has focused on how trust in political institutions affected concerns about the coronavirus (Lieberoth et al., 2021). Future studies should replicate our findings using longitudinal or experimental designs in different societies and employing contexts other than the coronavirus pandemic.

Other limitations of the data relate to the measures of emotions and trust. Using a single question with one labeled emotion does not render complex emotional states, but it is conventional in the literature (e.g., Capelos & Demertzis, 2018) and helps tackle the problem of endogeneity. In addition, we made generalizations by equating trust in government and parliament to trust in political institutions, and trust in science and the healthcare system to trust in experts. Even though trust in government and in parliament are the core of trust in political institutions (e.g., Schneider, 2017; van der Meer & Hakhverdian, 2017), different researchers include diverse indicators to capture it: for instance, Hooghe and Kern (2015) used trust in parliament, the legal system, the police and politicians, Berg, and Hjerm (2010) – trust in the parliament, the legal system, political parties and politicians. Similarly, doctors or other social groups could also be viewed as experts, although existing research has focused on the role of science (Battiston et al., 2020; Bicchieri et al., 2021) and healthcare authorities (Battiston et al., 2020). Therefore, although they made our argumentation more straightforward, our generalizations should be treated with caution.

Nevertheless, our study shows that addressing micro-processes, such as concerns about the coronavirus pandemic and emotions, is important for understanding the 'rally effect' and whether people would search for help and empowerment among political institutions and other actors involved in solving the crisis (as scientists and healthcare authorities in the case of COVID-19) or unite around populist leadership in the face of a life-threatening crisis.

7. The role of problem-focused coping potential, perceptions of relative deprivation, and individual differences in emotional appraisal in inducing populist attitudes

This chapter presents a design of a planned study which builds upon the results of Chapters 4 and 5. Its central question is what role appraisal of problem-focused coping potential (PFCP) and individual differences in appraisal play in how deprived people adopt populist ideas. I plan to test whether a same mechanism works among liberals and conservatives. Populism will be measured twice, before and after the experimental manipulation.

The proposed study, first, revisits the role of the appraisal of PFCP, which mediated the relationship between PRD and populist outcomes, but only among Leavers. Furthermore, we need to gather more empirical evidence on the effect of PFCP on populism: whether low (as found in Chapter 5 and suggested by Magni, 2017) or high levels of appraised PFCP (as suggested in the theoretical Chapter 2 and argued by Rico et al., 2020) contributes to making people support populists. In case PFCP proves to affect populist support, it might perhaps suggest interventions that could prevent nudging people's mindset further into a populist direction.

Second, I account for individual differences in emotional appraisals, as proposed in Chapter 2, by taking into account how sensitive people are to injustice (captured by justice sensitivity beliefs) and to what extent they in think they can control life events (captured by self-efficacy beliefs). Justice sensitive people are more likely to be affected by instances of relative deprivation. Addressing the role of justice sensitivity could potentially explain why in Chapter 5 perceptions of relative deprivation enhanced anti-elitist attitudes among Leavers. Leavers with a high level of observer-sensitivity would care more about other people, for instance, those who were deprived of access to vaccination. Leavers with a high level of victim-sensitivity would care about themselves and their ingroup not being contaminated.

Self-efficacy beliefs, which are relatively stable predispositions whether or not people feel they are in general capable to affect life events (Bandura, 1989), predict appraisal of PFCP (Poluektova, Kappas, & Smith, 2023). People with a higher level of self-efficacy beliefs are more likely to rate their appraisal of PFCP higher. Accounting for the role of self-efficacy beliefs could potentially explain another effect found in Chapter 5: Leavers exposed to an instance of relative deprivation experienced a more significant decrease of PFCP than Remainers.

Third, in the study, I revisit the role of political ideology in shaping the way people appraise instances of relative deprivation, which emotions they feel, and to what degree they may sway in the populist direction. In Chapters 4 (Study 2) and 5, I used opinion on Brexit as a proxy for the ideological divide between liberals and conservatives (e.g., Hobolt, 2016). The divide between conservatives and liberals has been found crucial in explaining how people make sense of the processes happening in society, including issues of fairness and injustice (Graham, Haidt, & Nosek, 2009; Jost et al., 2003). In the future study, test whether among conservatives and liberals PFCP plays a different role, as found in Chapter 5. I plan to select a more suitable in today's context measure of the ideological divide in the UK, given that the Brexit referendum happened seven years ago, and people were found to categorize themselves as Brexit supporters less (Tilley & Hobolt, 2023).

Fourth, populist attitudes will be measured before and after the experimental manipulation to have more refined evidence on how the situational experience of relative deprivation affects populist attitudes. To keep the results of the study more comparable with those employed in Chapter 5, I plan to address instances of relative deprivation in a context of existential threat other than the coronavirus pandemic.

This chapter is composed as follows: I first present the theory informing the hypotheses of the future study, and then describe the theoretical model and the research hypotheses. Next, I present results of an exploratory analysis made with the data of the studies presented in

Chapter 4 (Study 2) and Chapter 5. Last, I present the design of the future study and a discussion of its results. The design of the study has already been approved by the Constructor University Ethics Committee.

Theoretical model

Perceptions of relative deprivation are broadly assumed to enhance populist support (e.g., Marchlewska et al., 2018; Urbanska & Guimond, 2018, Pettigrew, 2017). It is vital to study the impact of perceptions of relative deprivation on diverse outcomes together with emotions resulting from perceptions of relative deprivation (Crosby, 1976; Smith et al., 2012; Smith & Pettigrew, 2014). Moreover, emotions are treated as a frame activating populist attitudes (Hawkins & Rovira Kaltwasser, 2018), while anger was found to be a key driver of populist support (Rico et al., 2017, 2020; see also Magni, 2017).

Indeed, in Chapters 4 and 5, I showed that perceptions of relative deprivation in different contexts activated populist outcomes via negative emotional reactions. People encountering an instance of relative deprivation experienced a generalized negative affect or mixed emotional states, which activated some or all components of populist attitudes (anti-elitism, homogeneity, and popular sovereignty). At the same time, the direct effect of perceptions of relative deprivation on populist attitudes was small or non-significant.

The study proposed here is aimed to further clarify the effect of perceptions of relative deprivation on populist attitudes. Smith and Pettigrew (2014) argued that the way people perceive unfairness affects how people react to a disadvantaged situation: priming system justifying beliefs decreased the effect of the perceptions of group inequality on anger as well as the effect of the perceived inequality on people's willingness to protest. Additionally, if people considered that they were fairly treated by authorities, they showed less dissatisfaction with outcomes involving relative deprivation (Smith & Pettigrew, 2014). I argue that the way people appraise an instance of relative deprivation, which emotional reactions and changes in attitudes follow is affected by people's justice sensitivity beliefs. Important to note, even

though there are significant differences between the concepts of fairness and justice, they also have much in common. For the purposes of the study, the common aspects will be addressed; so these two terms will be used as synonyms.

Justice sensitivity beliefs are individual traits, which are stable over time and which reflect general individual differences in how quickly people feel that they have been treated unfairly and how strongly they respond to what they perceive as unfair (Schmitt et al., 2010). Justice sensitivity works as a bias making people more sensitive to unjust cues (Baumert & Schmitt, 2016). There are four dimensions of justice sensitivity, distinguished based on the individual's role in a given situation: victim, observer, beneficiary, and perpetrator sensitivity (Baumert & Schmitt, 2016).

In the present research, two dimensions are of relevance: victim sensitivity and observer sensitivity. These two dimensions of justice sensitivity relate to the situation of relative deprivation happening to the self, the ingroup, or to others, but not the situation of relative gratification, which is likely to be linked to beneficiary sensitivity and perpetrator sensitivity. Victim sensitivity reflects concerns for justice for the self (Schmitt et al., 2010) and serves as a "mixture of self-protective motives and moral concerns" (Schmitt et al., 2005, p. 202). It was found to be positively related to socially undesirable traits: egoistic motivation, the likelihood of immoral behavior, and egoistic choices in social dilemma games (Schmitt et al., 2005, 2010). Observer sensitivity reflects concerns for justice for the others and is independent of an individual's or ingroup interests. It is positively related to socially desirable traits, empathy, prosocial behavior, social responsibility, high moral standards, and cooperative decision-making in social dilemma games (Schmitt et al., 2005, 2010; Rothmund et al., 2020).

Rothmund et al. (2020) found that victim sensitivity was positively related to populist attitudes and support for the right-wing populist president Trump in the USA and the right-wing populist party AfD in Germany. On the contrary, other-oriented justice concerns, which

reflect concerns about injustice happening to other individuals and social groups and comprise observer sensitivity, beneficiary sensitivity, and perpetrator sensitivity, were negatively related to populist attitudes and preferences for Trump and the AfD. In the proposed here study, I suggest that both victim sensitivity and observer sensitivity are likely to shape the way people appraise instances of relative deprivation. Since justice-sensitive people (in terms of both victim and observer sensitivity) are more sensitive to issues of injustice, they are likely to react to instances of relative deprivation stronger.

Moreover, justice sensitive people are likely have stronger emotional reactions to injustice than those who are less sensitive to injustice (Baumert & Schmitt, 2016). Justice sensitivity is associated with particular emotions: victim sensitivity is associated with anger, fear of exploitation, envy and jealousy, whereas observer sensitivity is associated with anger, guilt, and compassion (Schmitt et al., 2005; Rothmund et al., 2020). People with a high level of victim sensitivity are willing to punish the perpetrator for disadvantaging them, whereas individuals with a high level of observer sensitivity are eager to punish the perpetrator in order to compensate for injustice done to the victim (Strauß & Bondü, 2022; Baumert & Schmitt, 2016). I assume that people with a higher level of both types of justice sensitivity are more likely to experience emotions characterized by the appraisal of external causality, such as anger, disgust, and contempt (e.g., Smith & Lazarus, 1990; Smith & Ellsworth, 1985; Scherer, 2001).

In the literature on morality, it was suggested that liberals are particularly sensitive to issues related to fairness, while for conservatives, fairness does not play such an important role (Graham et al., 2009; Jost et al., 2003). Liberals care more for fairness in general and fairness happening to other people than conservatives, whereas conservatives are more guided by self-interest and justify the existence of injustice in society (Jost et al., 2003, Jost, Banaji, & Nosek, 2004). I expect victim sensitivity to produce a stronger effect on emotions, attitudes

and behavior of conservatives, while observer sensitivity is likely to produce a stronger effect on emotions, attitudes and behavior of liberals.

It has been suggested in populism research that powerlessness (Salmela & von Scheve, 2017) or internal political efficacy (Mangi, 2017; Rico et al., 2020; Spruyt et al., 2016) explains populist support. I differentiate between the stable self-efficacy beliefs, which belong to individual traits, and the situationally-embedded appraisal of problem-focused coping potential, which is evaluated in relation to each stimulus separately.

The appraisal of PFCP refers to the assessment of one's capability to take direct action in a situation in order to align it more closely with one's desires (Kirby et al., 2022). If individuals perceive that the effort required to address a challenging situation surpasses their abilities or if they believe that there is no immediate solution to the situation, the appraisal of PFCP tends to be low (Smith & Kirby, 2009; Kappas, 2001). Rico et al. (2020) showed that a high level of internal political efficacy is a pre-requisite for adopting populist views. In case people feel that they are capable to understand and participate in politics, they are more likely to challenge political elites and claim that ordinary people should make political decisions. In contrast, Magni (2017) argued that populists are attractive for people with a low level of internal political efficacy, since they provide powerless people with a target to blame within the establishment and a sense of empowerment. Instances of relative deprivation are already characterized by low levels of individuals' capability to change a disadvantaged situation: in order to be deprived, people should understand that the disadvantaged situation can be changed, but no change is guaranteed or is feasible without an external intervention (Smith & Pettigrew, 2014; Smith et al., 2008). I follow the proposition of Rico et al. (2020) that a high level of PFCP is likely to activate the support for populist ideas. This hypothesis needs testing, especially, since in no studies the appraisal of PFCP has been used to explain populist outcomes. The results acquired in the study in Chapter 5 needs to be replicated using another

research design. In the planned study, to have a better understanding of the role of the appraisal of PFCP, I manipulate it together with the perceptions of relative deprivation. As already mentioned, self-efficacy beliefs affect appraised PFCP. People's self-efficacy beliefs are rather stable cognitive schemata components which reflect people's perceived capability to control events happening in their lives (Bandura, 1989). Self-efficacy beliefs serve as biases determining which parameters of an appraised situation and which individual's mastery experience is recalled to estimate one's appraisal of PFCP (Poluektova et al., 2023). People with lower levels of self-efficacy beliefs are more likely to focus on situational cues and memories indicating failure, while people with higher levels of self-efficacy beliefs are more likely to focus on positive aspects of a situation and memories of success (Poluektova et al., 2023). People with low levels of self-efficacy beliefs are likely to be more pessimistic about a disadvantaged situation, focus on negative outcomes, and engage in automatic cognitive processing (Karademas et al., 2007). On the contrary, people with higher levels of self-efficacy beliefs may focus more on the positive aspects of a stressful situation and are more likely to engage in deliberate cognitive processing (Karademas et al., 2007). I expect people with lower levels of self-efficacy to appraise their PFCP as less high, because of the way self-efficacy beliefs filter the information about the appraised situation and which information on people's past experience is retrieved.

Low problem-focused coping potential is associated with sadness and fear. High problem-focused coping potential appraisals are associated with the experience of anger, contempt, or disgust (Smith & Lazarus, 1990, 1993; Scherer, 2001).

In order to understand how perceptions of relative deprivation together with appraisal of PFCP affect populist attitudes, I manipulate both of them in the proposed here study. The theoretical model of the future study is presented in Figure 7.1, while the hypotheses are listed below. Particularly, I expect that perceptions of relative deprivation and the appraisal of PFCP will directly and via emotions (anger, disgust, contempt, sadness and fear) affect populist

attitudes. Justice sensitivity beliefs will affect the way people will react to instances of relative deprivation, whereas self-efficacy beliefs will inform appraisal of PFCP. In an exploratory way, I also account for whether justice-sensitive people are more likely to experience emotions, characterized by blame attribution (anger, disgust, sadness; see also Haidt, 2003). Additionally, I test whether this model works in a same way among Leavers and Remainers.

Figure 7.1

Theoretical model for how perceptions of relative deprivation and appraised problem-focused coping potential affect populist attitudes, mediated via emotions
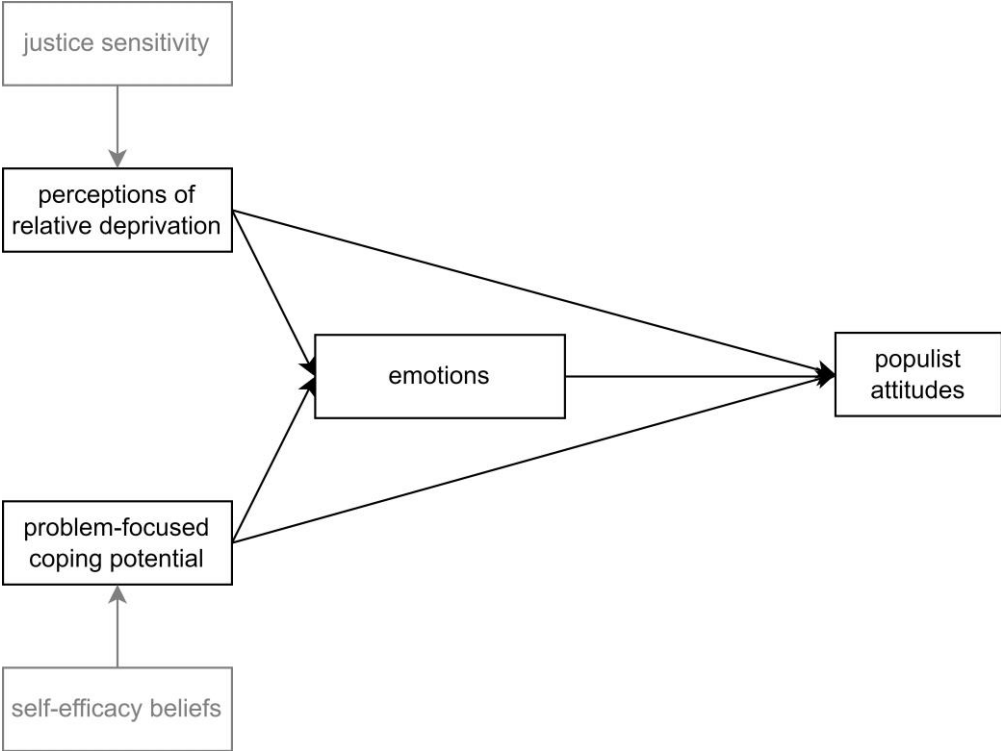
Research Hypotheses

1. People exposed to an instance of relative deprivation are likely to demonstrate an increase of populist attitudes (within- and between-subject effects)

2. If people feel they are capable to change the undesired situation, they are more likely to adopt populist attitudes (within- and between-subject effects)

3. People with a higher level of self-efficacy beliefs will rate their PFCP as higher

4. People with a higher level of justice sensitivity beliefs will demonstrate a higher level of perceived relative deprivation

5. Anger, disgust and contempt are likely to mediate the relationship between perceptions of relative deprivation and populist attitudes with a positive effect

6. Anger, disgust and contempt are likely to mediate the effect of problem-focused coping potential on populist attitudes with a positive effect

Evidence from the previous studies

While the effect of the appraisal of PFCP on populism has not been studied, I can inform the proposed hypotheses with an exploratory analysis using the data of the studies described in Chapters 4 (Study 2) and 5. In those studies the appraisal of PFCP (Chapter 5) or close to it appraisals of power and control (Chapter 4) were measured. Important to mention that in those studies the appraisal of PFCP was not manipulated.

In Chapter 4, the *appraisal of control* was measured by the item "At the time of reading the exempt from the article, did you think that real or potential consequences of the event could have been or could still be avoided or modified by appropriate human action?" The *appraisal of power* was measured by the item "At the time of reading the exempt from the article, did you think that you would be able to avoid the consequences or modify them to your advantage (through your own power or helped by others)?" Both items were measured on a 5-point scale where 1 stands for "strongly disagree", 5 for "strongly agree" (see Scherer & Meuleman, 2013).

In Chapter 5, the *appraisal of problem-focused coping potential* was measured as an index constructed of three items (Kirby et al., 2022). The items were measured on a 9-point scale from the lowest (1) to the highest (9) level: "How certain are you that you will be able to do something to make (or keep) the situation the way you want them to be?", "How certain are

you that you will be able to get your physical needs met in this situation?", and "How certain are you that you will be able to get your social needs met in this situation?". The index ranges from -2.71 (lowest level) to 1.96 (highest level).

Measures of populist attitudes were the same in both studies and are presented in Chapters 4 and 5. Same scales of negative emotions were measured in Chapters 4 and 5. In the analysis of the data of both studies, I control for trust in information presented in the manipulation materials, since in both studies there were differences in trust in the information between the treatment and the control conditions.

In both studies, I accounted for the role of political ideology: the analysis was separately conducted with those who supported and opposed Brexit. Besides, the studies involved two different contexts. In Chapter 4, the issue of illegal migration was addressed, which was of relevance (I treat the existence of mediation effects as evidence for it) for Leavers (N=286) but not Remainers (N=289). In Chapter 5, the context of the coronavirus was addressed, which was of relevance (as evidenced by significant indirect effects) for both Remainers (N=222) and Leavers (N=256). More details can be found in the corresponding chapters.

This analysis presented here should be treated with caution: different measures, scales, and contexts were used in the two studies. Besides, in both studies, perceptions of relative deprivation were manipulated, while the appraisal of PFCP was an observed variable measured on a Likert rating scale. The items measuring appraisal of PFCP did not immediately follow the experimental manipulation and were placed together with measures of other appraisals. The manipulation of the perceptions of relative deprivation caused changes in appraisals, emotions, and populist attitudes. In contrast, the causal claim that the appraisal of problem-focused coping potential shaped emotions and measures of populism is based on the theoretical reasoning of appraisal theory. While the relationship between perceptions of

relative deprivation and populist attitudes is a causal one, for appraisal of PFCP, the research

design does not allow to claim causality.

Data analysis

To check whether the selected appraisals activated populist attitudes, I used OLS regressions.

When analyzing the data from Chapters 4 and 5, I controlled for the perceived trustworthiness

of the articles used for manipulation. To check whether emotions mediated the relationships

between the selected appraisals, perceptions of relative deprivation and populist attitudes, I

conducted mediation analysis with bias corrected bootstrap (bootstrap number of draws was

10 000) standard errors and confidence intervals (Fritz & MacKinnon, 2007) using Mplus 8.7

software (Muthén & Muthén, 1998-2012, p. 37). I used STDY standardization to estimate the

effects of perceptions of relative deprivation on emotions and populist attitudes, since the

independent variable was binary. To estimate the effects of appraisal of PFCP and populist

attitudes, STDYX standardization was used, since the independent variable was ordinary.

Results

Direct effects. In Chapter 4, the appraisal that human action could avoid the possible negative

consequences of relative deprivation (see Table 7.1)[1] slightly enhanced anti-elitist ($B = 0.07$, p

$= 0.002$, $\beta = 0.20$) and popular sovereignty ($B = 0.12$, $p = 0.003$, $\beta = 0.19$) attitudes among

Leavers, and anti-elitist ($B = 0.07$, $p = 0.015$, $\beta = 0.15$) attitudes among Remainers. That implies

if those experiencing disadvantage thought that the disadvantaged situation could be improved,

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[1] Some of the effects had a sufficient statistical power, others not. Results of the sensitivity analysis conducted with G*Power program (Faul et al., 2007) show that in a regression analysis with four predictors ($\alpha = 0.05$, $1-\beta = 0.90$) with a sample of $N = 286$ (so was the sample of Leavers), is enough to estimate an effect of $f^2 = 0.055$ and more. The effect of the appraisal of control on anti-elitism reached an effect of $f^2 = 0.068$, the effect of the appraisal of control on popular sovereignty reached an effect of $f^2 = 0.063$ reaching enough power. The effect of the appraisal of power on anti-elitism of $f^2 = 0.04$ was thus underpowered and should be treated with caution. The sample size of Remainers, $N = 289$, is enough to estimate an effect of $f^2 = 0.054$ and higher. The effect of the appraisal of control on anti-elitism had an effect of $f^2 = 0.029$ and was thus underpowered, so it should be treated with caution.

they blamed the elites as acting in their own interests, and only Leavers also thought that ordinary people should do politics. The appraisal that individuals themselves were capable to change the disadvantaged situation made Leavers less prone to endorse anti-elitist attitudes (B = -0.05, p = 0.047, β = -0.12). On the contrary, the appraisal of being capable to change the disadvantaged situation made Leavers endorse homogeneity attitudes (B = 0.06, p = 0.015, β = 0.14).

Table 7.1

Direct effects of the appraisals of control and power on populist attitudes based on the data from Chapter 4

		Relative deprivation, Leavers			Relative deprivation, Remainers		
		Anti-elitism	Homogeneity	Sovereignty	Anti-elitism	Homogeneity	Sovereignty
Appraisal control: (low to high)	B	**.074****	.038	**.121****	**.067***	-.008	-.035
	β	.195	.094	.188	.151	-.019	-.041
	p	.002	.127	.003	.015	.754	.506
Appraisal power: (low to high)	B	**-.045***	**.057***	.044	-.014	-.011	*-.081+*
	β	-.117	.139	.067	-.039	-.030	-.113
	p	.047	.015	.249	.511	.603	.053
Relative deprivation (deprived)	B	-.047	-.085	-.064	-.106	*.148+*	-.064
	β	-.043	-.072	-.034	-.092	.133	-.029
	p	.505	.245	.592	.226	.076	.703
trustworthy	B	.016	**.101*****	**.090***	.005	**.101*****	**.115***
	β	.043	.251	.141	.015	.305	.174
	p	.464	.000	.016	.835	.000	.016
constant	B	-.039	.072	**-.401**	.099	**-.589****	**-1.075****
	p	.821	.688	.292	.195	.002	.005
N			286			289	
R^2		.046	.099	.057	.025	.063	.050
R^2_{adj}		.032	.087	.044	.011	.050	.037

In Chapter 5, which addressed the context of existential threat imposed by the COVID-19 pandemic (see Table 7.2), appraised PFCP deactivated populist attitudes of both Leavers and

Remainers[2]. Leavers who felt capable to fulfill their physical or social needs due to the disadvantaged situation were less prone to oppose elites (B = -0.13, p = 0.004, β = -0.21) and less prone to think that ordinary people should do politics instead of professional politicians (B = -0.29, p = 0.000, β= -0.30). Interestingly, the positive direct effect of perceptions of relative deprivation on anti-elitism among Leavers, which was described in Chapter 5, disappeared when the appraisal of problem-focused coping potential was included. Likewise, the appraisal of PFCP deactivated anti-elitist attitudes among Remainers (B = -0.07, p = 0.03, β = -0.14).

Table 7.2

Direct effects of the appraisal of problem-focused coping potential on populist attitudes based on the data from Chapter 5

		Relative deprivation, Leavers			Relative deprivation, Remainers		
		Anti-elitism	Homogeneity	Sovereignty	Anti-elitism	Homogeneity	Sovereignty
Problem-focused coping potential (low to high)	B	**-.133****	.046	**-.285*****	**-.065***	.049	-.083
	β	-.214	.088	-.299	-.135	.092	-.085
	p	.004	.248	.000	.034	.148	.182
Relative deprivation: (deprived)	B	.122	-.044	-.166	.010	.084	.032
	β	.091	-.038	-.081	.010	.077	.016
	p	.231	.622	.286	.878	.227	.803
trustworthy	B	-.007	.013	.000	-.024	.034	-.026
	β	-.013	.030	.000	-.063	.082	-.035
	p	.845	.659	.998	.309	.188	.581
constant	B	-.132	.002	.097	*.189+*	*-.223+*	.061
	p	.432	.988	.706	.088	.071	.786
N			222			256	
R^2		.074	.014	.073	.023	.018	.009
R^2_{adj}		.061	.001	.061	.011	.007	.003

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[2] Results of the sensitivity analysis conducted with G*Power program show that in a regression analysis with three predictors, α = 0.05, 1-β = 0.90, with a sample of N = 222 (so was the sample of Leavers), is enough to estimate an effect of f^2 = 0.065. The effect of PFCP on anti-elitism had an effect of f^2 = 0.073 and the effect of PFCP on popular sovereignty reached an effect of f^2 = 0.14. So these effects were estimated with sufficient statistical power. The sample sizes of Remainers, N = 256, is enough to estimate an effect of f^2 = 0.056 and higher. The effect of PFCP on anti-elitism was f^2 = 0.04, so it was underpowered, so it should be treated with caution.

To sum up, the two different measures of appraisals of coping potential used in Chapter 4 and Chapter 5 rendered different evidence. If people felt that the disadvantaged situation could be changed by politicians or other human actors, then they opposed elites as responsible for the disadvantaged condition (Remainers and Leavers in Chapter 4), and were more prone to think that ordinary people could do better than politicians (Leavers in Chapter 4). When people felt that they could change the disadvantaged situation, they were less prone to blame the elites for it (Leavers in Chapter 4, Remainers and Leavers in Chapter 5) or less prone to endorse popular sovereignty attitudes (Leavers in Chapter 5). This goes in accordance with the hypothesis that populists are especially attractive for powerless people in that they offer them strategies for empowerment (e.g., Magni, 2017).

Mediation models. In Chapter 4, the proposed model worked only for Leavers but not for Remainers. Among Leavers (see Figure 7.2), the feeling that the situation could be improved (but nothing happens) caused anger. Those feeling deprived felt angry. Feelings of anger, in their turn, activated anti-elitist and popular sovereignty attitudes. Leavers experiencing relative deprivation also felt disgust, which enhanced their level of homogeneity. Anger mediated the relationship between the appraisal of control and popular sovereignty with a small albeit positive effect which was significant given the confidence interval ($B = 0.04$, *95% CI* [0.01, 0.08], $p = 0.060$, $β = 0.06$). It means if people felt that the disadvantaged situation could be improved and felt angry, they were more prone to think that the elites did not work in the interests of the people.

The effect of the perceptions of relative deprivation on anti-elitism among Leavers was mediated by anger with a positive significant effect ($B = 0.08$, *95% CI* [0.02, 0.18], $p = 0.031$, $β = 0.15$). Anger mediated the relationship between the perceptions of relative deprivation and popular sovereignty with a positive and significant ($B = 0.15$, *95% CI* [0.05, 0.32], $p = 0.023$, $β = 0.16$). Disgust mediated with a positive and significant effect the relationship between the

perceptions of relative deprivation and homogeneity ($B = 0.08$, *95% CI* [0.01, 0.18], $p = 0.05$, *β* = 0.14).

Therefore, there is evidence that while among Leavers, the emotions caused by exposure to an instance of relative deprivation activated all components of populist attitudes, and anger associated with the high level of the appraisal of control made Leavers adopt popular sovereignty attitudes. In contrast, the effect of the appraisal of power on populist attitudes was not mediated by emotions.

Figure 7.2

Mediation Analysis: the impact of the appraisal of control and the perceptions of relative deprivation on populist attitudes mediated via emotional reactions among Leavers (based on the data from Chapter 4)
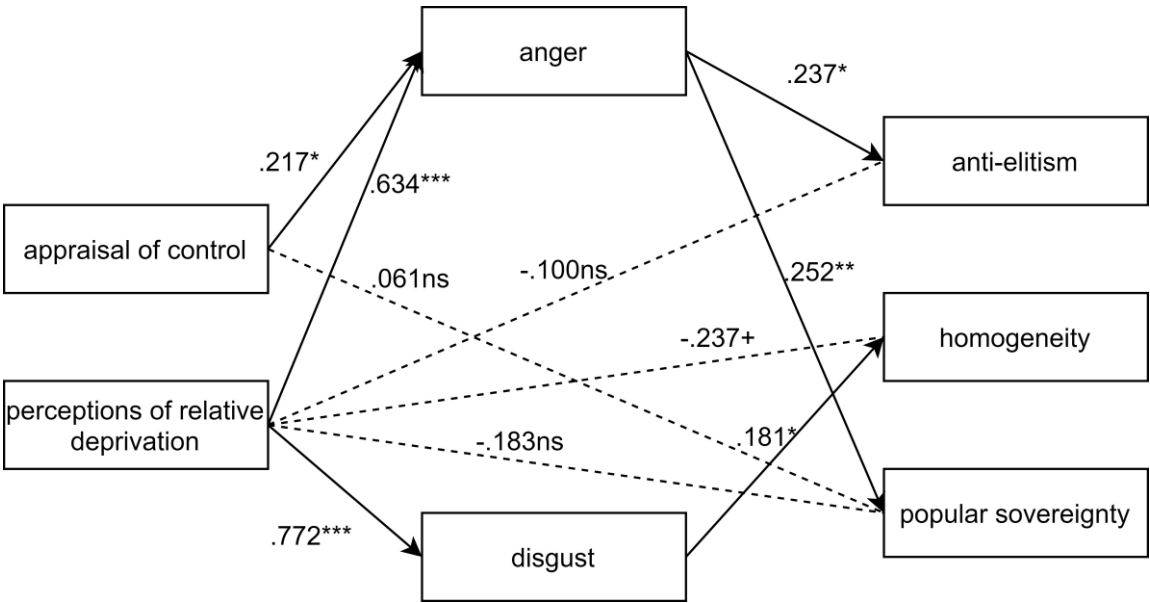
Note. N=222. Controlled by trust in information.
Standardized coefficients are plotted

In Chapter 5, the proposed model worked both for Remainers and Leavers. However, there was difference in which emotions served as mediators. *Remainers* (see Figure 7.3) who felt

they could not change the disadvantaged situation in a desired way were less prone to experience anger, which deactivated anti-elitist attitudes (B = -0.04, *95% CI* [-0.06, -0.02], *p* = 0.002, *β* = -0.08). People with a high level of PFCP were also less likely to experience fear, which decreased their level of popular sovereignty by 5.7% of a standard deviation (B = -0.06, *95% CI* [-0.10; -0.02], *p* = 0.003, *β* = -0.06).

If perceptions of relative deprivation resulted in anger, people opposed elites more; the mediation effect of anger was positive and reached a medium to high effect size (B = 0.316, *95% CI* [0.21, 0.45], p < .001, *β* = 0.641), and if perceptions of relative deprivation resulted in fear, people were more likely to endorse popular sovereignty (B = 0.113, *95% CI* [0.05, 0.22], *p* = 0.009, *β* = 0.114). Same emotions (anger and fear) served as mediators of the relationship of perceptions of relative deprivation and the appraisal of PFCP with the same populist attitudes (anti-elitism and popular sovereignty). This could indicate that the appraisal of PFCP played an important role in the way people reacted to instances of relative deprivation.

Figure 7.3

Mediation Analysis: the impact of the appraisal of problem-focused coping potential and the perceptions of relative deprivation on populist attitudes mediated via emotional reactions among Remainers (based on the data from Chapter 5)
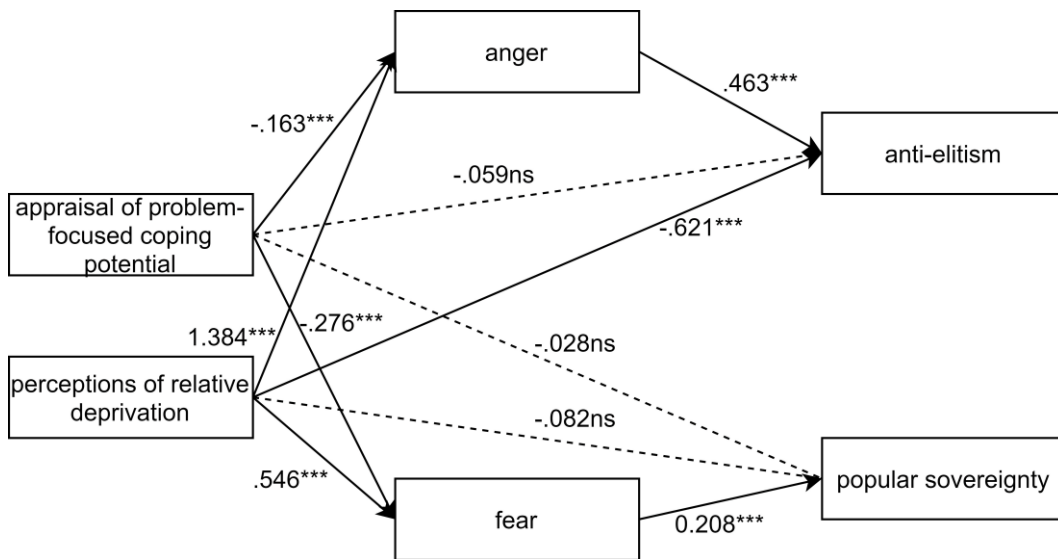
Note. N=257. Controlled by trust in information.
Standardized coefficients are plotted

Turning to the next model, *Leavers* (see Figure 7.4) who felt that they could change the disadvantaged situation were less likely to feel anger, which deactivated their anti-elitist and popular sovereignty attitudes. Therefore, anger mediated the relationship between PFCP and anti-elitism (*B* = -0.03, *95% CI* [-0.07, -0.004], *p* = 0.080, *ß* = -0.05) and PFCP and popular sovereignty (*B* = -0.04, *95% CI* [-0.10, -0.01], *p*=0.080, *ß* = -0.04) with small albeit significant negative effects. At the same time, there were negative direct effects of the appraisal of PFCP on anti-elitism (*B* = -0.11, *95% CI* [-0.19, -0.02], *p*= 0.020, *ß* = -0.17) and popular sovereignty (*B* = -0.24, *95% CI* [-0.38, -0.11], *p* = 0.000, *ß* = -0.26), which remained unmediated by emotions. That means that Leavers feeling that they could change the disadvantaged situation did not endorse anti-elitist and popular sovereignty attitudes (both as direct and indirect effects).

Leavers who felt deprived were significantly more likely to experience anger, which enhanced people's level of anti-elitism ($B = 0.34$, *95% CI* [0.16, 0.56], $p = 0.001$, $ß = 0.51$) and of popular sovereignty ($B = 0.49$, *95% CI* [0.21, 0.823], $p = 0.002$, $ß = 0.48$) with medium effect sizes. Again, same emotions mediated the effects of perceptions of relative deprivation and PFCP on the same populist attitudes.

Results of the analysis with the data from Chapter 5, which are of key relevance to us, demonstrate that low levels of the appraisal of PFCP among both, Brexit opponents and supporters, directly and via emotions activated anti-elitist and popular sovereignty attitudes (albeit some effects were underpowered). The effect of the appraisal of PFCP on populist attitudes was fully mediated via emotions among Remainers and partially – among Leavers. The results could hint that the appraisal of PFCP plays an important role not only among Leavers. However, to understand how the appraisal of PFCP affects populist attitudes, one needs to perform a study focusing on the role of this appraisal. The effect of appraised PFCP found in Chapter 5 is different from that found in Chapter 4, where the appraisal of control activated popular attitudes. However, in Chapter 4, there is some evidence that the appraisal of power deactivated populist attitudes. The results can be different given the different measures of appraisals and the two different contexts within which people experienced relative deprivation.

Figure 7.4

Mediation Analysis: the impact of the appraisal of problem-focused coping potential and the perceptions of relative deprivation on populist attitudes mediated via emotional reactions among Leavers (based on the data from Chapter 5)
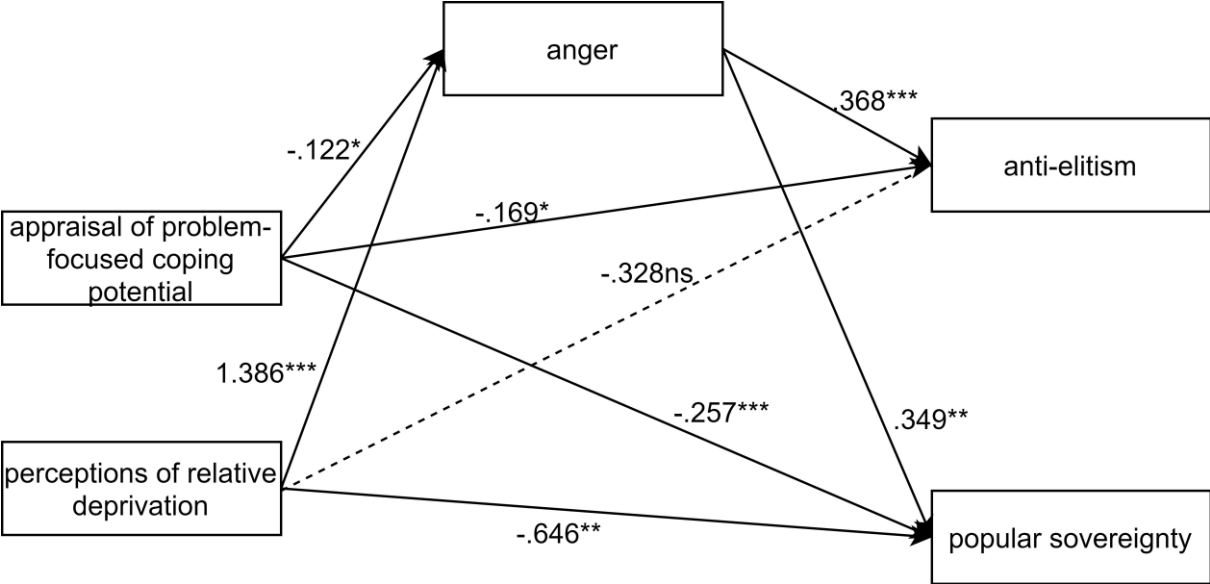
Note. N=223. Controlled by trust in information.

Standardized coefficients are plotted.

Despite some evidence gained from the exploratory analysis, hasty conclusions should not be drawn. While the perceptions of relative deprivation were manipulated, the appraisal of problem-focused coping potential was measured with a scale. Therefore, the effect sizes cannot be readily compared. Besides, this analysis does not enable us to disentangle the effect of the appraisal of PFCP on emotions, and vice versa. Emotions and appraisals may affect each other in parallel and in also in the course of time (e.g., Scherer, 2001; Moors et al., 2013). That is why in the proposed study, I plan to manipulate the appraisal of PFCP directly.

CHAPTER 7: PROBLEM-FOCUSED COPING POTENTIAL AND POPULISM

Proposed Study

In the study proposed here, I test whether the perceptions of relative deprivation and the appraisal of PFCP affect populist attitudes, directly and via emotions. Populist attitudes will be measured twice, before and after the experimental manipulation. Besides, I plan to account for the role of individual differences in appraisal using self-efficacy beliefs, justice sensitivity beliefs. I also want to see whether the same mechanism works for people with different political views. For the experimental manipulation, I plan to employ a threatening situation other than the coronavirus pandemic to make it closer to the context used in Chapter 5. The study will be preceded by two pretests. The first pretest is needed to select manipulation materials, whereas the second one will give evidence on whether the selected proxy for attitude polarization works, and whether the four manipulation materials are perceived differently from each other.

Participants

The study and the pretests will be conducted among British respondents holding the citizenship and residing in the country at the time of fieldwork. Respondents will be recruited via the online platform "Prolific", while the pretests informing the study will be hosted at the online platform "Unipark". Males and females, and people with opposing ideological views (e.g., conservatives and liberals - upon the selected measure of attitude polarization) will be equally represented. To test for the main effects, whether perceptions of relative deprivation and appraised PFCP induce populist attitudes, effect size for a MANOVA with repeated measures and within-between interaction was estimated with G*Power program (Faul et al., 2007). One needs a minimum of 1435 respondents ($\alpha=0.05$, $1-\beta=0.8$, 8 groups, 2 measurements, small effect size, $f(V) = 0.10$). Since the study will be conducted at two time points and given the possible attrition rate, in the first part of the study, 1800 to 2000 respondents will be invited; 1500 respondents will be invited for the second part of the study. The sample size for mediation analysis was estimated with the pwrSEM package for the statistical program R (Wang & Rhemtulla, 2021)

using the effect sizes derived from Chapter 5 for Leavers. The required sample size corresponds to the estimated by Fritz and MacKinnon (2007) sample size for a mediation model with small effect sizes estimated with bias corrected bootstrapping: the minimum sample is 924 respondents.

Exclusion criteria. I will exclude respondents below 18 years, those who do not meet the screening criteria set on "Prolific" (not having the UK citizenship, not living in the country, not meeting the sampling quota on gender). I will use several attention checks, ensuring that people read the articles used for experimental manipulation, read questions to the end, and pay attention to their contexts. I will exclude participants who will fail more than half of the attention checks. Besides, a script will be used to detect flat-liners on battery-like questions.

Materials

Manipulation

Perceptions of relative deprivation and problem-focused coping potential will be manipulated in the study.

Manipulation checks

Perceptions of relative deprivation will be measured to ensure that perceptions of relative deprivation were induced. The same measure will be used as in Chapter 4 (Study 2), which is based on the theoretical model of relative deprivation by Smith et al. (2012). To measure the *appraisal of problem-focused coping potential,* the measure by Kirby et al. (2022) will be adapted to the topic used for experimental manipulation.

Dependent variables

Populist attitudes will be measured as three components of populist attitudes using the scale by Schulz et al. (2018): *anti-elitism*, *homogeneity*, and *popular sovereignty*. Each of the components is captured by three items measured on a 5-point Likert scale ("1" stands for

"completely disagree", "5" for "completely agree"). Like in previous studies, the three components of populist attitudes will be analyzed separately.

Mediators

*A*nger, disgust, contempt, sadness, and fear, which were of significance in previous studies (Chapters 4 and 5) will be measured on a 9-point Likert scale, from an extremely low (1) to an extremely high (9) salience.

Moderators

Self-efficacy beliefs will be measured via the general self-efficacy scale by Scholz et al. (2002). An example of an item includes "I can always manage to solve difficult problems if I try hard enough". *Justice sensitivity beliefs* will be measured as proposed by Baumert et al. (2014). I will measure victim sensitivity and observer sensitivity. The scale includes such items as "It makes me angry when others are undeservingly better off than me" for victim-sensitivity and "I am upset when someone is undeservingly worse off than others" for observer-sensitivity. A measure of *political ideology* will be selected in Pretest 1.

Controls

As controls, I will include gender, age, level of education, trust in the article people read, ethnic identity, parental nationality, and the longest place of residence. I will also include partisanship and the left-right self-placement as controls. Additionally, in an exploratory way, I will include the appraisal of self- and other-accountability (measured as in Chapter 5).

Procedure

Two pretests will inform the main study. The first one will be used to select materials for manipulation, and the second one will show whether the experimental manipulations work. I firstly present the pretests, and then the main study.

Pretest 1. During the first pretest, I will select scenarios for experimental manipulation. A pool of newspaper-like scenarios will be constructed, constituting six different sets of scenarios. Each set will consist of four situations united by one topic and will contain a situation characterized by: 1) perceptions of relative deprivation and a low level of PFCP, 2) perceptions of relative deprivation and a high level of PFCP, 3) no relative deprivation and a low level of PFCP, 4) no relative deprivation and a high level of PFCP.

For the pretest, people with opposing attitudes on Brexit, males and females will be sampled separately. The resulting sample will consist of 180 people (so that each material for manipulation is read 30 times) invited for a 20 minutes study. During the pretest, each person will read six situations and rate them on perceived injustice and the appraisal of PFCP. I will also measure whether respondents trust the information presented in the article, and whether the situation described in the article is of relevance to respondents and their family and friends. Besides, I will include attention checks to ensure that people attentively read the texts they are presented with.

At the end of the pretest, I will ask several questions on political ideology: opinion-based polarization on Brexit reflecting people's attitudes at the time of the fieldwork (as used in Chapters 4 and 5), partisanship, authoritarianism (Zakrisson, 2005), left-right self-placement, social and economic conservatism (or economic and social ideology) (Everett, 2013; Feldman & Johnston, 2014), and moral conservatism (Feldman & Stenner, 1997).

Pretest 2. The second pretest aims to examine whether the experimental manipulations works and whether the selected measure of political ideology is suitable as a proxy for attitude polarization. A sample of 50 participants will be recruited for a 5 minutes study.

Main Study

The data of the study will be conducted in two time-points with the same respondents. Perceptions of relative deprivation and the appraisal of problem-focused coping potential will be manipulated. People with opposing ideological views will be separately sampled (e.g., conservatives and liberals). Hence, the study will have a 2 (Time 1 v. Time 2) x 2 (relative deprivation v. none) x 2 (problem-focused coping potential: high v. low) x 2(conservatives v. liberals) mixed experimental design.

Procedure. *Time 1*. Respondents will be invited for a 3-minutes study and informed that they will be recruited in a larger-scaled subsequent study happening ten days after the first study.

At the first point of time, I will measure: respondents' populist attitudes masked by a different scale, a control question on how people perceive the topic used in Time 2 to manipulate perceptions of relative deprivation and problem-focused coping potential (e.g., in case the issue of vaccination is addressed – whether the person believes in vaccination), and political ideology. Even though there are different filters related to attitudes on politics, partisanship and position on Brexit on the recruitment platform "Prolific", it is not indicated when these questions were asked. We know that people change their opinion (e.g., their position on Brexit; see, e.g., Tilley & Hobolt, 2023). I will use the measure of political ideology measured in Time 1 to recruit subjects in Time 2.

Time 2. This part of the study will be performed ten days after the first part of the study. Respondents participating in the first part of the study will be invited considering the following characteristics: attitudes related to the topic for experimental manipulation (e.g., those who believe in vaccination if the topic of vaccination is used) and using measures of attitude polarization as a quota for sampling. Using the sampling criteria of "Prolific", men and women will be equally represented. Respondents will be recruited for a 12-minute study.

After reading information on the study and upon the informed consent, respondents will be randomly assigned to one of the experimental conditions: 1) relative deprivation and a high level of PFCP, 2) relative deprivation and a low level of PFCP, 3) no deprivation and a high level of PFCP, and 4) no deprivation and a low level of PFCP. Respondents will be presented with an article, followed by measures of emotions, populist attitudes, manipulation and attention checks, and controls. At the end of the study, people will be debriefed and given the possibility to provide feedback on the study.

Analysis strategy

To test whether the appraisals of problem-focused coping potential and the perceptions of relative deprivation enhance populist attitudes, I will use the repeated measures GLM with pairwise comparisons with Bonferroni adjustment for repeated testing. I will control for trust in the information used in the article for manipulation. Using OLS regression analysis, I will also test whether individual differences in self-efficacy affect people's appraisal of PFCP and whether justice sensitivity beliefs affect people's perceptions of relative deprivation. I will use the statistical program R.

Next, I will perform a mediation analysis. I will use perceptions of relative deprivation and the appraisal of PFCP as independent variables, three indices of populist attitudes (anti-elitism, homogeneity, and popular sovereignty) as dependent variables, and emotions as mediators. Mediation analysis with bias corrected bootstrapping (10,000) will be performed separately for people with opposing ideological views using the software MPLUS. I will control for trust in the article used for manipulation.

Practical implications of the study

The study will shed light on the role of the appraisal of PFCP in driving populist support and how individual differences in appraisal affect the appraisal of PFCP and the way people react

to instances of relative deprivation. The study will help us think of solutions that might motivate people to consider other options rather than voting for populist parties to improve the disadvantaged situation.

In case the appraisal of PFCP indeed plays a role in driving populist support, it will give us ideas on how to prevent people from adopting populist ideas. For instance, civic education could be used to help people cope with the perceptions that they cannot do anything about an undesired situation. Such education could be especially helpful for people with low levels of self-efficacy beliefs, who in disadvantaged situations are especially likely to concentrate on their coping deficiencies. Particularly, one could teach people to focus on people's attributes relevant to the stressful situations, examples of their positive in coping in similar situations, and concentrate on the positive aspects of the situation. Besides, one could provide people with possibilities of civic engagement and activism within political institutions, thus making the populist challengers less attractive to the people. Additionally, non-populist parties could also try to target powerless and deprived people in their rhetoric.

Another measure would be to channel people's grievances, especially among individuals with a high level of justice sensitivity. Ideally, people encountering injustice would be capable to provide the political system with feedback and to initiate changes within the existing institutions (like by starting online petitions and campaigning for them). By providing people with such opportunities, one can make them less motivated to search for justice among populists. Drawing on results of this study, one could perform a subsequent experimental study, exploring how an opportunity to express discontent affects the relationship between the perceptions of relative deprivation and populist voting. Potentially, people enabled with efficient coping strategies to deal with a disadvantaged situation and negative emotions connected with it will be unlikely to adopt a populist outlook.

8. Conclusions and general discussion

The goal of my PhD thesis was to explore whether perceptions of relative deprivation affect populist outcomes, and whether this relationship is mediated by emotions. To answer this question, I employed a multi-method quantitative research design, which combined experiments and secondary data analysis. First, in three online experiments conducted in the UK in 2019-2020, I tested for a causal relationship between perceptions of relative deprivation, emotions, and populism in different contexts. Using opinion on Brexit as a proxy for political ideology, I tested whether people with different political views reacted differently to instances of relative deprivation. Second, I performed secondary data analysis with the ESS data (Round 9, 2018-2021) representative of 23 European societies and the data from the LISS Panel representative of the Netherlands (October, 2020) to establish associations between the variables of interest.

It was found that perceptions of relative deprivation have a very small to negligible association or direct effect on populism, whereas emotions resulting from encountering instances of relative deprivation accounted for populist support. In addition, I showed that the three components of populist attitudes (anti-elitism, homogeneity, and popular sovereignty) should be analyzed separately given the consistent empirical evidence of experimental studies.

Below, I summarize the key findings of the thesis in more detail, describe the theoretical and methodological contributions, and policy implications of my research. I conclude with an overview of the limitations of the studies and directions for future research.

Summary and discussion of main results

The most important findings of the thesis relate to the role of emotions. In contrast to existing literature, I found that perceptions of relative deprivation enhanced populist outcomes not directly, but via emotions. Important to note, that there was a mediation effect of emotions only if the message used to manipulate perceptions of relative deprivation in experiments was congruent with people's political views. Moreover, people with opposite political views, reacted to instances of relative deprivation differently: different emotions resulting from perceived relative deprivation enhanced different components of populist attitudes.

In three experimental studies conducted in the UK, encountering instances of relative deprivation resulted in strong negative emotions, which activated populist attitudes and voting for a populist candidate. Anger demonstrated the strongest effect in mediating the relationship between perceptions of relative deprivation and populist outcomes. Its effect was most prominent among Leavers and replicated across two different contexts. Feelings of anger made people oppose elites in the context of existential threat among both Remainers and Leavers and in the context of cultural threat among Leavers. It also strengthened popular sovereignty attitudes among Leavers in the context of cultural and existential threat.

Important to note, that the strongest effect of anger was found in the context of existential threat. The experimental paradigm addressed a situation that everyone was affected by and which was of importance for everyone: the study was conducted after the first wave of the coronavirus pandemic. Similarly, in a correlational study, conducted at the beginning of the second wave of COVID-19 in the Netherlands, anger about the coronavirus pandemic was positively associated with preference for right-wing populist parties. Therefore, anger may serve to punish elites for the disadvantaged condition and gain a sense of empowerment by endorsing popular sovereignty attitudes. Anger may motivate people make a political change.

These results are in accordance with the existing literature showing that anger activates populist support (e.g., Rico et al., 2017, 2020; Magni, 2017).

Disgust was also of importance in activating populist attitudes. In the context of economic threat, it enhanced anti-elitist attitudes of people facing an instance of relative deprivation. It activated homogeneity attitudes among Leavers in the context of cultural threat, and made them more prone to support a populist candidate in the context of existential threat. Interestingly, to my knowledge, disgust has not been addressed in research on populism. People may potentially feel disgust towards a person who is perceived as causing a moral violation (e.g., Hutcherson & Gross, 2011); disgust can be targeted at political opponents (Bakker et al., 2020) and those who are perceived as endangering or acting against the ingroup (e.g., Haidt, 2003).

The role of contempt was less prominent and was present when only one emotion, contempt, was included in mediation models. It predominantly made people oppose political elites. Anger, disgust, and contempt are three emotions which share rather similar patterns of appraisals (high level of appraised other-accountability and PFCP) and perform similar functions: preserve the existing social order and punish those who violate it (e.g., Haidt, 2003; Hutcherson & Gross, 2011; Rosin et al., 1999, but cf. Russell, & Giner-Sorolla, 2001). It is possible that when all the three emotions are included in a study, most of the effect is taken by anger, which is a more common emotional label for the audience. Therefore, in studies not focusing on the role of each of these emotions in particular, their effect can be attenuated by a most common emotion of anger (hence, the effect of anger is being replicated in research on populism).

Unlike expected, emotions characterized by different appraisal patterns – lack of appraised other-accountability and low levels of appraised PFCP – also activated populist attitudes among deprived people. Sadness in reaction to a relative deprivation instance enhanced

popular sovereignty attitudes in the context of economic injustice. If sadness was included as a single mediator, it also enhanced anti-elitist and popular sovereignty attitudes among Remainers and anti-elitist attitudes among Leavers in the context of existential threat. Fear resulting from the experience of relative deprivation made Remainers endorse popular sovereignty attitudes in the context of the coronavirus pandemic. In contrast, in a correlational study in the Netherlands addressing the context of the coronavirus pandemic, fear and sadness were negatively related to preference for the populist right.

These results render three important implications. First, it is vital to revisit the role of sadness, which was previously found unrelated to populist outcomes (Rico et al., 2016). Second, results on how emotions affect populist outcomes are affected by the measures of emotions, and which emotional labels are included in studies. In the correlational study, respondents could choose only one emotion. In the experimental studies, respondents were allowed to select multiple emotions, and emotions were allowed to correlate with each other. Therefore, one could capture complex affective states, given that people prefer to describe their emotional states with more than one label (Scherer & Meuleman, 2013). Third, it is vital to consider that emotions are dynamic and changeable; which emotion people experience depends on the characteristics of the appraised event, context, individual characteristics, whether emotions are experienced by a person on one's own or in public, and other aspects. Therefore, inconsistent findings described in literature on fear (e.g., Rhodes-Purdy et al., 2021) are normal. Same emotions may lead to different outcomes depending, for instance, on people's appraised coping potential (Abadi et al., 2021).

Another consistent finding was that shame in relation to perceived relative deprivation did not enhance populist outcomes. Shame is an emotion which people are less willing to experience or demonstrate (e.g., Salmela & von Scheve, 2017) and thus are less likely to indicate with self-reported measures used in the thesis. In addition, the manipulation

materials, which I used, involved instances of relative deprivation felt on behalf of other people. With such type of perceived relative deprivation, it was unlikely that the self or the ingroup were blamed for causing injustice to others. Therefore, shame could potentially be a less feasible emotional reaction given the type of perceived relative deprivation addressed in the thesis.

The implications of the effect of emotions in activating populist support are far-reaching. Previously, one was striving for clear-cut results: anger enhanced populist support, fear decreased it (e.g., Vasilopoulos et al., 2019), though not always (e.g.., Rico et al., 2017; Rhodes-Purdy et al., 2021; Nguyen et al., 2022), and other emotions played no role. In the thesis, I argue and show some evidence that the world of emotions is more complicated and less consistent. Emotions are caused by a particular stimulus, emotional processes are fluid, immediate and complex (Scherer, 2001, 2019; Kappas, 2006); they are affected by different factors (Kuppens & Tong, 2010). The first components of emotional episodes, which are responsible for emotional elicitation and differentiation – appraisals – are most often done in an automatic way (Kappas, 2006).

Apart from some evidence on the role of separate emotions, experimental studies suggest that there was a generalized negative affect, which made people encountering relative deprivation instances adopt populist ideas. Three arguments speak in favor of a generalized negative affect: 1) negative emotions characterized by different appraisal patterns (anger, disgust, contempt, sadness and fear) enhanced populist attitudes, 2) these negative emotions were highly correlated with each other, and 3) from research, we know that people are more prone to describe their emotional state not with one but two emotional labels, which do not necessarily describe the emotions sharing similar appraisal patterns (see Scherer & Meuleman, 2013). This generalized negative affect was different depending on the appraised stimulus, context, and political views of the people who experienced it. In the context of

existential threat posed by the coronavirus pandemic, this negative affect included fear, which was, according to the literature, the most salient emotional reaction to the pandemic (e.g., Abadi et al., 2021). In the context of cultural threat, emotions targeted at violations of social order and justice, characterized by blame attributions and high level of coping potential – anger, disgust, and contempt – captured the emotional reaction of Leavers to instances of relative deprivation activating populist attitudes.

An important contribution of the thesis is using different layers of emotional experience and, particularly, appraisals. In the context of existential threat, I found that appraisals of other-accountability and PFCP mediated the effect of perceptions of relative deprivation on populist attitudes. These effects were different among people with different political views – those on the left (Remainers) and the right (Leavers) of the political scale. That implies that people with opposing political views appraised instances of relative deprivation differently. Particularly, Leavers experiencing relative deprivation endorsed anti-elitist and popular sovereignty attitudes due to low levels of appraised PFCP, whereas the anti-elitist attitudes among Remainers facing an instance of relative deprivation were activated via their blame attributions to the political elites.

Furthermore, in the thesis, I revisited the association between perceptions of relative deprivation and populist voting. So far, the relationship between perceptions of relative deprivation and right-wing populism was addressed (e.g., Urbanska & Guimond, 2018; Marchlewska et al., 2018). Using a sample of 23 European countries, I found that the association between perceptions of relative deprivation and any kind of populist voting is not universal across societies. Only in two countries, I found a positive and significant relationship between perceptions of relative deprivation with populism. These were France and the Netherlands, where the association of perceptions of relative deprivation with populist outcomes was previously established in several studies (see e.g., Lüders et al., 2021;

Manunta et al., 2022; Urbanska & Guimond, 2018 for France, and Hameleers & de Vreese, 2020 for the Netherlands). When comparing voting for populist right and populist left parties, I could find some evidence that voting for the populist left can be explained by economic factors, whereas support for the populist right could not be accounted by only economic factors.

Another consistent finding of the thesis is that perceptions of relative deprivation and emotions activated different components of populist attitudes in different ways. It was shown that one should analyze the three components of populist attitudes (anti-elitism, homogeneity, and popular sovereignty), separately, as done in literature (e.g., Oliver & Rahn, 2016; Castanho Silva et al., 2018). I address this finding in more details below.

Furthermore, I showed that political ideology plays an important role in shaping the way people appraise instances of relative deprivation. In experimental studies, there was a consistent difference between Remainers and Leavers in how perceptions of relative deprivation affected populist outcomes via emotions. As already mentioned, anger in reaction to a relative deprivation instance activated populist attitudes among Leavers more often. For Remainers, sadness and fear in reaction to instances of relative deprivation contributed to endorsing popular sovereignty, the beliefs that ordinary people can do politics better than professional politicians. At the same time, emotions of Remainers facing an instance of relative deprivation in the context of cultural threat did not activate populist support. This can be explained by the context used to manipulate perceptions of relative deprivation: illegal migration. While this topic was congruent with the political views of Leavers, it was incongruent with the views of Remainers: migration was one of the main arguments for voting "Leave" in the referendum on UK's membership in the EU in 2016 (e.g., Hobolt, 2016). Moreover, there was some evidence of disconfirmation bias among Remainers exposed to a disadvantaged comparison of illegal migrants with poor British: in the relative

deprivation condition, the level of popular sovereignty among Remainers decreased compared to the control condition.

In experimental studies, I used a paradigm related to research on media effects. Previously, it was shown that populist attitudes were positively associated with mass media and social media consumption (e.g., Schumann et al., 2022; Schulz, 2019). In the experiments, I showed that even a single manipulation of perceptions of relative deprivation was sufficient to cause strong emotional reactions, which enhanced populist attitudes. This finding speaks in favor of the crucial role of media exposure in driving populist support. Future research should find how long-lasting these effects are and focus on how long-time media exposure contributes to causing and maintaining a shift towards populist ideas. In addition, while in the thesis, I treated an exposure to an instance of relative deprivation as a source of change in opinion, such messages are also likely to maintain the already existing support for populism (Schumann et al., 2022).

A further finding relates to the effect of perceptions of existential insecurity on populist support. In an experimental study addressing the context of the coronavirus pandemic, I aimed to contrast two different explanations of populism: perceptions of relative deprivation and perceptions of existential insecurity. The latter explanation was derived from the cultural backlash theory of Inglehart and Norris (2017, 2016, Norris & Inglehart, 2019). That was the first attempt to test the cultural backlash theory of Inglehart and Norris in an experimental setting. Even though these two explanations could not be tested against each other given the manipulation checks, cultural backlash theory was not very informative in explaining populist outcomes. There was no direct effect of perceptions of existential insecurity on populism, but there were small but significant indirect effects of emotional reactions, particularly, among Leavers. However, it would be a hasty conclusion to say that cultural backlash theory does not explain populist support. Similar propositions follow from other theories, including the

motivated social cognition theory (Jost et al., 2003). Cultural backlash theory needs further testing with different contexts and diverse experimental paradigms to understand how applicable it is in explaining populist support. Different hypotheses were addressed in the thesis. Instead of addressing each chapter, I give an overview of the main research hypotheses in Table 8.1.

Table 8.1

Overview of the main hypotheses addressed in the thesis

	Hypotheses	Results
Hypothesis 1	If people encounter an instance of relative deprivation, they are more likely to endorse populist ideas	Limited confirmation; the effect is mediated via emotions (Chapters 3, 4, 5)
Hypothesis 2a	If people encountering an instance of relative deprivation appraise other-accountability as high, they are more likely to endorse populist ideas	Confirmed (Chapter 5)
Hypothesis 2b	If people encountering an instance of relative deprivation appraise their PFCP as high, they are more likely to endorse populist ideas	Not confirmed. Mediation effect found among Leavers. Opposite sign of the effect (Chapter 5)
Hypothesis 3a	If people encountering an instance of relative deprivation feel anger, disgust or contempt, they are more likely to endorse populist ideas	Confirmed (Chapters 4, 5)
Hypothesis 3b	If people encountering an instance of relative deprivation feel sadness, fear, or shame, they are less likely to endorse populist ideas	Not confirmed. Opposite effect found for sadness and fear among Remainers (Chapters 4, 5)
Hypothesis 4a	People with higher levels of self-efficacy beliefs are likely to appraise their PFCP level higher than those with lower levels of self-efficacy beliefs	Chapter 7[a]
Hypothesis 4b	People with higher levels of justice sensitivity beliefs are likely to appraise other-accountability higher than those with lower levels of justice sensitivity beliefs	Chapter 7 [a]

Note. [a] Hypotheses are not tested in the thesis

Contribution to the theory

The thesis makes several important contributions to the theory. I could show that the association between perceptions of relative deprivation and populist voting is not universal, unlike assumed in majority of papers on perceived relative deprivation (e.g., Pettigrew, 2017; Marchlewska et al., 2018). In addition, there are different types of relative deprivation perceptions, based on the dimensions of social comparisons which people make. The different types of perceptions of relative deprivation do not form generalized perceptions of relative deprivation: if you feel deprived in economic terms, you do not necessarily feel that you have a worse job than other people in the country. Results of the analysis of the cross-sectional data of 23 European societies showed that different types of relative deprivation perceptions can be differently associated with populist outcomes.

Furthermore, in the thesis, I introduced third-party relative deprivation, or perceptions of relative deprivation on behalf of other people. We commonly encounter issues of injustice in mass media or on social media, which makes us feel for someone. In this case, people may experience relative deprivation even though their own interests are not affected. While such perceptions of relative deprivation have not been addressed in populism research, they can be beneficial to understand why people who are not deprived themselves, for instance, in economic terms may still perceive relative deprivation, and these perceptions could nudge them into populist support.

Furthermore, I showed that it is vital to analyze the effect of perceptions of relative deprivation on populism via emotions. Even though it was proposed by Smith et al. (2012) and implemented by Smith et al. (2008), to explain several individual and group-level outcomes, no research has so far considered and tested whether perceptions of relative deprivation affect populist outcomes via emotions.

CHAPTER 8: CONCLUSIONS AND GENERAL DISCISSION

In my thesis, a theoretical mechanism was proposed of how perceptions of relative deprivation affect populist outcomes via emotional reactions. I argued that the appraisals of problem-focused coping potential and other-accountability play a crucial role in explaining the way perceptions of relative deprivation affect populist outcomes, which emotions deprived people feel and how these emotions may affect populist support. Moreover, I proposed to account for individual differences in emotional appraisal: self-efficacy beliefs could inform the appraisal of PFCP, and justice-sensitivity beliefs could inform the appraisal of other-accountability.

I also contributed by revisiting what populist attitudes are comprised of. Even though the concept of populism introduced by Mudde (2004) was operationalized and became popular in empirical research (for an overview, Castanho Silva et al., 2020), there are theoretical reasons to believe that the three concepts of populist attitudes (anti-elitism, homogeneity, and popular sovereignty) comprising one of the most popular scales by Schulz et al. (2018) are likely to function differently in relation to different variables among respondents of different political views and in different contexts. First, anti-elitism may relate to popular sovereignty stronger than to homogeneity. The proximity of anti-elitism and popular sovereignty is reflected in the concept "Manichean outlook" (the opposition between the elites and the people), which captures the vertical relationship between these two groups (e.g., Hameleers & Schumuck, 2017; Reinemann et al., 2016). Second, homogeneity may reflect feelings of solidarization with the ingroup and opposition to horizontal outgroups such as migrants or refugees (e.g., Hameleers & Schumuck, 2017; Reinemann et al., 2016), which is more typical for nativism than populism (Rooduijn, 2019). At the same time, anti-elitism and homogeneity can be affected by intergroup relations, while popular sovereignty – a concept that Mudde (2004) derived from Rousseau – may capture more stable political attitudes. It is vital to revisit the theory to understand what the core of populism is comprised of and how it can be measured.

Methodological contribution

Measures of perceptions of relative deprivation, which were typically employed in existing literature, were limited to the indicators available in the data used for secondary data analysis (e.g., Cena et al., 2023; Filsinger, 2022; Urnabska & Guimond, 2018). Smith et al. (2012, Smith et al., 2008) proposed to measure perceptions of relative deprivation as an upward social comparison happening due to an unjust process, when the individual or the ingroup are not responsible for the disadvantaged condition; the dimension of a social comparison should be of importance for the individual, and the disadvantaged situation is unlikely to change unless there is an intervention from outside. To my knowledge, a corresponding measure of perceptions of relative deprivation has not yet been developed. Among the best practices of measuring perceptions of the relative deprivation, Osborne et al. (2012) and Smith et al. (2008) measured perceptions of relative deprivation as a disadvantaged social comparison due to an unjust reason. Smith et al. (2018, Study 2) used an evaluation of a personal economic situation in the present and in the future, dissatisfaction with it, and a comparison with the economic situation of other people in the country. In the thesis, based on a model by Smith et al. (2012), I developed a measure of perceptions of relative deprivation, which I used as a manipulation check in the study on perceptions of relative deprivation in the context of cultural threat. While it was sufficient for that purpose, the measure of perceptions of relative deprivation needs further development and validation.

Besides, I claim that it is vital to consider the dimensions of social comparisons (whether people compare themselves to others on economic, cultural, educational, or other dimensions), targets of social comparisons (people from the same nation, migrants, or economically privileged people), as well as to consider the role of contexts in which these social comparisons are made (for instance, whether people are deprived of economic resources or resources necessary for survival). With the findings of the thesis, I could back up

the first two claims. In experimental studies, the effects of perceived relative deprivation and emotions on populist outcomes were different in diverse contexts. In a study of 23 European countries, cultural contexts seemed to be of importance. In addition, it was shown that perceptions of economic, occupational, and educational relative deprivation were distinct from each other, and were differently related to populist voting.

Next, when studying the impact of perceptions of relative deprivation on populism or other political outcomes, it is vital to include emotions. Emotions can be modelled as suppressors of the effects of perceptions of relative deprivation on populist outcomes. That means that the inclusion of emotions can increase the direct effect of the perceptions of relative deprivation on populist outcomes, and that the direct effect of the perceptions of relative deprivation on populism is likely to have opposite effect signs than the effects of emotions used as mediators (see MacKinnon, Krull, & Lockwood, 2000). There was evidence of suppression of effects in all experimental studies: in all models, the direct and mediation effects had opposite signs, and in most models with the inclusion of emotions the magnitude of the direct effect of perceptions of relative deprivation on populist outcomes became larger.

Moreover, in the thesis, it was shown that the components of one of the most established measures of populist attitudes (Schulz et al., 2018) functioned differently in relation to perceptions of relative deprivation and populism. Particularly, different emotions affected different components of populist attitudes, and this finding was consistent across experiments. Homogeneity was least affected by emotions. It renders evidence that it is of advantage to use the components of populist attitudes separately (e.g., Casthano Silva et al., 2018).

It was also shown that depending on the measures of emotions, one can gain different results. In case one uses one item to measure emotions (as was done in the study on the association between concerns about COVID-19 and emotions with the support for the populist right in

the Netherlands in Chapter 6), one gets clear-cut results, which, however, may be overly simplistic and cannot capture complex emotional states. Furthermore, one can prime emotions by showing the most common emotional reactions making respondents tempted to pick one most recognizable emotional label. If one uses more complex measures of emotions, such as the Geneva Emotion Wheel, (used in Chapter 4) one can blur out the effects of particular emotions, since respondents can choose out of 20 emotional reactions as used in experiments. In addition, this measure was used by people differently: while majority of respondents selected a couple of emotions, some respondents rated each of the 20 emotions on their intensity.

In the experimental study in the context of the coronavirus pandemic in, I made use of different layers of emotional experience: discrete emotions, appraisals, and three basic emotional dimensions. As showed by Harmon-Jones et al. (2017), different levels of operationalization of emotions render a better understanding of affective processes. In future research, it is important to move beyond the self-reported measures of emotions (e.g., Kappas, 2001).

Last, following Hobolt et al. (2021, Hobolt, 2016), I used opinion on Brexit as a measure of attitude polarization. In the thesis, I showed that among people with opposing views on Brexit, instances of relative deprivation resulted in different emotional reactions, and different emotional reactions affected populist outcomes in different ways. Even though Tilley and Hobolt (2023) showed that opinion-based polarization in relation to Brexit worked even six years after the Brexit referendum, it is still an empirical question whether opinion-based polarization worked better than other measures of political ideology and attitude polarization, such as partisanship at the time when the experiments presented here were conducted – several years after the Brexit referendum.

Policy implications

The results of the thesis allow to formulate several policy implications and to suggest some potential interventions aimed to prevent people from nudging towards populist ideas.

Perceptions of relative deprivation pose a significant problem in making people sway towards populist ideas and candidates predominantly due to the emotions they cause. Therefore, most of these policies are related to emotions caused by perceptions of relative deprivation.

The first group of policy implications relates to political and civic participation. Deprived people are likely to adopt a victim narrative, which may contribute to such dysfunctional attitudes as collective narcissism, which was found to be a pathway to support populists (Marchlewska et al., 2018). Hameleers et al. (2017) found that deprived people were more susceptible to populist rhetoric. Therefore, it would be highly beneficial to foster political representation of disadvantaged social groups, acknowledge and address their problems. This can be achieved, for instance, by affirmative action policies. This will help to make populists addressing relative deprivation in their discourse less attractive. Besides, one could provide deprived people with possibilities to communicate their grievances to mainstream politicians and political institutions. One can also facilitate civic participation, so that people would feel that they can make changes and participate in collective solving of existing problems. A simple example of such participation is launching a petition and campaigning for it so that it could in case of sufficient support from other citizens, be addressed by the Parliament. Such a system works, for instance, in the UK.

The second group of policy implications relates to civic education. First, it is crucial to teach people to recognize populist messages, emotionalized communication, and critically assess information in mass media and, particularly, social media. This can be done in high school as well as in mass media. In mass media, it is important to make fact checks of the arguments that populist politicians use. For instance, fact checking was rather widespread during the

coronavirus pandemic. Second, it is crucial to explain the role of emotions in affecting

attitudes and behavior which can be done in the high school, mass media, and public talks.

One could teach people not to rely on automatic information processing. Social scientists

working in the field of emotions, political studies and communication sciences could act as

experts in the media and initiate corresponding educational programs.

One should consider the channels for such civic political education, especially, by taking into

account the media diet of populist supporters. Populist supporters use television and tabloids

as main sources of information; therefore, their media diet is not substantially different from

non-populist citizens (Schulz, 2019). This gives a possibility to act upon the impact of

populist rhetoric on their views. One can also use more targeted channels to spread

information aimed at populist supporters, which, however, should be done with caution.

Since trust in the source of information was crucial in inducing populist attitudes (Hameleers

& Schmuck, 2017), it may even play a more important role in presenting people with the

information aimed to decrease populist support.

A possible intervention would be to present people with information on emotional cues in

communication. To inform the intervention, one could run an experiment testing to what

extent and which kind of information may be helpful in recognizing emotional cues in

communication. In one group, people will firstly be presented with information about

emotional cues and their role in populist communication in the other group, no information

will be given prior to the experimental manipulation. Then all respondents will be exposed to

an instance of relative deprivation. One could test which emotions, changes in attitudes and

behavior people facing an instance of relative deprivation and informed about emotional cues

would demonstrate compared to others who did not get any information on emotional cues.

Another policy implication relates to political education. It is crucial to raise awareness and

knowledge on politics to prevent people from being in eco-chambers. That could enhance

people's internal political efficacy, and facilitate deliberate processing of information. Debois and Blank (2018) found that an audience with a higher interest in politics is prone to use different sources of information, which makes it less likely to be in an eco-chamber. However, Taber and Lodge (2006) argued that knowledge on a topic makes people more able and motivated to defend their initial beliefs; hence, the more informed respondents are about a topic, the more biased they are in processing information. It would be highly beneficial to test whether political knowledge makes people involved in deliberate information processing, whether it enhances people's appraised PFCP, and how via the appraised PFCP it could affect populism.

While a most straightforward way to prevent deprived people from swaying towards populist ideas would be to tackle social inequality and raise people's social status (e.g., Gidron & Hall, 2017), with improving the economic situation and fostering social mobility, one cannot prevent people from feeling deprived. However, it is possible to change the way people react to instances of relative deprivation. One could teach people (in high school, people in psychological therapy) to gain positive mastery experience in dealing with instances of relative deprivation and to have experiences of success easily retrievable. One can teach people to attribute success to internal causes, and to enable people with a choice of efficient coping strategies (e.g., Poluektova et al., 2023). It was shown that in the context of COVID-19 people who concentrated on the positive aspects of the situation coped better with the consequences of the pandemic (Kruglanski et al., 2021). One can also make resilience training at high school or at work.

Limitations

Since specific limitations were addressed in each empirical chapter, I present a general overview. First, I relied only on self-reported measures of emotions, which is the state of art in studies on perceptions of relative deprivation, emotions, and populism. However, it would

be beneficial to also use physiological measures, such as facial electromyography, as done by Schumacher et al. (2022). Moreover, results on emotions could be affected by the measures of emotions used in the thesis. When emotions were measured with one item, sadness and fear were negatively related to populist support, whereas when emotions were allowed to correlate, sadness and fear enhanced populist support. Therefore, future research should aim to triangulate research methods by using self-reported and physiological measures of emotions.

Next, opinion on Brexit was used as a proxy for the divide between liberals and conservatives a couple of years after the referendum. That was a reasonable decision at the time of the fieldwork for several reasons. This divide reflected the major concerns in the society (Hobolt, 2016, Hobolt et al., 2021; Curtice, 2018). Opinion-based identity in relation to Brexit was found to result in identification with the ingroup, and stereotyping and prejudice towards the outgroup (Hobolt et al., 2021). Even though proponents of Brexit managed to achieve what they wanted, even six years after the Brexit referendum the identification based on the opinion on Brexit was still strong (Tilley & Hobolt, 2023). It remains still an empirical question on how the opinion on Brexit relates to other measures of political ideology and attitude polarization. In the future study proposed in the thesis, I plan to use a different proxy for political ideology than opinion on Brexit.

Furthermore, main results of experimental studies were acquired with mediation analysis. Even though it is a conventional method in psychology, its results should be treated with caution. While the independent variable was manipulated, one cannot rule out the possibility of a confounding variable of the relationship between the mediator and the outcome variable (Bullock, Green, and Ha, 2009). Ideally, one would measure mediators and dependent variables at different time points. More problematic is using mediation analysis in a correlational study, which I do in Chapter 6. Another problem relates to the possibility of

suppression of effects in the mediation models used in Chapters 4 and 5, where several emotions were used together as mediators, and these emotions were highly correlated. At the same time, models with multiple emotions at one time rendered similar results to the models where one emotion was included at a time (see Appendix 4c).

The last limitation relates to the generalizability of the effects found in experimental studies, which is a general limitation of experimental research. I used one paradigm to manipulate perceptions of relative deprivation. The same model was tested in three different contexts. Potentially, the effect of perceptions of relative deprivation on populist outcomes with a different paradigm will be different; also, the effects observed may be specific to a particular context. The results cannot be generalized to broader populations as well. In contrast, while the results of the secondary data analysis used in the thesis are generalizable to country populations, they do not allow to make causal claims.

Directions for Future Research

Some of the directions for future research were already addressed in the proposed study in Chapter 7. I address here the main directions which go beyond those propositions.

First, in three experimental studies a same research paradigm was used: perceptions of relative deprivation were manipulated with the help of vignettes constructed adjusted mass media articles. While it was highly beneficial to address the issues which were already present in the public discourse, of interest would be to use other paradigms to test how perceptions of relative deprivation affect populist outcomes. For instance, one could use economic games, such as the Intergroup Prisoner's Dilemma—Maximizing Difference (IPD-MD) game proposed by Halevy et al. (2010) to manipulate perceptions of relative deprivation at the group level. Addressing this paradigm could, for instance, shed light whether the motivation to get ahead or not to fall behind could serve as a reasoning for populist support.

One could also use remembering or imaginary tasks in order to induce perceptions of relative deprivation.

Furthermore, it would be interesting to address different types of perceived relative deprivation, given that social comparisons underlying perceptions of relative deprivation are done on different dimensions and to different targets. One could also do a qualitative study first, which could render which social comparisons people are likely to make. It would also be of interest to compare the effects of perceptions of relative deprivation on populist outcomes when people's interests are affected with perceptions of relative deprivation felt on behalf of others.

In the theoretical Chapter, I proposed to study individual differences in appraisal processes, in particular, how self-efficacy beliefs affect the appraisal of PFCP, and justice sensitivity beliefs impact the appraisal of other-accountability. These effects need testing. Moreover, it would also be interesting to consider the role of such personality traits as optimism, self-esteem, or neuroticism in shaping people's appraisals. Besides, of interest is how personality traits informing appraisals interact with the characteristics of a situation. Individual traits filter which information about the situation is used in the appraisal process, whereas personality traits may have an effect on appraisals in some situations, and not work in others (Kuppens & Tong, 2010, Kuppens & van Mechelen, 2007). For instance, it is possible that self-efficacy beliefs may have a higher impact on appraised PFCP in a threatening situation, such as COVID-19, especially, when people lack previous mastery experience in dealing with the situation. Then they rely on their self-efficacy beliefs more in order to evaluate their appraised PFCP. In a situation of cultural threat, justice sensitivity beliefs could impact the appraisal of other-accountability among Leavers more, since the issue of illegal migration, used in the experimental manipulation, was highly salient in the discourse on Brexit (e.g.,

Hobolt, 2016), and people on the political right already perceived that the native population is disadvantaged, and this disadvantage is illegitimate.

Another interesting question is how conservatives and liberals react to instances of injustice. For instance, in Chapter 5, an exposure of a relative deprivation instance in a threatening context activated anti-elitist attitudes among Leavers, but not Remainers. This was contrary to expectations: according to the moral foundations theory, liberals and not conservatives are more sensitive to the issues of injustice (e.g., Graham, Haidt, & Nosek, 2009; Kivikangas et al., 2021), also, in a health-threatening situation (Skitka & Tetlock, 1993). One explanation for the positive and significant effect of perceptions of relative deprivation on anti-elitism among Leavers could be that Leavers exposed to a relative deprivation instance were driven by the moral foundation of ingroup/loyalty, which made them more sensitive to the context of injustice (Day et al., 2014). Another explanation could be that Leavers opposed elites, whom they blamed for not promoting equality in vaccine redistribution. In this case, equal distribution of vaccination among poor and rich people and poor and rich countries could be seen as a prerequisite for the survival of the ingroup. This could explain why there was a direct effect of perceptions of relative deprivation on anti-elitism only among Leavers but not Remainers. I expect that addressing victim sensitivity and observer sensitivity beliefs could render why Leavers were more affected by experimental manipulation in the study in the context of existential threat.

Another direction for future research would be to formulate a theory on generalized emotional affect underlying the way perceptions of relative deprivation affect populist support, and how this affect depends on the aspects of the appraised situation. Even though significant contributions in these directions have been done by Salmela and von Scheve (2017, 2018), they proposed a mechanism which develops over time and cannot explain emotional blends.

More attention should also be paid to measures of emotions. Of special interest would be to combine different measures of emotions, ideally physiological and self-report ones in experimental research.

It would be beneficial to study the proposed mechanism of how perceptions of relative deprivation via emotions affect populism using longitudinal designs. On the one hand, a constant exposure to instances of relative deprivation is likely to produce stronger effects in making people adopt populist attitudes. On the other hand, a longitudinal design would allow to study the feedback loops between populist attitudes and emotions, populist attitudes and perceptions of relative deprivation. One could potentially compare two causal mechanisms: whether perceptions of relative deprivation affect emotional reactions which drive populist support, or whether populist supporters are more prone to experience relative deprivation (Filsinger, 2022), and to feel particular emotional reactions (Wirz, 2018; Widmann, 2021). In addition, it would also be interesting to find out how long the effect of a single manipulation of relative deprivation perceptions holds.

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APPENDICES

Appendix 1 - Overview of Steps Taken in the PhD Project

N	Paper	Studies / steps / methods	Results
Chapter 3			
	Version 1	Dependent variable: voting for parties employing anti-elitist or popular sovereignty rhetoric, imputed with the ESS (2018-2021) and Chapel Hill Survey (2014, 2017, 2019) data	Presented at the ECPR conference in August, 2022
	Version 2	The dependent variables were changed to voting for populist parties	(included in the thesis)
Chapter 4			
	Study 1 – perceptions of economic relative deprivation		
		Selection of manipulation materials for Study 1 taken from mass media To manipulate materials for study 1, newspaper articles published on the internet from different sources were collected, including: "Guardian", "Daily Express", "the Sun", "Daily Mail", "Mirror".	For the pretest, 12 pairs of articles adopted from mass media were selected. In each pair, one article involved an instance of relative deprivation, and another one – a neutral situation on the same topic without instances of relative deprivation. Three contexts were addressed: cultural, economic relative deprivation, or manipulations containing disadvantaged comparisons with elites.
		Proofreading of changes done by me to newspaper articles used for manipulations	
		Approval of Study 1 by the Ethics committee of the Constructor University (formerly - Jacobs University Bremen)	
		OSF pre-registration of research hypotheses, measures, and data analysis methods	
	Pretests: selection of materials for manipulation	Pretest 1a: time needed to read six articles for Pretest 1b (students of Constructor University)	
		Pretest 1b: selection of manipulation materials for Study 1, N=80, Pretest was conducted online, respondents were recruited via the online platform "Prolific", the pretest was	One set of materials for manipulation in Study 1 was selected

		hosted on the online Platform "Unipark"	
		Exclusion of respondents who failed attention checks. Recruitment of additional respondents.	
	Pretest 2:	Pretest 1 – time needed to do Study 1, check that Study 1 was correctly programmed, all instructions are clear (PhD students of BIGSSS, students of Constructor University)	
	Study 1	Study 1, N=589, the study was conducted online, respondents were recruited via the online platform "Prolific", the study was hosted on the online Platform "Unipark".	May - June, 2019
		Exclusion of respondents who failed attention checks. Recruitment of additional respondents.	
Study 2 - perceptions of cultural deprivation			
		Ethics committee: The study did not need a further approval of the Ethics Committee of the Jacobs University, since a same design was used as in Study 1	
		OSF pre-registration of research hypotheses, measures, and data analysis methods	
		Selection of manipulation materials for Study 2 taken from mass media. To manipulate materials for study 1, newspaper articles published on the internet from different sources were collected, including: "Guardian", "Daily Express", "the Sun", "Daily Mail", "Mirror".	6 pairs of articles adopted from mass media were selected to manipulate perceptions of cultural relative deprivation. In each pair of articles, one article contained an instance of relative deprivation, and another one – a neutral situation on the same topic without instances of relative deprivation.
		Proofreading of changes done by me in the articles used for manipulation	
	Pretest 1	Selection of manipulation materials for Study 1, N=160, Pretest was conducted online, respondents were recruited via the online platform "Prolific", the study was hosted on the online Platform "Unipark". Additionally, respondents with opposing position on Brexit (pro / contra) were separately sampled.	
	Pretest 2	Time needed to do Study 2, a check that Study 2 was correctly	

		programmed, all instructions are clear (PhD students of BIGSSS, students of Constructor University)	
	Study 2	Study 2, N=626, the study was conducted online, respondents were recruited via the online platform "Prolific", the study was hosted on the online Platform "Unipark".	December, 2019
		Exclusion of respondents who failed attention checks. Recruitment of additional respondents.	
	Study 3	**(not realized)**	
		Design of Studies 3 and 4 was done	
		Study 3 was pretested among student of Constructor University and was planned to inform a subsequent laboratory study	March 16th, 2020 Planned studies 3 and 4 had to be changed due to the coronavirus pandemic. Studies 3 and 4 were connected with each other, and Study 4 was as a laboratory experiment. Design of both studies had to be changed since laboratory studies were impossible due to the lockdown and subsequent social distances
Paper 3			
	Study 3 – perceptions of existential insecurity and perceptions of relative deprivation		
		Selection of manipulation materials for Study 3 taken from mass media To manipulate materials for study 1, newspaper articles published on the internet from different sources were collected, including: "Guardian", "Daily Express", "the Sun", "Daily Mail", "Mirror".	Six sets of 18 mass media articles adjusted for length and arguments made were selected. Each set was devoted to one topic and comprised an instance of perceptions of relative deprivation, existential insecurity, and a control condition
		Proofreading of changes done by me in articles used for manipulation	
		Approval of Studies 3 and 4 by the Ethics committee of the Constructor University	
	Pretest 1	Selection of manipulation materials for Study 3, N=142. Pretest was conducted online, respondents were recruited via the online platform "Prolific", the study was hosted on the online Platform "Unipark". Additionally, respondents with	

		opposing position on Brexit (pro / contra) were separately sampled.	
	Pretest 2	Time needed to do Study 2, check that Study 2 was correctly programmed, all instructions are clear (PhD students of BIGSSS)	
		OSF pre-registration of research hypotheses, measures, and data analysis methods for Study 3	
	Study 3	Study 3, N=756, the study was conducted online, respondents were recruited via the online platform "Prolific", the study was hosted on the online Platform "Unipark". Respondents with opposing position on Brexit (pro / contra) were separately sampled.	August, 2020
Study 4 – problem-focused coping potential and perceptions of relative deprivation			
		Manipulation materials were constructed & programmed for Study 4 using the context of COVID-19.	7 situations were constructed for manipulation of perceived relative deprivation and control conditions for Study 4
	Pretest 1:	pretest of manipulation materials with an NHS specialist from the UK	December, 2020 Materials for the study had to be changed
		A new set of manipulation materials was constructed & programmed for Study 4.	December, 2020 – January, 2021 14 situations were constructed for manipulation of perceptions of relative deprivation and PFCP for Study 4 The study was postponed once due to a changed political context (problems caused by Brexit), and once - for personal reasons

Note. Grey are studies, steps, and pretests which did not result in studies or papers.

Appendix 2

Appendix to Chapter 3: Their Grass is Greener! – Are Perceptions of Relative Deprivation Related to Populist Voting? Evidence from European Societies

Appendix 2.1: Multilevel Analysis Explaining Voting for Populist Parties: Summary of Variables for Multilevel Analysis

Table 1

List of Populist Parties from Upon PopuList 1.0 and 2.0 (Rooduijn et al., 2019) Merged with Parties Voted for in the ESS Data (2018)

Country		Populist Parties	N, populist
Austria	FPÖ	Freedom Party of Austria	293
Belgium	VB FN Pp LDD	Flemish Interest National Front People's Party Libertarian, Direct, Democratic	35
Bulgaria	GERB NFSB + Ataka + IMRO Volya	Citizens for European Development of Bulgaria National Front for the Salvation of Bulgaria + Ataka + IMRO - National Bulgarian Movement Will	405
Switzerland	SVP EDU-UDF LdT	Swiss People's Party Federal Democratic Union of Switzerland Ticino League	152
Cyprus	SYM / SYPOL	Citizens' Alliance **(Cyprus excluded due to a low share of populist vote)**	3
Check Republic	ANO 2011 SPD	Action of Dissatisfied Citizens Freedom and Direct Democracy - Tomio Okamura	471
Germany	AfD Linke	Alternative for Germany The Left	203
Estonia	EKRE	Estonian Conservative People's Party	61
Spain	Unidas Podemos, ECP VOX	Podemos (Podemos + United Left + other) In Common We Can Voice	238
Finland	Ps	Finns Party (True Finns)	135
France	FI DLR|DLF	France Unbowed Republic Arise | France Arise	203

	FN / RN	National Front / Rally	
United Kingdom	UKIP SF	United Kingdom Independence Party Sinn Fein	56
Croatia	Most Zivi zid HDSSB	Bridge of Independent Lists Human Shield Croatian Democratic Alliance of Slavonia and Baranja	166
Hungary	FIDESZ Jobbik	Fidesz - Hungarian Civic Alliance Jobbik, the Movement for a Better Hungary	625
Ireland	SF	Sinn Fein	156
Italy	M5S FI LN FdI	Five Star Movement The People of Freedom / Forza Italia, FI/PdL (Northern) League Brothers of Italy	896
Lithuania	JL TT DP DK LCP	"Young Lithuania" Order and Justice Labour Party The Way of Courage Lithuanian Central Party	113
Latvia	KPV LV	Who Owns the State?	44
Netherlands	PVV SP FvD	Party for Freedom Socialist Party (Netherlands) Forum for Democracy	194
Norway	FrP	Progress Party	102
Poland	Kukiz'15 PiS	Kukiz'15 Law and Justice	424
Portugal	-	**Excluded, no populist parties in 2018**	**0**
Sweden	SD	Sweden Democrats	141
Slovenia	L LMS SDS SNS	The Left List of Marjan Sarec Slovenian Democratic Party Slovenian National Party	354
Slovakia	OLaNO SNS Smer SR	Ordinary People Slovak National Party Direction - Social Democracy We are family	387

Note. Frequencies were weighted by dweight.

Table 2

Summary of Dependent and Independent Variables

Indicator	Variable labels	Wording	coding	recoding
		Independent variables		
Economic relative deprivation				
Unjust payment - individual	netifr	Would you say your net pay is unfairly low, fair, or unfairly high?	-4 - unfairly low 0 – fair 1 –unfairly high	Reversely coded, iunfair -4 - high 4 – unfairly low 77 – 99 => missing
Unjust payment - rich	topinfr1	Please think about the top 10% of employees working full-time in [country], earning more than [amount per month or per year]. In your opinion, are these incomes unfairly low, fair, or unfairly high? Please think generally about people earning this level of incomes.	-4 - -1 - unfairly low 0 – fair 1 – 4 – unfairly high	upunfair same coding, 77 – 99 => missing
	ecRD	Index to measure economic relative deprivation	(iunfair + upunfair)/2 77 – 99 => missing	Reversely coded, From -4.992 to 3.008
Educational relative deprivation	**edRD**	Compared to other people in [country], I have had a fair chance of achieving the level of education I was seeking	0 - Does not apply at all 10 - Applies completely 55 - I have not completed a level of education yet 77 – refusal 88 – don't know	Reversely coded, From -3.9812 to 6.0188
Occupational relative deprivation	**jRD**	Imagine you were looking for a job today. To what extent do you think this statement would apply to you? Compared to other people in [country], I	0 - Does not apply at all 10 - Applies completely 77 – refusal	Reversely coded, From -2.8294 to 7.1706

		would have a fair chance of getting the job I was seeking.	88 – don't know	

Second Level Predictors

Openness of the political system		External political efficacy		
	exteffic	Index to measure external self-efficacy	**(psppsgva+ pspppipla)/2** From -1.35 (inefficacious) to 2.65 (efficacious)	Aggregated at the country level
	psppsg va	Political system allows people to have a say in what government does	1 - not at all able 5 - completely able 7 - Refusal 8 - Don't know	Missing: 7, 8
	pspppi pla	Political system allows people to have influence on politics	1 - not at all able 5 - completely able 7 - Refusal 8 - Don't know	Missing: 7, 8
Affluence	**GDP PPP**	Level 2, country		Log GDP PPP, grand-mean centered
Country Inequality	**GINI**	Level 2, country		GINI, grand-mean centered

Dependent variables

Populist vote	**Vote for a populis t party**	Party voted for in last national election	See Table 1 1 – vote for populist parties 0 – vote non-populist parties Missing – other, blank or spoilt ballots, non-voting	

Control Variables

Gender	gndr		1 – male 2 – female 9 – no answer	recoded -0.5 – female (ref.cat) 0.5 – male 9 - missing
Education	eisced	Highest level of education, ES - ISCED	0 - Not possible to harmonise into ES-ISCED	Missing (999): 0, 55, 77, 88, 99

			1 - ES-ISCED I, less than lower secondary 2 - ES-ISCED II, lower secondary 3 - ES-ISCED IIIb, lower tier upper secondary 4 - ES-ISCED IIIa, upper tier upper secondary 5 - ES-ISCED IV, advanced vocational, sub-degree 6 - ES-ISCED V1, lower tertiary education, BA level 7 - ES-ISCED V2, higher tertiary education, >= MA level 55 – Other 77 – Refusal 88 - Don't know 99 - No answer	grand-mean centered
Self-Placement on the left - right scale	**lrscale**	In politics people sometimes talk of "left" and "right". Using this card, where would you place yourself on this scale, where 0 means the left and 10 means the right?	00 – left 10 – right 77 – refusal 99 – don't know	Missing 77, 88, 99
Unemployed	**uemp3m**	Have you ever been unemployed and seeking work for a period of more than three months?	Yes 1 No 2 (Refusal) 7 (Don't know) 8	Unemployed 0.5 - Yes -0.5 – no (ref.) Missing: 7, 8
Dependent on welfare	**hincsrca**	Please consider the income of all household members and any income which may be received by the household as a whole. What is the main source of income in your household? Please use this card.	Wages or salaries 01 Income from self-employment (excluding farming) 02 Income from farming 03 Pensions 04	Recoded: ***Pensions receivers*** 0.5 – yes (if hincsrca = 04) -0.5 – no (ref.; other categories).

			Unemployment/ redundancy benefit 05 Any other social benefits or grants 06 Income from investment, savings, insurance or property 07 Income from other sources 08 (Refusal) 77 (Don't know) 88	*Benefits receivers* 0.5 – yes (if hincsrca = 05 | 06) -0.5 – no (ref.; other categories). 77 & 88 - missing

Table 3

Means, standard deviations, and correlations of all variables for 23 European Countries

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. economic deprivation	0.00	1.16												
2. occupational deprivation	0.00	2.91	.22**											
3. educational deprivation	0.00	2.76	.18**	.52**										
4. populist vote[a]	5852	24.3%	.10**	.11**	.12**									
5. gender(male)[a]	19520	46.5%	-.09**	-.07**	-.04***	.04**								
6. education	-0.03	1.80	-.18**	-.28**	-.39**	-.15**	-.01*							
7. unemployed[a]	11560	27.7%	.09**	.15**	.08**	.03**	.00	-.03**						
8. pensions[a]	11217	27.2%	.09**	.17**	.16**	-.02*	.04**	-.20**	-.10**					
9. benefits[a]	1687	4.1%	.04**	.08**	.08**	.01	.00	-.08**	.15**					
10. left-right	-0.01	2.22	-.04**	-.03**	-.02**	.17**	.05**	-.02**	-.06**	-.00	-.04**			
11. System openness	0.00	0.33	-.19**	-.26**	-.20**	-.24**	.06**	.09**	-.06**	-.08**	.05**	-.01		
12. Affluence	0.00	0.32	-.16**	-.21**	-.14**	-.25**	.06**	.04**	-.02**	-.09**	.09**	-.04**	.75**	
13. Inequality	-0.00	4.06	.02**	.16**	.14**	.02**	-.02**	-.07**	.02**	.04**	.00	-.02**	-.31**	-.27**

Note. M and *SD* are used to represent mean and standard deviation, respectively.

[a] Frequency and percentage are given for a binary variable. Cramer's V is given as a measure of association (these fields are marked grey).
* indicates *p* < .05. ** indicates *p* < .01

Appendix 2.2 – Multilevel Analysis: Model Comparisons

Table 1a

The Relationship between Perceptions of Economic Relative Deprivation and Voting for Populist Parties across 23 Countries. GDP per Capita PPP is used as a Country-Level Predictor

Predictors	Vote populist Model 0		Vote populist Model 1		Vote populist Model 2		Vote populist Model 3		Vote populist Model 4	
	Odds Ratios	*CI*	*Odds Ratios*	*CI*	*Odds Ratios*	*CI*	*Odds Ratios*	*CI*	*Odds Ratios*	*CI*
(Intercept)	**0.272**	[0.164; 0.451]	**0.31**	[0.183; 0.531]	**0.30**	[0.188; 0.492]	**0.31**	[0.190; 0.501]	**0.31**	[0.19; 0.50]
economic relative deprivation (EcRD)			**1.07**	[1.03; 1.11]	**1.07**	[1.03;1.11]	**1.08**	[1.00; 1.16]	**1.08**	[1.02; 1.15]
gender			**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.28**	[1.18; 1.39]	**1.28**	[1.18; 1.38]
education			**0.84**	[0.820; 0.862]	**0.84**	[0.820; 0.862]	**0.84**	[0.819; 0.861]	**0.84**	[0.82; 0.86]
unemployed			**1.35**	[1.23; 1.48]	**1.34**	[1.23;1.48]	**1.35**	[1.23; 1.48]	**1.35**	[1.23; 1.48]
pensions			**0.72**	[0.657; 0.789]	**0.72**	[0.656; 0.789]	**0.73**	[0.667; 0.802]	**0.73**	[0.67; 0.81]
benefits			**1.47**	[1.17; 1.84]	**1.47**	[1.17; 1.84]	**1.46**	[1.16; 1.83]	**1.45**	[1.15; 1.81]
left-right self-placement scale			**1.24**	[1.22; 1.27]	**1.24**	[1.22; 1.27]	**1.25**	[1.22; 1.27]	**1.25**	[1.22; 1.27]
affluence					**0.17**	[0.039; 0.756]	0.23	[0.04; 1.32]	**0.17**	[0.04; 0.74]
EcRD: affluence									**1.35**	[1.13; 1.63]
Random Effects										
σ²	3.29		3.29		3.29		3.29		3.29	
τ₀₀	1.56 cntry		1.62 cntry		1.31 cntry		1.32 cntry		1.64 cntry	
τ₁₁							0.02 cntry.ecRD		0.01 cntry.ecRD	
ρ₀₁							-0.21 cntry		-0.14 cntry	
ICC	0.32		0.33		0.28		0.29		0.33	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	24182		19636		19636		19636		19636	
Marginal R² / Conditional R²	0.000 / 0.322		0.080 / 0.384		0.136 / 0.382		0.121 / 0.377		0.082 / 0.389	
Deviance	20635.387		15517.145		15512.281		15482.579		15479.390	
AIC	20639.387		15535.145		15532.281		15506.579		15503.390	
log-Likelihood	-10317.694		-7758.573		-7756.141		-7741.290		-7739.695	

Note. Odds Ratios and their 95% confidence intervals (CI) are displayed.

Bold are effects reaching conventional significance level.

Table 1b

The Relationship between Perceptions of Economic Relative Deprivation and Voting for Populist Parties across 23 Countries. Openness of Political System is used as a Country-Level Predictor

Predictors	Vote populist Model 0		Vote populist Model 1		Vote populist Model 2		Vote populist Model 3		Vote populist Model 4	
	OR	CI	OR	CI	OR	CI	OR	CI	OR	CI
(Intercept)	**0.27**	[0.164; 0.451]	**0.31**	[0.183; 0.531]	**0.32**	[0.19; 0.52]	**0.32**	[0.19; 0.53]	**0.32**	[0.19; 0.53]
economic relative deprivation (EcRD)			**1.07**	[1.03; 1.11]	**1.07**	[1.03; 1.11]	**1.08**	[1.004; 1.16]	**1.08**	[1.02; 1.15]
gender			**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.28**	[1.18; 1.39]	**1.28**	[1.18; 1.39]
education			**0.84**	[0.820; 0.862]	**0.84**	[0.82; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.82; 0.86]
unemployed			**1.35**	[1.23; 1.48]	**1.35**	[1.23; 1.48]	**1.35**	[1.23; 1.48]	**1.35**	[1.23; 1.48]
pensions			**0.72**	[0.657; 0.789]	**0.72**	[0.66; 0.79]	**0.73**	[0.67; 0.80]	**0.73**	[0.67; 0.80]
benefits			**1.47**	[1.17; 1.84]	**1.47**	[1.17; 1.84]	**1.46**	[1.16; 1.82]	**1.45**	[1.16; 1.81]
left-right self-placement scale			**1.24**	[1.22; 1.27]	**1.24**	[1.22; 1.27]	**1.25**	[1.22; 1.27]	**1.25**	[1.22; 1.27]
openness of the political system					0.27	[0.07; 1.11]	0.40	[0.08; 2.08]	0.27	[0.06; 1.11]
EcRD:pol.openness									**1.31**	[1.10; 1.56]
Random Effects										
σ^2	3.29		3.29		3.29		3.29		3.29	
τ_{00}	1.56 cntry		1.62 cntry		1.42 cntry		1.45 cntry		1.43 cntry	
τ_{11}							0.02 cntry.pRDGMC		0.01 cntry.pRDGMC	
ρ_{01}							-0.29 cntry		-0.22 cntry	
ICC	0.32		0.33		0.30		0.31		0.31	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	24182		19636		19636		19636		19636	
Marginal R^2 / Conditional R^2	0.000 / 0.322		0.080 / 0.384		0.119 / 0.384		0.101 / 0.380		0.122 / 0.390	
Deviance	20635.387		15517.145		15514.086		15484.015		15476.472	
AIC	20639.387		15535.145		15534.086		15508.015		15502.472	
log-Likelihood	-10317.694		-7758.573		-7757.043		-7742.007		-7738.236	

Note. Odds Ratios and their 95% confidence intervals (CI) are displayed.

Bold are effects reaching conventional significance level.

Table 1c

The Relationship between Perceptions of Economic Relative Deprivation and Voting for Populist Parties across 23 Countries. Inequality is used as a Country-Level Predictor

Predictors	Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party	
	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	**0.27**	[0.164; 0.451]	**0.31**	[0.18; 0.53]	**0.31**	[0.18; 0.53]	**0.31**	[0.18; 0.54]	**0.31**	[0.18; 0.54]
Economic Relative Deprivation (EcRD)			**1.07**	[1.03; 1.11]	**1.07**	[1.03; 1.11]	**1.08**	[1.01; 1.16]	**1.08**	[1.01; 1.16]
gender			**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.28**	[1.18; 1.38]	**1.28**	[1.18; 1.39]
education			**0.84**	[0.82; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.82; 0.86]
unemployed			**1.35**	[1.23; 1.48]	**1.35**	[1.23; 1.48]	**1.35**	[1.23; 1.48]	**1.35**	[1.23; 1.48]
pensions			**0.72**	[0.66; 0.79]	**0.72**	[0.66; 0.79]	**0.73**	[0.67; 0.80]	**0.73**	[0.67; 0.80]
benefits			**1.47**	[1.17; 1.84]	**1.47**	[1.17; 1.84]	**1.45**	[1.16; 1.82]	**1.45**	[1.16; 1.82]
left-right			**1.24**	[1.22; 1.27]	**1.24**	[1.22; 1.27]	**1.25**	[1.22; 1.27]	**1.25**	[1.22; 1.27]
GINI					0.99	[0.87; 1.13]	0.98	[0.87; 1.10]	0.988	[0.87; 1.13]
EcRD:GINI									0.996	[0.98; 1.01]
Random Effects										
σ^2	3.29		3.29		3.29		3.29		3.29	
τ_{00}	1.56 cntry		1.62 cntry		1.62 cntry		1.64 cntry		1.64 cntry	
τ_{11}							0.02 cntry.pRDGMC		0.02 cntry.pRDGMC	
ρ_{01}							-0.44 cntry		-0.44 cntry	
ICC	0.32		0.33		0.33		0.34		0.34	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	24182		19636		19636		19636		19636	
Marginal R^2 / Conditional R^2	0.000 / 0.322		0.080 / 0.384		0.080 / 0.384		0.081 / 0.391		0.080 / 0.390	
Deviance	20635.387		15517.145		15517.120		15485.027		15484.815	
AIC	20639.387		15535.145		15537.120		15509.027		15510.815	
log-Likelihood	-10317.694		-7758.573		-7758.560		-7742.514		-7742.407	

Note. Odds Ratios and their 95% confidence intervals are displayed.

Bold are effects reaching conventional significance level.

Table 2a

The Relationship between Occupational Relative Deprivation and Voting for Populist Parties across 23 Countries. GDP per Capita PPP is used as a Country-Level Predictor

Predictors	Vote populist Model 0		Vote populist Model 1		Vote populist Model 2		Vote populist Model 3		Vote populist Model 4	
	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	**0.27**	[0.16; 0.45]	**0.32**	[0.19; 0.54]	**0.31**	[0.19; 0.50]	**0.31**	[0.19; 0.51]	**0.31**	[0.19; 0.50]
occupational relative deprivation (ORD)			1.01	[0.996; 1.03]	1.01	[0.996; 1.03]	1.01	[0.988; 1.04]	1.01	[0.995; 1.03]
gender			**1.24**	[1.15; 1.33]	**1.24**	[1.15; 1.34]	**1.24**	[1.15; 1.34]	**1.24**	[1.15; 1.34]
education			**0.84**	[0.83; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.82; 0.86]
unemployed			**1.32**	[1.22; 1.44]	**1.32**	[1.21; 1.44]	**1.32**	[1.21; 1.44]	**1.32**	[1.22; 1.44]
pensions			**0.74**	[0.67; 0.80]	**0.74**	[0.67; 0.80]	**0.73**	[0.67; 0.80]	**0.73**	[0.67; 0.80]
benefits			**1.51**	[1.22; 1.87]	**1.51**	[1.23; 1.87]	**1.49**	[1.21; 1.84]	**1.46**	[1.19; 1.81]
left-right self-placement scale			**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]
Affluence					**0.16**	[0.04; 0.73]	0.22	[0.04; 1.39]	**0.16**	[0.04; 0.72]
ORD:Affluence									**1.11**	[1.04; 1.17]
Random Effects										
σ^2	3.29		3.29		3.29		3.29		3.29	
τ_{00}	1.56 cntry		1.64 cntry		1.31 cntry		1.33 cntry		1.32 cntry	
τ_{11}							0.00 cntry.jRDGMC		0.00 cntry.jRDGMC	
ρ_{01}							-0.21 cntry		-0.22 cntry	
ICC	0.32		0.33		0.29		0.29		0.29	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	24182		22111		22111		22111		22111	
Marginal R^2 / Conditional R^2	0.000 / 0.322		0.073 / 0.382		0.133 / 0.380		0.117 / 0.373		0.136 / 0.384	
Deviance	20635.387		17753.757		17748.688		17730.348		17721.226	
AIC	20639.387		17771.757		17768.688		17754.348		17747.226	
log-Likelihood	-10317.694		-8876.879		-8874.344		-8865.174		-8860.613	

Note. Odds Ratios and their 95% confidence intervals (CI) are displayed.

Bold are effects reaching conventional significance level.

Table 2b

The Relationship between Occupational Relative Deprivation and Voting for Populist Parties across 23 Countries. Openness of Political System is used as a Country-Level Predictor

Predictors	Vote populist Model 0 Odds Ratios	CI	Vote populist Model 1 Odds Ratios	CI	Vote populist Model 2 Odds Ratios	CI	Vote populist Model 3 Odds Ratios	CI	Vote populist Model 4 Odds Ratios	CI
(Intercept)	**0.27**	[0.164; 0.451]	**0.32**	[0.185; 0.540]	**0.32**	[0.195; 0.528]	**0.32**	[0.193; 0.532]	**0.32**	[0.196; 0.53]
occupational relative deprivation (oRD)			1.01	[0.996; 1.03]	1.01	[0.996; 1.03]	1.01	[0.989; 1.04]	1.01	[0.992; 1.03]
gender			**1.24**	[1.15; 1.33]	**1.24**	[1.15; 1.33]	**1.24**	[1.15; 1.34]	**1.24**	[1.15; 1.34]
education			**0.84**	[0.825; 0.864]	**0.84**	[0.825; 0.864]	**0.84**	[0.823; 0.862]	**0.84**	[0.823; 0.863]
unemployed			**1.32**	[1.22; 1.44]	**1.32**	[1.21; 1.44]	**1.32**	[1.21; 1.44]	**1.33**	[1.22; 1.44]
pensions			**0.74**	[0.674; 0.803]	**0.74**	[0.674; 0.803]	**0.73**	[0.670; 0.799]	**0.73**	[0.669; 0.797]
benefits			**1.51**	[1.22; 1.87]	**1.51**	[1.23; 1.87]	**1.48**	[1.20; 1.83]	**1.48**	[1.20; 1.82]
left-right self-placement scale			**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]
openness of the political system					0.25	[0.062; 1.06]	0.41	[0.073; 2.26]	0.26	[0.06; 1.07]
oRD: openness of the political system									**1.09**	[1.03; 1.15]
Random Effects										
σ^2	3.29		3.29		3.29		3.29		3.29	
τ_{00}	1.56 cntry		1.64 cntry		1.42 cntry		1.46 cntry		1.44 cntry	
τ_{11}							0.00 cntry.oRD		0.00 cntry.oRD	
ρ_{01}							-0.33 cntry		-0.28 cntry	
ICC	0.32		0.33		0.30		0.31		0.31	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	24182		22111		22111		22111		22111	
Marginal R^2 / Conditional R^2	0.000 / 0.322		0.073 / 0.382		0.115 / 0.382		0.094 / 0.375		0.117 / 0.387	
Deviance	20635.387		17753.757		17750.475		17731.748		17724.001	
AIC	20639.387		17771.757		17770.475		17755.748		17750.001	
log-Likelihood	-10317.694		-8876.879		-8875.238		-8865.874		-8862.001	

Note. Odds Ratios and their 95% confidence intervals are displayed.

Bold are effects reaching conventional significance level.

Table 2c

The Relationship between Occupational Relative Deprivation and Voting for Populist Parties across 23 Countries. Inequality is used as a Country-Level Predictor

Predictors	Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party	
	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	**0.27**	[0.16; 0.45]	**0.32**	[0.19; 0.54]	**0.32**	[0.18; 0.54]	**0.31**	[0.18; 0.54]	**0.32**	[0.19; 0.55]
Occupational Relative Deprivation (ORD)			1.01	[0.996; 1.03]	1.01	[0.996; 1.03]	1.01	[0.991; 1.04]	1.01	[0.990; 1.03]
gender			**1.24**	[1.15; 1.33]	**1.24**	[1.15; 1.33]	**1.24**	[1.15; 1.34]	**1.24**	[1.15; 1.34]
education			**0.84**	[0.83; 0.86]	**0.84**	[0.83; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.82; 0.86]
unemployed			**1.32**	[1.22; 1.44]	**1.32**	[1.22; 1.44]	**1.32**	[1.22; 1.44]	**1.33**	[1.22; 1.44]
pensions			**0.74**	[0.67; 0.80]	**0.74**	[0.67; 0.80]	**0.73**	[0.67; 0.80]	**0.73**	[0.67; 0.80]
benefits			**1.51**	[1.22; 1.87]	**1.51**	[1.22; 1.87]	**1.48**	[1.20; 1.83]	**1.48**	[1.20; 1.83]
left-right			**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]
GINI					0.99	[0.87; 1.13]	0.94	[0.82; 1.06]	0.99	[0.87; 1.13]
ORD:GINI									**0.995**	[0.990; 0.999]
Random Effects										
σ^2	3.29		3.29		3.29		3.29		3.29	
τ_{00}	1.56 cntry		1.64 cntry		1.64 cntry		1.71 cntry		1.66 cntry	
τ_{11}							0.00 cntry.jRDGMC		0.00 cntry.jRDGMC	
ρ_{01}							-0.61 cntry		-0.57 cntry	
ICC	0.32		0.33		0.33		0.35		0.34	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	24182		22111		22111		22111		22111	
Marginal R^2 / Conditional R^2	0.000 / 0.322		0.073 / 0.382		0.073 / 0.382		0.081 / 0.400		0.073 / 0.387	
Deviance	20635.387		17753.757		17753.736		17731.800		17728.006	
AIC	20639.387		17771.757		17773.736		17755.800		17754.006	
log-Likelihood	-10317.694		-8876.879		-8876.868		-8865.900		-8864.003	

Note. Odds Ratios and their 95% confidence intervals are displayed.

Bold are effects reaching conventional significance level.

Table 3a

The Relationship between Educational Relative Deprivation and Voting for Populist Parties across 23 Countries. GDP per Capita PPP is used as a Country-Level Predictor

Predictors	Vote populist Model 0		Vote populist Model 1		Vote populist Model 2		Vote populist Model 3		Vote populist Model 4	
	OR	CI	OR	CI	OR	CI	OR	CI	OR	CI
(Intercept)	**0.27**	[0.16; 0.45]	**0.32**	[0.18; 0.54]	**0.31**	[0.19; 0.50]	**0.31**	[0.19; 0.52]	**0.31**	[0.19; 0.50]
educational deprivation (edRD)			1.00	[0.985; 1.02]	1.00	[0.985; 1.02]	1.02	[0.988; 1.04]	1.02	[0.994; 1.04]
gender			**1.25**	[1.16; 1.34]	**1.25**	[1.16; 1.34]	**1.25**	[1.16; 1.35]	**1.25**	[1.16; 1.35]
education			**0.84**	[0.82; 0.87]	**0.84**	[0.82; 0.86]	**0.85**	[0.83; 0.87]	**0.85**	[0.83; 0.87]
unemployed			**1.36**	[1.25; 1.48]	**1.36**	[1.25; 1.48]	**1.35**	[1.24; 1.47]	**1.35**	[1.24; 1.47]
pensions			**0.73**	[0.67; 0.80]	**0.73**	[0.67; 0.80]	**0.73**	[0.67; 0.80]	**0.73**	[0.67; 0.80]
benefits			**1.49**	[1.20; 1.83]	**1.49**	[1.21; 1.84]	**1.46**	[1.18; 1.80]	**1.45**	[1.17; 1.78]
left-right self-placement scale			**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]
Affluence					**0.16**	[0.04; 0.71]	0.42	[0.08; 2.09]	**0.16**	[0.04; 0.70]
edRD: affluence									**1.12**	[1.05; 1.20]
Random Effects										
σ^2	3.29		3.29		3.29		3.29		3.29	
τ_{00}	1.56 cntry		1.66 cntry		1.32 cntry		1.41 cntry		1.32 cntry	
τ_{11}							0.00 cntry.eRDGMC		0.00 cntry.eRDGMC	
ρ_{01}							-0.60 cntry		-0.55 cntry	
ICC	0.32		0.33		0.29		0.31		0.29	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	24182		22387		22387		22387		22387	
Marginal R^2 / Conditional R^2	0.000 / 0.322		0.073 / 0.384		0.133 / 0.381		0.092 / 0.369		0.137 / 0.388	
Deviance	20635.387		17947.118		17941.916		17915.607		17907.256	
AIC	20639.387		17965.118		17961.916		17939.607		17933.256	
log-Likelihood	-10317.694		-8973.559		-8970.958		-8957.803		-8953.628	

Note. Odds Ratios and their 95% confidence intervals (CI) are displayed.

Bold are effects reaching conventional significance level.

Table 3b

The Relationship between Educational Relative Deprivation and Voting for Populist Parties across 23 Countries. Openness of Political System is used as a Country-Level Predictor

Predictors	Vote populist Model 0		Vote populist Model 1		Vote populist Model 2		Vote populist Model 3		Vote populist Model 4	
	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	**0.27**	[0.164; 0.451]	**0.32**	[0.184; 0.539]	**0.32**	[0.194; 0.527]	**0.32**	[0.188; 0.539]	**0.32**	[0.19; 0.53]
educational deprivation (edRD)			1.00	[0.985; 1.02]	1.00	[0.985; 1.02]	1.02	[0.989; 1.04]	1.02	[0.994; 1.04]
gender			**1.25**	[1.16; 1.34]	**1.25**	[1.16; 1.34]	**1.25**	[1.16; 1.35]	**1.25**	[1.16; 1.35]
education			**0.84**	[0.824; 0.865]	**0.84**	[0.824; 0.865]	**0.85**	[0.825; 0.866]	**0.85**	[0.83; 0.87]
unemployed			**1.36**	[1.25; 1.48]	**1.36**	[1.25; 1.48]	**1.35**	[1.24; 1.48]	**1.35**	[1.24; 1.47]
pensions			**0.73**	[0.674; 0.800]	**0.73**	[0.673; 0.80]	**0.73**	[0.674; 0.801]	**0.73**	[0.67; 0.80]
benefits			**1.49**	[1.20; 1.83]	**1.49**	[1.20; 1.83]	**1.46**	[1.18; 1.80]	**1.45**	[1.17; 1.79]
left-right self-placement scale			**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]
openness of the political system					0.25	[0.06; 1.05]	0.79	[0.164; 3.84]	0.26	[0.06; 1.11]
edRD: openness of the political system									**1.12**	[1.05; 1.19]
Random Effects										
σ^2	3.29		3.29		3.29		3.29		3.29	
τ_{00}	1.56 cntry		1.66 cntry		1.43 cntry		1.59 cntry		1.45 cntry	
τ_{11}							0.00 cntry.edRD		0.00 cntry.edRD	
ρ_{01}							-0.67 cntry		-0.60 cntry	
ICC	0.32		0.33		0.30		0.33		0.31	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	24182		22387		22387		22387		22387	
Marginal R^2 / Conditional R^2	0.000 / 0.322		0.073 / 0.384		0.115 / 0.383		0.077 / 0.383		0.119 / 0.391	
Deviance	20635.387		17947.118		17943.774		17916.628		17906.594	
AIC	20639.387		17965.118		17963.774		17940.628		17932.594	
log-Likelihood	-10317.694		-8973.559		-8971.887		-8958.314		-8953.297	

Note. Odds Ratios and their 95% confidence intervals are displayed.

Bold are effects reaching conventional significance level.

Table 3c

The Relationship between Educational Relative Deprivation and Voting for Populist Parties across 23 Countries. Inequality is used as a Country-Level Predictor

Predictors	Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party	
	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	**0.27**	[0.164; 0.451]	**0.32**	[0.184; 0.539]	**0.31**	[0.18; 0.54]	**0.31**	[0.18; 0.54]	**0.32**	[0.19; 0.55]
Educational Relative Deprivation (EdRD)			1.00	[0.985; 1.02]	1.00	[0.985; 1.02]	1.02	[0.990; 1.05]	1.02	[0.989; 1.04]
gender			**1.25**	[1.16; 1.34]	**1.25**	[1.16; 1.34]	**1.25**	[1.16; 1.35]	**1.25**	[1.16; 1.35]
education			**0.84**	[0.824; 0.865]	**0.84**	[0.82; 0.87]	**0.85**	[0.83; 0.87]	**0.85**	[0.82; 0.87]
unemployed			**1.36**	[1.25; 1.48]	**1.36**	[1.25; 1.48]	**1.35**	[1.24; 1.48]	**1.35**	[1.24; 1.48]
pensions			**0.73**	[0.674; 0.800]	**0.73**	[0.67; 0.80]	**0.74**	[0.67; 0.80]	**0.73**	[0.67; 0.80]
benefits			**1.49**	[1.20; 1.83]	**1.49**	[1.20; 1.83]	**1.45**	[1.18; 1.79]	**1.46**	[1.18; 1.80]
left-right			**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]	**1.23**	[1.21; 1.25]
GINI					0.99	[0.87; 1.13]	0.94	[0.85; 1.05]	0.99	[0.87; 1.13]
EdRD:GINI									1.00	[0.99; 1.002]
Random Effects										
σ²	3.29		3.29		3.29		3.29		3.29	
τ00	1.56 cntry		1.66 cntry		1.65 cntry		1.70 cntry		1.66 cntry	
τ11							0.00 cntry.eRDGMC		0.00 cntry.eRDGMC	
ρ01							-0.75 cntry		-0.74 cntry	
ICC	0.32		0.33		0.33		0.35		0.34	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	24182		22387		22387		22387		22387	
Marginal R² / Conditional R²	0.000 / 0.322		0.073 / 0.384		0.074 / 0.384		0.080 / 0.400		0.074 / 0.390	
Deviance	20635.387		17947.118		17947.100		17915.609		17914.019	
AIC	20639.387		17965.118		17967.100		17939.609		17940.019	
log-Likelihood	-10317.694		-8973.559		-8973.550		-8957.804		-8957.010	

Note. Odds Ratios and their 95% confidence intervals are displayed.

Bold are effects reaching conventional significance level.

Table 4a

The Relationship between All Types of Relative Deprivation Perceptions and Voting for Populist Parties across 23 Countries. GDP per Capita PPP is used as a Country-Level Predictor

Predictors	Voting for a Populist Party (Fixed effects, 1st level) Odds Ratios	CI	Voting for a Populist Party (Fixed effects, 2nd level) Odds Ratios	CI	Voting for a Populist Party (Random Slope of EcRD) Odds Ratios	CI	Voting for a Populist Party (Random Slope of ORD) Odds Ratios	CI	Voting for a Populist Party (Random Slope of EdRD) Odds Ratios	CI	Voting for a Populist Party [a] (Random Slopes of all deprivation types) Odds Ratios	CI
(Intercept)	**0.31**	[0.18; 0.53]	**0.30**	[0.19; 0.49]	**0.31**	[0.19; 0.50]	**0.31**	[0.19; 0.50]	**0.31**	[0.19; 0.51]	**0.31**	[0.19; 0.51]
cRD	**1.07**	[1.03; 1.12]	**1.07**	[1.03; 1.11]	**1.08**	[1.003; 1.16]	**1.07**	[1.03; 1.11]	**1.07**	[1.03; 1.11]	**1.07**	[1.003; 1.15]
ORD	1.02	[0.999; 1.03]	1.02	[0.999; 1.03]	1.02	[0.999; 1.03]	1.02	[0.993; 1.04]	1.02	[0.999; 1.04]	1.01	[0.99; 1.04]
EdRD	0.99	[0.97; 1.01]	0.99	[0.97; 1.01]	0.98	[0.97; 1.004]	0.99	[0.97; 1.01]	1.00	[0.97; 1.03]	0.999	[0.97; 1.03]
gender	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.28**	[1.18; 1.39]
education	**0.84**	[0.82; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.81; 0.86]	**0.84**	[0.81; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.81; 0.86]
unemployed	**1.29**	[1.18; 1.42]	**1.29**	[1.18; 1.42]	**1.30**	[1.18; 1.43]	**1.29**	[1.18; 1.42]	**1.29**	[1.17; 1.42]	**1.30**	[1.18; 1.43]
pensions	**0.72**	[0.66; 0.79]	**0.72**	[0.66; 0.79]	**0.73**	[0.67; 0.81]	**0.72**	[0.65; 0.79]	**0.72**	[0.66; 0.79]	**0.73**	[0.66; 0.80]
benefits	**1.47**	[1.17; 1.85]	**1.48**	[1.17; 1.86]	**1.46**	[1.16; 1.84]	**1.45**	[1.15; 1.83]	**1.45**	[1.15; 1.83]	**1.43**	[1.14; 1.81]
left-right	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.27]	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.26]
affluence			**0.17**	[0.04; 0.73]	0.23	[0.04; 1.25]	0.26	[0.05; 1.51]	0.45	[0.10; 1.92]	0.36	[0.08; 1.71]

Random Effects

σ^2	3.29	3.29	3.29	3.29	3.29	3.29
τ_{00}	1.61 cntry	1.28 cntry	1.30 cntry	1.31 cntry	1.38 cntry	1.35 cntry
τ_{11}			0.02 cntry.pRDGMC	0.00 cntry.jRDGMC	0.00 cntry.eRDGMC	0.02 cntry.pRDGMC
						0.00 cntry.jRDGMC
						0.00 cntry.eRDGMC
ρ_{01}			-0.23 cntry	-0.36 cntry	-0.72 cntry	-0.23
						-0.02
						-0.76
ICC	0.33	0.28	0.29	0.29	0.30	0.30
N	23 cntry	23 cntry	23 cntry	23 cntry	23 cntry	23 cntry
Observations	19021	19021	19021	19021	19021	19021
Marginal R^2 / Conditional R^2	0.079 / 0.381	0.138 / 0.380	0.122 / 0.375	0.115 / 0.370	0.096 / 0.369	0.103 / 0.374
Deviance	15027.857	15022.799	14994.043	15013.046	15001.550	14968.749
AIC	15049.857	15046.799	15022.043	15041.046	15029.550	15010.749
log-Likelihood	-7513.928	-7511.400	-7497.022	-7506.523	-7500.775	-7484.375

Note. 'EcRD' stands for perceptions of economic relative deprivation, 'ORD' – perceptions of occupational relative deprivation, 'EdRD' – educational relative deprivation, "RD"- relative deprivation.

Odds Ratios and their 95% confidence intervals (CI) are displayed.

Bold are effects reaching conventional significance level.

[a] The model had convergence issues.

Table 4b

The Relationship between All Types of Relative Deprivation Perceptions and Voting for Populist Parties across 23 Countries. Openness of Political System is used as a Country-Level Predictor

Predictors	Voting for a Populist Party (Fixed effects, 2nd level)		Voting for a Populist Party (Random Slope of EcRD)		Voting for a Populist Party (Random Slope of ORD)		Voting for a Populist Party (Random Slope of EdRD)		Voting for a Populist Party [a] (Random Slopes of all deprivation types)	
	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	**0.32**	[0.19; 0.52]	**0.32**	[0.19; 0.53]	**0.31**	[0.19; 0.52]	**0.31**	[0.19; 0.53]	**0.32**	[0.19; 0.54]
Perceptions of Economic Relative Deprivation	**1.07**	[1.03; 1.11]	**1.08**	[1.004; 1.16]	**1.07**	[1.03; 1.11]	**1.07**	[1.03; 1.11]	**1.08**	[1.005; 1.15]
Perceptions of Occupational Relative Deprivation	1.02	[0.999; 1.03]	1.02	[0.999; 1.03]	1.02	[0.994; 1.04]	1.02	[0.999; 1.04]	1.02	[0.993; 1.04]
Perceptions of Educational Relative Deprivation	0.99	[0.968; 1.01]	0.98	[0.966; 1.004]	0.99	[0.971; 1.01]	1.00	[0.973; 1.03]	1.00	[0.97; 1.03]
gender	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.28**	[1.18; 1.39]
education	**0.84**	[0.82; 0.86]	**0.84**	[0.81; 0.86]	**0.84**	[0.81; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.81; 0.86]
unemployed	**1.29**	[1.18; 1.42]	**1.30**	[1.18; 1.43]	**1.29**	[1.18; 1.42]	**1.29**	[1.17; 1.42]	**1.30**	[1.18; 1.43]
pensions	**0.72**	[0.65; 0.79]	**0.73**	[0.67; 0.81]	**0.72**	[0.65; 0.79]	**0.72**	[0.66; 0.79]	**0.73**	[0.66; 0.80]
benefits	**1.47**	[1.17; 1.86]	**1.46**	[1.16; 1.84]	**1.45**	[1.15; 1.82]	**1.44**	[1.15; 1.82]	**1.43**	[1.13; 1.80]
Left-right self-placement scale	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.27]	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.27]
Openness of political system	0.26	[0.06; 1.08]	0.40	[0.08; 2.04]	0.46	[0.09; 2.25]	0.77	[0.18; 3.18]	0.72	[0.16; 3.28]
Random Effects										
σ^2	3.29		3.29		3.29		3.29		3.29	
τ_{00}	1.39 cntry		1.43 cntry		1.44 cntry		1.54 cntry		1.54 cntry	
τ_{11}			0.02 cntry.pRDGMC		0.00 cntry.jRDGMC		0.00 cntry.eRDGMC		0.02 cntry.pRDGMC	
									0.00 cntry.jRDGMC	
									0.00 cntry.eRDGMC	
ρ_{01}			-0.30 cntry		-0.47 cntry		-0.76 cntry		-0.33	
									-0.09	
									-0.78	
ICC	0.30		0.31		0.31		0.33		0.33	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	19021		19021		19021		19021		19021	
Marginal R^2 / Conditional R^2	0.120 / 0.382		0.101 / 0.378		0.096 / 0.374		0.083 / 0.381		0.084 / 0.386	
Deviance	15024.668		14995.605		15014.279		15002.553		14970.153	
AIC	15048.668		15023.605		15042.279		15030.553		15012.153	
log-Likelihood	-7512.334		-7497.803		-7507.140		-7501.277		-7485.077	

Note. Odds Ratios and their 95% confidence intervals (CI) are displayed.

Bold are effects reaching conventional significance level.

[a] The model had convergence issues.

Table 4c

The Relationship between All Types of Relative Deprivation Perceptions and Voting for Populist Parties across 23 Countries. Inequality is used as a Country-Level Predictor

| Predictors	Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party		Voting for a Populist Party	
	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	**0.31**	[0.18; 0.53]	**0.31**	[0.18; 0.54]	**0.31**	[0.18; 0.53]	**0.31**	[0.18; 0.53]	**0.31**	[0.18; 0.54]
Perceptions of Economic Relative Deprivation	**1.07**	[1.03; 1.12]	**1.08**	[1.01; 1.17]	**1.07**	[1.03; 1.11]	**1.07**	[1.03; 1.11]	**1.08**	[1.01; 1.15]
Perceptions of Occupational Relative Deprivation	1.02	[0.999; 1.03]	1.02	[0.999; 1.03]	1.02	[0.996; 1.04]	1.02	[0.999; 1.04]	1.02	[0.995; 1.04]
Perceptions of Educational Relative Deprivation	0.99	[0.968; 1.01]	0.98	[0.966; 1.004]	0.99	[0.971; 1.01]	1.00	[0.97; 1.03]	1.00	[0.972; 1.03]
gender	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.27**	[1.17; 1.38]	**1.28**	[1.18; 1.39]
education	**0.84**	[0.82; 0.86]	**0.84**	[0.81; 0.86]	**0.84**	[0.81; 0.86]	**0.84**	[0.82; 0.86]	**0.84**	[0.81; 0.86]
unemployed	**1.29**	[1.18; 1.42]	**1.30**	[1.18; 1.43]	**1.29**	[1.18; 1.42]	**1.29**	[1.17; 1.42]	**1.30**	[1.18; 1.43]
pensions	**0.72**	[0.66; 0.79]	**0.73**	[0.67; 0.81]	**0.72**	[0.65; 0.79]	**0.72**	[0.66; 0.79]	**0.73**	[0.67; 0.80]
benefits	**1.47**	[1.17; 1.85]	**1.46**	[1.16; 1.84]	**1.44**	[1.14; 1.81]	**1.44**	[1.15; 1.82]	**1.42**	[1.13; 1.79]
left-right	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.27]	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.26]	**1.24**	[1.22; 1.26]
GINI	0.99	[0.87; 1.13]	0.98	[0.87; 1.11]	0.93	[0.83; 1.05]	0.94	[0.85; 1.04]	0.93	[0.84; 1.03]
Random Effects										
σ^2	3.29		3.29		3.29		3.29		3.29	
τ_{00}	1.61 cntry		1.63 cntry		1.69 cntry		1.68 cntry		1.71 cntry	
τ_{11}			0.02 cntry.pRDGMC		0.00 cntry.jRDGMC		0.00 cntry.eRDGMC		0.02 cntry.pRDGMC	
									0.00 cntry.jRDGMC	
									0.00 cntry.eRDGMC	
ρ_{01}			-0.45 cntry		-0.75 cntry		-0.86 cntry		-0.38	
									-0.23	
									-0.82	
ICC	0.33		0.34		0.34		0.34		0.35	
N	23 cntry		23 cntry		23 cntry		23 cntry		23 cntry	
Observations	19021		19021		19021		19021		19021	
Marginal R^2 / Conditional R^2	0.079 / 0.381		0.080 / 0.389		0.088 / 0.401		0.087 / 0.401		0.088 / 0.410	
Deviance	15027.843		14996.703		15013.975		15001.158		14968.399	
AIC	15051.843		15024.703		15041.975		15029.158		15010.399	
log-Likelihood	-7513.922		-7498.352		-7506.988		-7500.579		-7484.200	

Figure 1

Cross-Level Interactions: How Affluence Moderates the Relationships between Perceptions of

Economic, Occupational, and Educational Relative Deprivation and Voting for Populist Parties
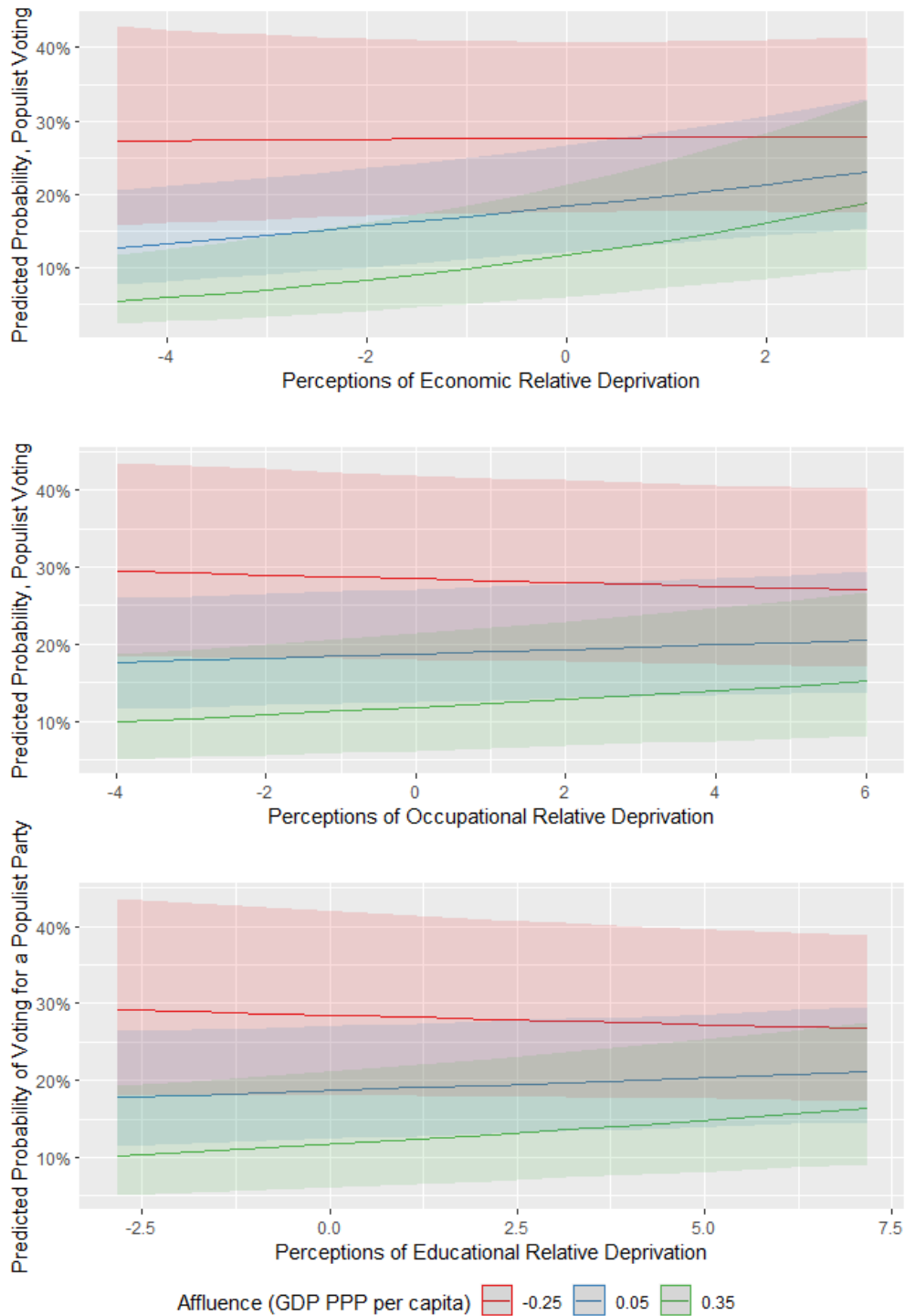
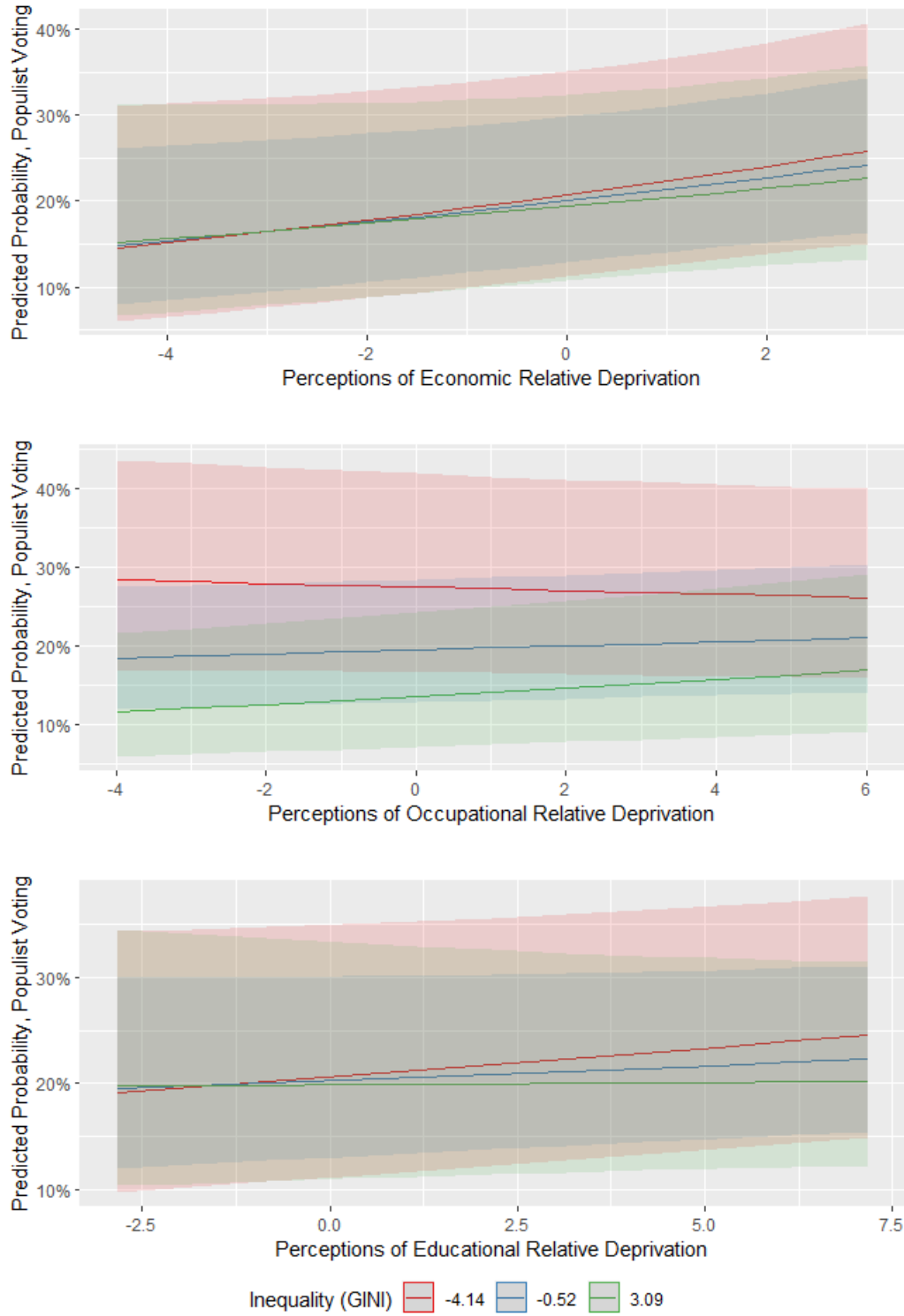*Note.* Means, and +- one standard deviation of Affluence are plotted.

Figure 2

Cross-Level Interactions: How Openness of the Political System Moderates the Relationships between Perceptions of Economic, Occupational, and Educational Relative Deprivation and Voting for Populist Parties
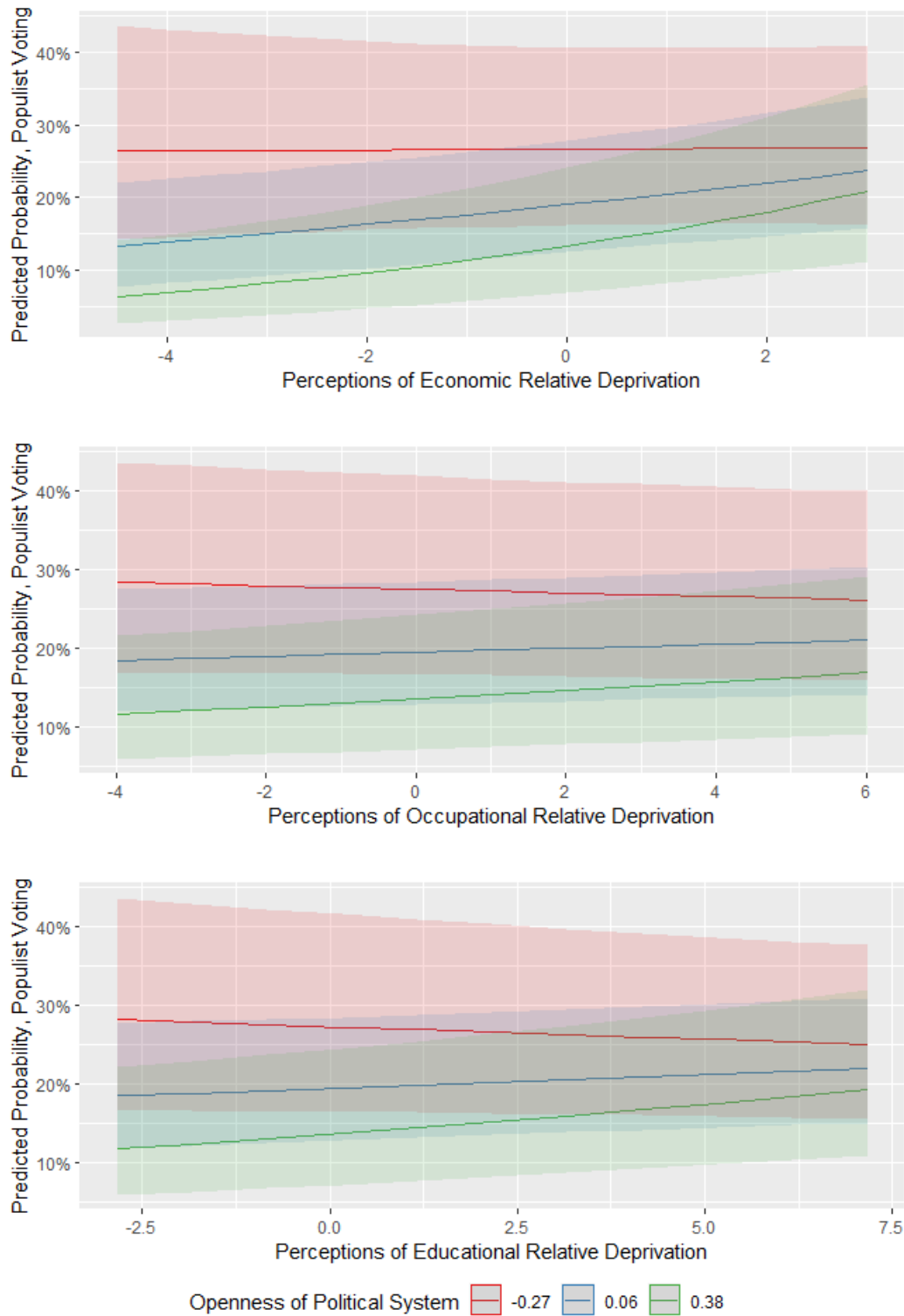
Note. Means, and +- one standard deviation of Openness of Political System are plotted.

Figure 3

Cross-Level Interactions: How Inequality Moderates the Relationships between Perceptions of Economic, Occupational, and Educational Relative Deprivation and Voting for Populist Parties

Note. Means, and +- one standard deviation of Inequality are plotted.

Appendix 2.4 – Random Effects for Selected Multilevel Models

Figure 1

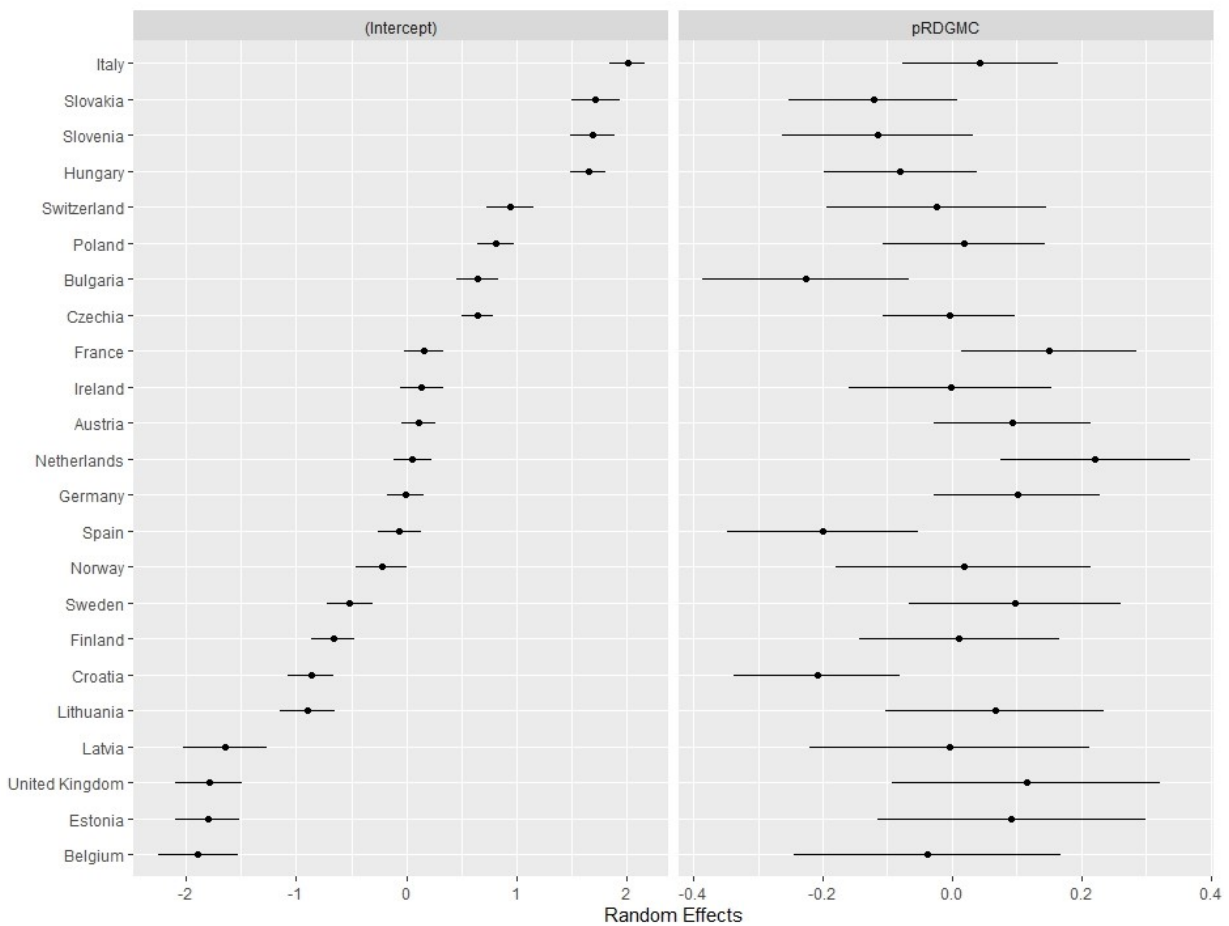*Random Intercepts and Slopes for Perceptions of Economic Relative Deprivation (See Table 1a, Model 3)*

Figure 2

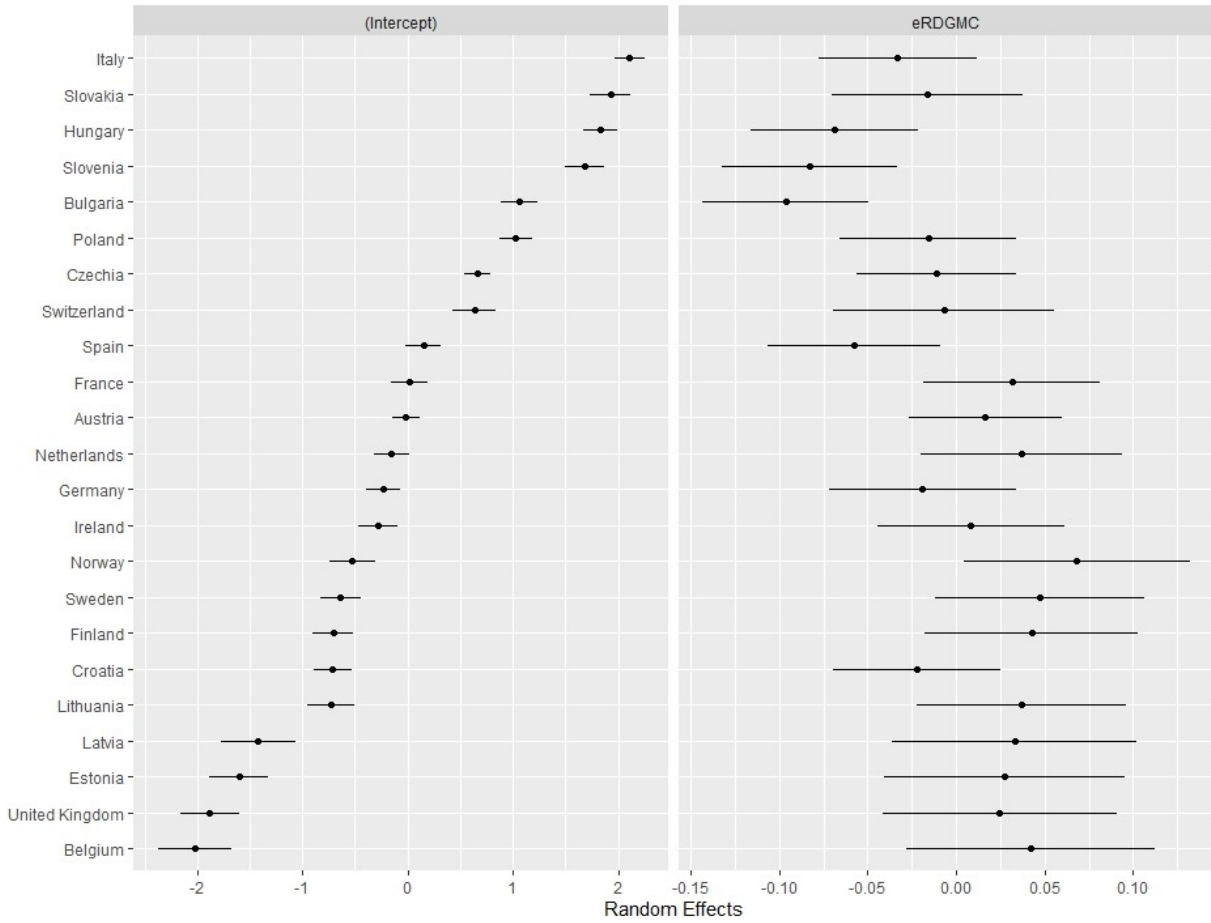*Random Intercepts and Slopes for Perceptions of Occupational Relative Deprivation (See Table 2a,*

Model 3)
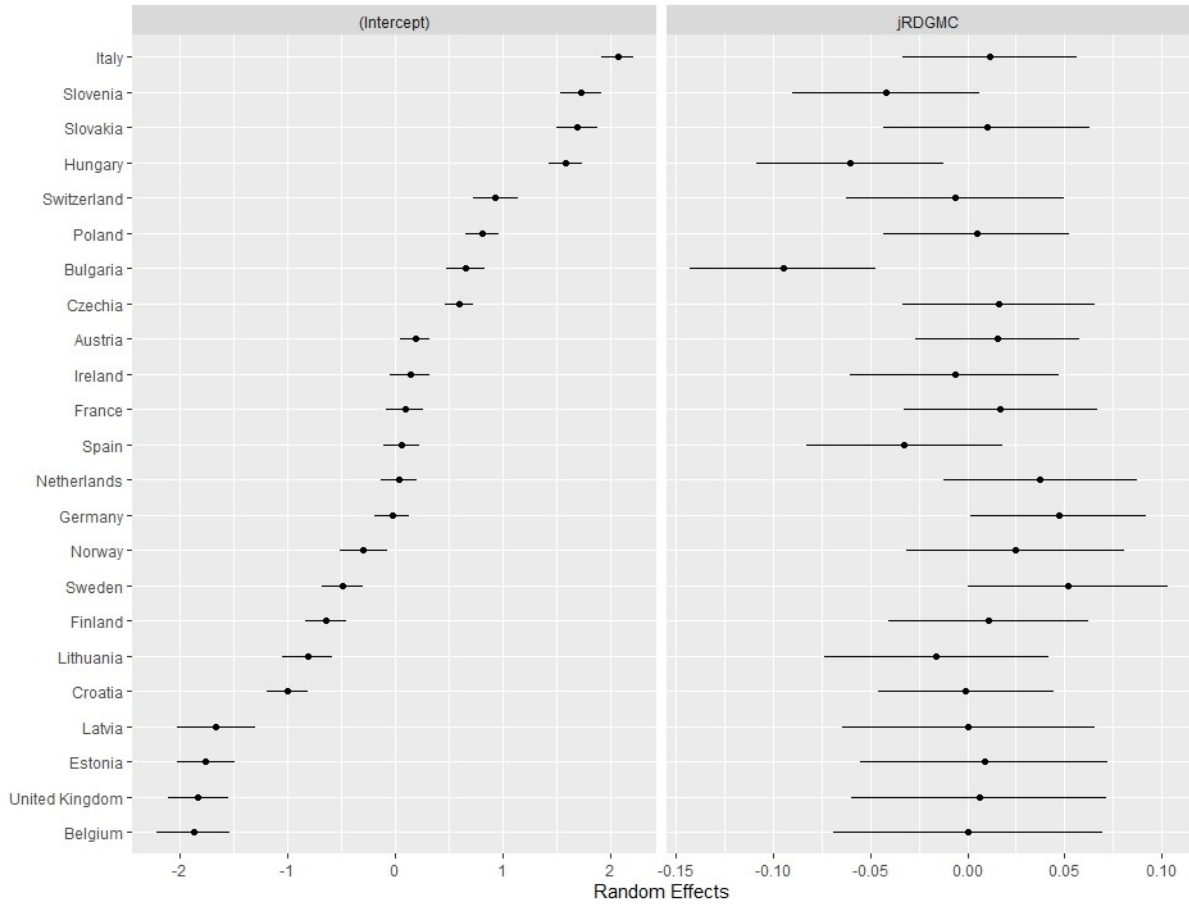
Figure 3

Random Intercepts and Slopes for Perceptions of Educational Relative Deprivation (See Table 3a,

Model 3)

Appendix 2.5 - Multinomial Regression Analysis Explaining Voting for Populist Left and Populist Right Parties: Summary of Selected Variables

Table 1

List of Populist Left and Populist Right Parties: Data from PopuList 1.0 and 2.0 (Rooduijn et al., 2019) Merged with Parties Respondents Voted for in the ESS Round 9 Data (2021)

Country		Populist Parties	N, populist left	N, populist right
Germany	Linke AfD	The Left **(L)** Alternative for Germany **(R)**	107	96
Spain	Unidas Podemos, ECP VOX	Podemos (Podemos + United Left + other) **(L)** In Common We Can **(L)** Voice **(R)**	135	103
France	FI DLR|DLF FN / RN	France Unbowed **(L)** Republic Arise | France Arise **(R)** National Front / Rally **(R)**	80	123
Netherlands	SP PVV FvD	Socialist Party (Netherlands) **(L)** Party for Freedom **(R)** Forum for Democracy **(R)**	94	100
Slovenia	L SDS SNS	The Left **(L)** Slovenian Democratic Party **(R)** Slovenian National Party **(R)**	52	172

Note. Frequencies were weighted by dweight.

"L" stands for "populist left", and "R" – for "populist right".

Table 2

Means, standard deviations, and correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. economic deprivation	-0.07	1.14											
2. occupational deprivation	-0.06	2.91	.18**										
3. educational deprivation	-0.12	2.77	.18**	.50**									
4. populist vote[a]	1192	23%	.12**	.11**	.05**								
5. populist right[a]	594	11.5%	.08**	.08**	.07**	.66**							
6. populist left[a]	468	9%	.04**	.03*	.00	.58***	-						
7. gender (male)[a]	4446	49.3%	-.07**	-.12**	-.07**	.02	.05**	.00					
8. education	-0.12	1.90	-.18**	-.27**	-.37**	-.10**	-.13**	.00	.04**				
9. unemployed[a]	2903	32.2%	.10**	.16***	.11***	.08***	.05***	.07**	-.03*	-.03*			
10. pensions[a]	2300	25.5%	.01	.19**	.17**	-.05***	-.02	-.07***	-.04***	-.18***	-.09***		
11. benefits[a]	445	5%	.04**	.09**	.08**	.03+	-.01	.06**	-.02+	-.09***	.15***	-	
12. left-right	-0.37	2.15	-.03*	-.01	.01	.02	.30**	-.28**	.04**	-.07**	-.07**	.04**	-.03*

Note. M and *SD* are used to represent mean and standard deviation, respectively.

* indicates $p < .05$. ** indicates $p < .01$. + indicates $p < .1$.

[a] Frequency and percentage are given for a binary variable. Cramer's V is given as a measure of association (these fields are marked grey).

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Table 3

Average Marginal Effect of Perceptions of Relative Deprivation on Non-Populist, Populist Left, and Populist Right Voting

Voting	Model without socio-demographic controls			Model with socio-demographic controls		
	Populist left	Populist right	Non-populist	Populist left	Populist right	Non-populist
Perceptions of economic relative deprivation	0.009	0.015	-0.024	0.005	0.009	-0.015
Perceptions of occupational relative deprivation	0.003	0.003	-0.007	0.002	0.004	-0.006
Perceptions of educational relative deprivation	-0.004	0.004	0.001	-0.003	0.000	0.003

Note. Since non-populist voting comprises diverse parties with different political orientation, it is not meaningful to analyze it on its own.

Appendix 3A. Questionnaire for Study 1 in Chapter 4

Questionnaire

1   prolific id

Before you start the survey, please switch off your phone, music and e-mails so you focus on this study.

Thank you!

First, please enter your Prolific ID.

Your Prolific ID contains 24 characters.

[   ]

2   Instructions

Thank you for choosing to participate in the study!

Here are some instructions about the study. Please, read them carefully before you proceed.

We ask you to read some text attentively and will then ask a number of questions. Please, take your time to read the text, and not just skim through the lines.

Please answer all the questions. When anwering the questions, mind that there are no "good" or "bad" answers. Please take your time to read each question thoroughly, and answer them in the order they are presented. This study is confidential and anonymous. So we ask you to give honest answers without fear of being judged for them later on. Please, answer all questions to the best of your ability.

We are very grateful for you taking the participation in this study seriously. The software will detect random answers, and in this case, or if you interrupt the study, you won't get any payment for participation.

Your participation in this study has no reasonable foreseeable risks. However, in case you feel uncomfortable, you can stop participating. However, as we said, you will be paid only in case you complete the whole study.

At the end of the session, we will provide more detailed information regarding the background of the study. Also, if you like, a summary of the results of the study will be sent to you once they are available.

Thank you for your participation!

3   Instruction Emotions

We are interested in your attitudes and feelings towards some important issues and processes in the society today.

We will show you an article from mass media on a certain issue. After you have read the article, there will be several questions describing emotions which you could feel when reading the situation. It may be, however, that you will not experience any emotions.

Before you read the article, we will show you an instruction on how to answer the questions about your feelings. Please, take your time to read it carefully, so that you won`t have any difficulties when answering the questions on your own.
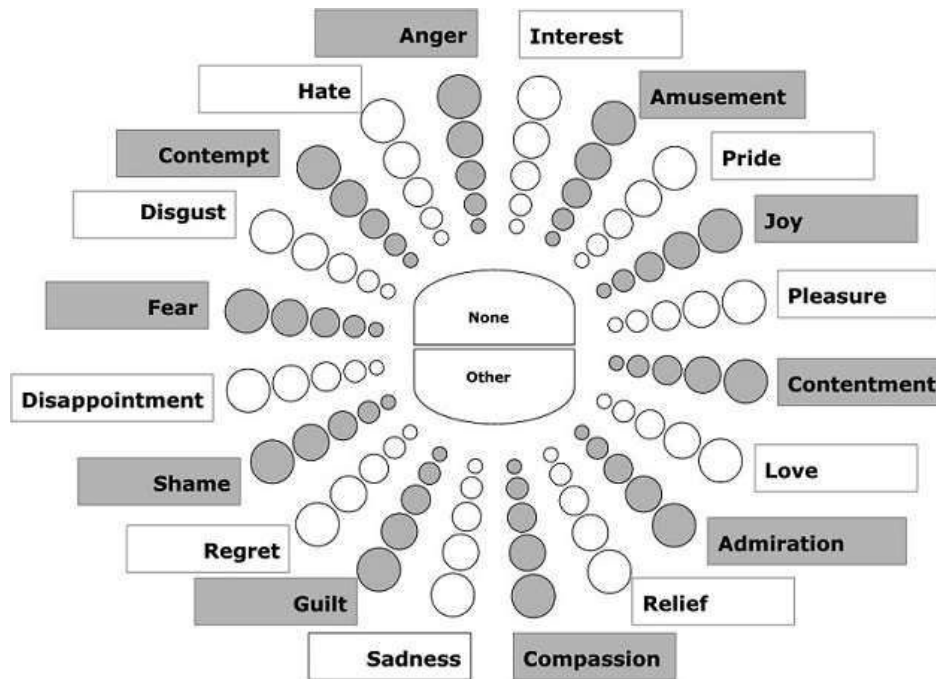
Let's start.

4   blank page

Instruction

In order to make it easier for you to report the type of emotion you experience, 20 different emotions are arranged in a circular fashion on the graph below (Graph 1).
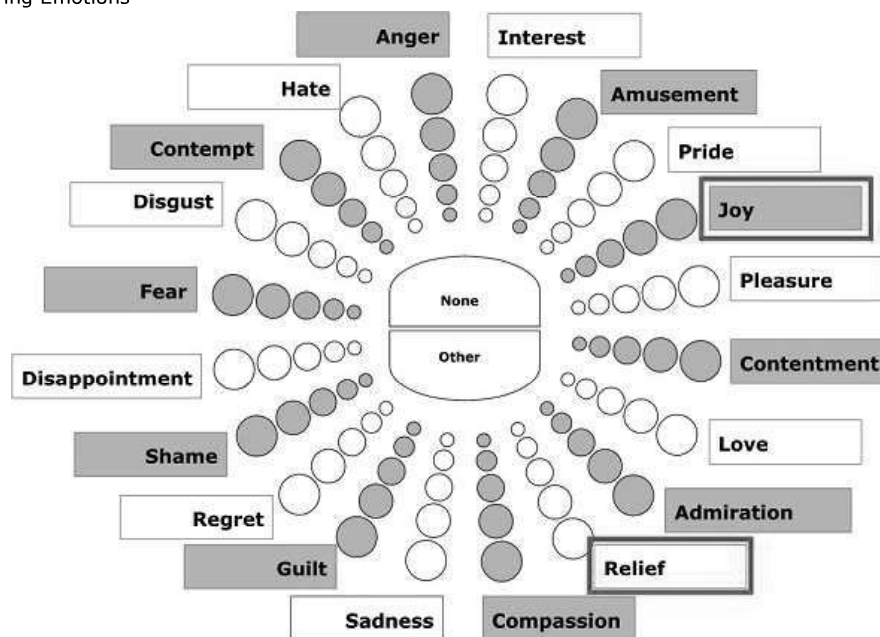
Please note that the words provided often represent a large "emotion family" and may thus refer to a whole range of similar emotions. Thus, the Anger family also covers emotions such as rage, vexation, annoyance, indignation, fury, exasperation, or being cross or mad; the Fear family includes anxiety, worry, apprehensiveness, fright, or panic. Some of the words, such as love, hate, or guilt, can be used to refer to long-term affective states; but in this case checking those labels means that you have had a salient temporary feeling that belongs to the families of Love, Hate, or Guilt.

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Graph 1. Measure of Emotions

5   blank page1

First identify the emotion family that seems to best correspond to the kind of feeling you may experience when reading the article we provide you with. Define the emotion family (or emotion families) even though the words on the graph may not capture all facets of your experience.

Our emotions are sometimes blended or mixed and may contain many different components. So you could experience not just one, but also several emotions.

For example, you have just learnt from your boss that your wage will be increased. You feel joy (you were longing for it) and relief (now you can afford buying a new car). Now, you would choose the emotions indicated in red.

Graph 2. Measuring Emotions

6   blank page2

Next, you determine with which intensity you experienced the respective emotion and check one of the circles in the "spike" corresponding to this emotion family – the bigger the circle and the closer it is to the rim of the wheel, the stronger your emotional experience (as
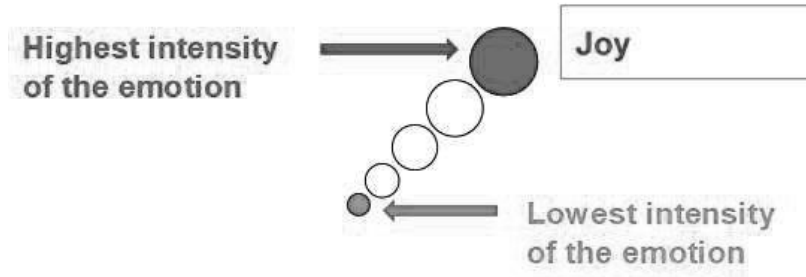
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portrayed at Graph 3).

Different intensities often correspond to different members of an emotion family. Thus, irritation can be considered a less intense emotion belonging to the Anger family and anxiety a less intense emotion belonging to the Fear family.

For less intense emotions, please check one of the smaller circles in the spike. If the emotion was very intense, please check the largest circle of the spike.
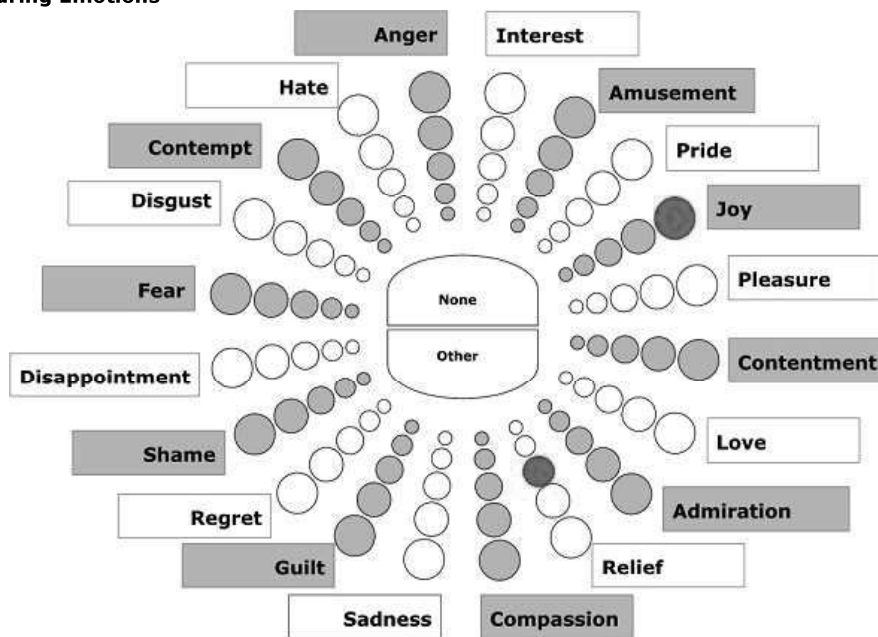
For emotions that you did not experience at all, do not check any of the circles.

Graph 3. Defining the Intensity of the Emotions.

For example, you experienced the highest degree of pleasure (indicated by the biggest circle), and a medium level of relief (indicated by a medium sized circle).
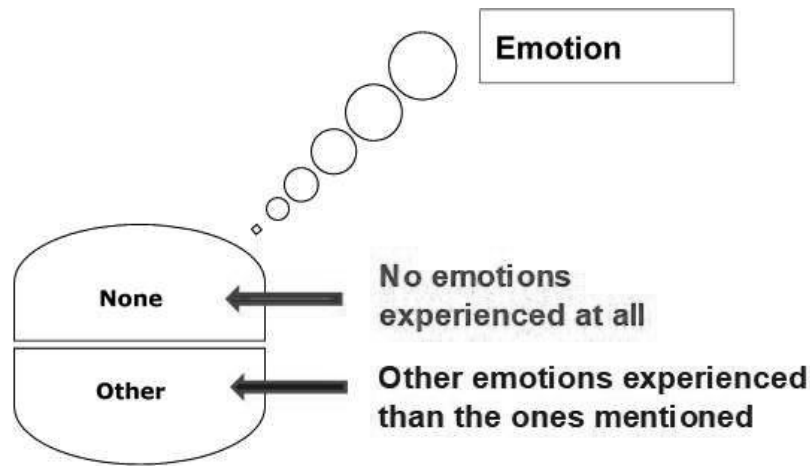
Graph 4. Measuring Emotions

---

7   **blank page3**

If you did not feel any emotion at all, please check the upper half circle in the center of the wheel (labeled "None"). If you experienced an emotion that is very different from any of the emotions in the wheel, please check the lower half circle (labeled "Other").

Graph 5. Measuring Emotions.

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If you understood these instructions, please press the button "Continue".

If you want to go back to the instructions on how to answer the questions with emotions, select the corresponding version.

○   I need to go back to the instructions
○   The instructions are clear

---

8   Intro_text

Please, now read the following article carefully. Afterwards, we will ask you about the emotions you felt when reading it and some more questions about this article. You will not have the possibility to go back to the article.

9.1   Text

Single mothers suffering from benefits cuts, tax paradise for the rich

The investigation by the Resolution Foundation thinktank reveals that 10% of the richest households will benefit most from the new income tax cuts, whereas endangered groups and especially single mums will hopelessly shift further to the very bottom of income distribution.

Income tax cuts for millions of workers announced in Philip Hammond's budget will "overwhelmingly benefit richer households", analysis has found, with almost half set to go to the top 10% of households.

The analysis by the Resolution Foundation thinktank found that welfare cuts would continue to affect the poorest households, despite Hammond's announcement that austerity was coming to an end.

Three-quarters of the £12bn in welfare cuts announced after the 2015 election remain government policy.

The overall package of tax and benefit changes announced since 2015 will deliver an average gain of £390 for the richest fifth of households in 2023-24, the thinktank found, compared to an average loss of £400 for the poorest fifth.

The income tax cuts announced by Hammond will cost £2.7bn next year. The 20% tax band, which currently starts on earnings above £11,850, will rise to £12,500 next year. The higher rate 40% tax band will begin at £50,000 from April, a jump from £46,350.

In total, 84% of the income tax cuts will go to the top half of the income distribution next year, rising to 89% by the end of the parliament.

At the same time, welfare cuts to come include a £1.5bn benefit freeze this April that will mean a £200 loss to a couple with children in the bottom half of the income distribution.

Single mums make up the overwhelming majority of those hit by the government's benefit cap, Labour analysis of Department for Work and Pensions (DWP) data shows.

Women living alone with at least one dependent child account for over 85 per cent of all households who have had their benefits capped.

They comprise 114,337 out of a total of 134,044 households who have had benefits limited to £20,000 a year and £23,000 a year in Greater London.

This number is more than double the 50,000 single parents that were reported in August last year to be facing a drop in income due to the cap.

The cap stood at £26,000 a year when first implemented in 2013 by then chancellor George Osborne, but was lowered to the current level in November 2016, which led to the number of families affected increasing fourfold.

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Single parent families charity Gingerbread's policy officer Laura Dewar said: "The benefit cap was designed to 'improve work incentives' but instead it is pushing many single parents and their children into further poverty.

"The Government's own figures show that the majority of single parents are not securing work to escape the cap, hardly surprising, as most of them have young children.

"Without sustainable work, reasonable childcare or affordable housing these families face a shortfall in rent, leaving them exposed to eviction and poverty. With the New Year, children's well-being must be put first and the benefit cap scrapped, for single parents particularly for those with pre-school aged children."

The rich are getting richer, the poorer continue to shift further to the bottom.

10.1   Text_2

Chancellor unveils surprise income tax cuts that will save working Brits HUNDREDS

From April, 26million basic rate tax payers will get a £130 a year tax cut and six million higher rate taxpayers on the 40p band will see cash back of £495 a year

Philip Hammond doled out surprise income tax cuts worth hundreds of pounds next year to Britain's 32million workers on October, 30th, 2018.

Billed as another end of austerity boost, the Chancellor announced that personal tax-free thresholds will leap up from April 2019.

The popular move is a Tory manifesto promise, but a major relaxation of Government spending rules means he's able to deliver it a year earlier than the 2020 date it was originally promised.

From this April, no income tax will have to be paid on the first £12,500 of annual wages, up from the current threshold of £11,850.

That delivers a £130 a year tax cut to 26million basic rate tax payers.

And the higher rate of tax will now only have to be paid on salaries of £50,000 year, up from £46,350 at the moment.

Six million higher rate taxpayers on the 40p band will see cash back of £495 a year.

And there will be further income tax cuts in each of the following four years, Mr Hammond also announced, when the thresholds go up in line with inflation.

The announcement was the big surprise rabbit in the Chancellor's jumbo 8,800-word Budget speech, which took 72 minutes to deliver.

Announcing it, Mr Hammond described it as "the hard work of the British people paying off in hard cash in their pockets".

The move will cost the Exchequer a £2billion a year, and a whopping £10billion by 2024.

In total, it will mean the Tory government has taken a total of 1.7million people out of paying any income tax altogether since 2015.

The income tax cut was also by far the biggest bazooka in Mr Hammond's jumbo package to tackle Britain's spiralling cost of living.

He also spent billions freezing fuel duty for the ninth year in a row – another win in a long running Sun campaign – bringing the total saving to the average car driver to over £1,000 since they started in 2010.

The Chancellor ordered all bosses to pay a minimum wage of £7.83 to £8.21, a 4.9% hike, from next April as well.

And he scrapped planned rises in the levies on beer and spirits, as well as pouring billions back into Universal Credit to help the nation's struggling workers.
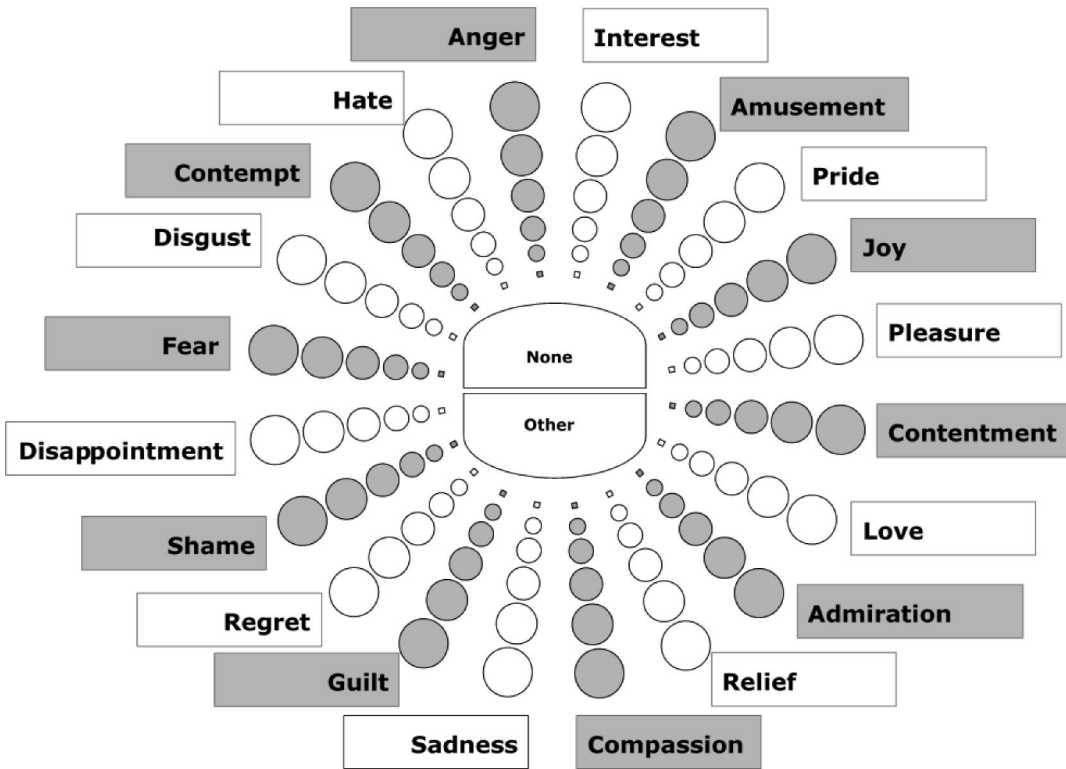
Mr Hammond told delighted Tory MPs: "I recognise that many people are feeling pressure on their household budgets now.

"It's only by dealing with our debts and tackling the long term challenges our country faces, that we can sustainably raise wages and living standards."

To sum up: The £20billion NHS injection, the £1billion bailout for defence, hundreds of millions for our pock-marked roads and hard-up schools. Another £1.7billion to iron out Universal Credit problems. A near five per cent hike in the minimum wage. A big, welcome cut in business rates for struggling firms.

When thinking about the situation described above, please, tell us how you felt.
Please choose one or several emotions that you felt.
For emotions that you did not experience at all, do not check any of the circles.
If you did not feel any emotion at all, please check the upper half circle in the center of the wheel (labeled "None").
If you experienced an emotion that is very different from any of the emotions in the wheel, please check the lower half circle (labeled "Other").

Now, please find the emotion or emotions that you felt and indicate their intensity:

12.1 Other emotion

You mentioned, that you experienced a different emotion or emotions. Could you please specify which one(s)?

Please write (if applicable) each emotion or your comments in a separate line.

Emotion 1	
Emotion 2	
Emotion 3	

13.1　Manipulation checks

To what extent do you agree with the following statements?

Please, give your evaluation on a scale from 1 to 7, where 1 stands for "completely disagree", 7 for "completely agree".

	1 – Completely disagree	2	3	4 – Neither agree nor disagree	5	6	7 – Completely agree
The package of tax and benefit changes described in the article puts poor single parent families in a better condition compared to the richest families	○	○	○	○	○	○	○
The package of tax and benefit changes described in the article puts poor single parent families in a worse condition compared to the richest families	○	○	○	○	○	○	○
The package of tax and benefit changes described in the article will increase the gap between the rich and the poor	○	○	○	○	○	○	○
The package of tax and benefit changes described in the article will decrease the gap between the rich and the poor	○	○	○	○	○	○	○
The package of tax and benefit changes described in the article is just	○	○	○	○	○	○	○
The package of tax and benefit changes described in the article is fair	○	○	○	○	○	○	○
The described problem of the gap between the rich and the poor will get better	○	○	○	○	○	○	○
The described problem of the gap between the rich and the poor will get worse	○	○	○	○	○	○	○
The problem of the gap between the rich and the poor described in the article is of high importance to you	○	○	○	○	○	○	○
The problem of the gap between the rich and the poor described in the article is of relevance to you or your closest ones (family or friends)	○	○	○	○	○	○	○

To what extent are any of these actors responsible for the new package of tax and benefit changes described in the article?

Please, give your evaluation on a scale from 1 to 7, where 1 stands for "not at all responsible", 7 for "highly responsible".

	1 – Not at all responsible	2	3	4 – neither responsible nor irresponsible	5	6	7 – Highly responsible	not applicable
government	○	○	○	○	○	○	○	○
the richest families	○	○	○	○	○	○	○	○
poor single parent families	○	○	○	○	○	○	○	○
British citizens	○	○	○	○	○	○	○	○
fate or circumstances	○	○	○	○	○	○	○	○
European Union	○	○	○	○	○	○	○	○
migrants	○	○	○	○	○	○	○	○

14　Appraisals _ Em

Please, think about the budget changes described in the article you have read and answer to what extent you agree with the following statements:

Please, give your evaluation on a scale from 1 to 7, where 1 stands for "completely disagree", 7 for "completely agree".

	1 – Completely disagree	2	3	4 – Neither agree nor disagree	5	6	7 – Completely agree
The budget changes would have very important consequences for you	○	○	○	○	○	○	○
The real or potential consequences of the budget changes could have been or could	○	○	○	○	○	○	○

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still be avoided or modified by appropriate human action

You would be able to avoid the consequences or modify them to your advantage (through your own power or helped by others)	○	○	○	○	○	○	○
You could live with, and adjust to, the consequences of the budget changes that could not possibly be avoided or modified	○	○	○	○	○	○	○
The actions that produced the budget changes were morally and ethically acceptable	○	○	○	○	○	○	○
The actions that produced the budget changes violated laws or social norms	○	○	○	○	○	○	○
The real or potential consequences of the budget changes were or would be unjust or unfair	○	○	○	○	○	○	○

15   Check

Can you please remember, what was the topic of the article you have read?

Please choose one option.

○ the problem of poverty in the UK

○ an income tax cut for 32 million British workers

○ austerity in the UK

○ 10% richest households benefiting most from the income tax cut

16.1   Manipulation checks

Based on the article you have read, could you please remember which of the following statements are true, false, or are not mentioned in the article?

Please give your answer to each of the statements.

	true	false	not mentioned
The poor will benefit most from the new income tax	○	○	○
It is predicted that the benefit cut will significantly increase the number of working parents	○	○	○
Alongside with the benefit cuts, the government introduced a new childcare programme	○	○	○
Richest households will benefit most from the new income tax cuts	○	○	○
Women living alone with at least one dependent child account for the majority of all households who have had their benefits capped	○	○	○

17.1   Manipulation checks

Based on the article you have read, could you please remember which of the following statements are true, false, or are not mentioned in the article?

Please give your answer to each of the statements.

	true	false	not mentioned
The number of people paying income tax in the UK will increase	○	○	○
Philip Hammond spoke about the danger of Brexit for the British economy	○	○	○
As the result of the income tax cut, working British citizens will save hundreds of pounds a year	○	○	○
The aim of the income tax cut is to improve the living conditions of the poorest families	○	○	○
The income tax cut will affect the richest households only	○	○	○

18   PopAtt

Please, read the following items related to society and political institutions and answer to what extent you agree with this statements

Please, choose the correct answer where 1 stands for "completely disagree", 5 for "completely agree".

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	1 – strongly disagree	2	3 – neither agree nor disagree	4	5 – strongly agree
MPs in Parliament very quickly lose touch with ordinary people	○	○	○	○	○
The differences between ordinary people and the ruling elite are much greater than the differences between ordinary people.	○	○	○	○	○
People like me have no influence on what the government does.	○	○	○	○	○
Politicians talk too much and take too little action.	○	○	○	○	○
Politicians are really interested in what people like me think.	○	○	○	○	○
Ordinary people all pull together	○	○	○	○	○
Ordinary people are of good and honest character.	○	○	○	○	○
Ordinary people share the same values and interests.	○	○	○	○	○
Although the British are very different from each other, when it comes down to it they all think the same.	○	○	○	○	○
The politicians, not the people, should make our most important policy decisions.	○	○	○	○	○
There are no British as a coherent entity, rather there is just a bunch of individuals.	○	○	○	○	○
The people should have the final say on the most important political issues by voting on them directly in referendums.	○	○	○	○	○
The people should be asked whenever important decisions are taken.	○	○	○	○	○
The people, not the politicians, should make our most important policy decisions.	○	○	○	○	○
The politicians in Parliament need to follow the will of the people.	○	○	○	○	○

19   Control_style of article

Nowadays, the problem of fake news has become of extreme importance. How much do you trust the article you read at the beginning of the study?

Please give your estimate where 1 stands for "do not trust at all", and 7 - "trust completely"

- ○ 1 - do not trust at all
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7 - trust completely

Do you think the author of the article was neutral or was pursuing a certain view?

Please give your opinion on a scale from 1 to 5, where 1 stands for "very neutral" and 5 for "the author was strongly pushing his/her political views"

- ○ 1 - very neutral
- ○ 2
- ○ 3
- ○ 4
- ○ 5 - the author was strongly pushing his/her political views

20   Socdem

And now, please, provide us with some information about yourself.

Please tell us where were you born?

- ○ England
- ○ Scotland
- ○ Wales
- ○ Northern Ireland
- ○ Outside of UK

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Where do you currently live?

  ○ England

  ○ Scotland

  ○ Wales

  ○ Northern Ireland

  ○ Outside of UK

Are you...

  ○ female

  ○ male

  ○ other

What was your age last birthday?

Please, select from the list.

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17 or younger
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89
90 and older

What is the highest level of education you have successfully completed?

Please choose one option

○ Early childhood education

○ Primary education

○ Lower secondary education

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○ Upper secondary education
○ Post-secondary non-tertiary education
○ Short-cycle tertiary education
○ Bachelor's or equivalent level
○ Master's or equivalent level
○ Doctoral or equivalent level

Most people see themselves as belonging to a particular class. Please tell us which social class you would say you belong to?

Please choose one option.

○ Lower class
○ Working class
○ Lower middle class
○ Middle class
○ Upper middle class
○ Upper class
○ Refuse to answer the question

Thinking of your household's total income, including all the sources of income of all the members who contribute to it, how difficult or easy is it currently for your household to make ends meet?

Please choose one option

○ Very difficult
○ Fairly difficult
○ Neither easy nor difficult
○ Fairly easy
○ Very easy
○ Refuse to answer the question

21   Politics

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

Please give your answers to each of the questions where 1 stands for "strongly disagree" to 7 "completely agree"

	1 – strongly disagree	2	3	4 – neither agree nor disagree	5	6	7 – strongly agree
Government should redistribute income from the better off to those who are less well off	○	○	○	○	○	○	○
Ordinary working people do not get their fair share of the nation's wealth	○	○	○	○	○	○	○
There is one law for the rich and one for the poor	○	○	○	○	○	○	○
When jobs are scarce, men should have more right to a job than women	○	○	○	○	○	○	○
Gay men and lesbians should be free to live their own life as they wish	○	○	○	○	○	○	○
If a close family member was a gay man or a lesbian, I would feel ashamed	○	○	○	○	○	○	○
Sometimes people are not attentive enough when answering questions. Please press number one to answer this item	○	○	○	○	○	○	○
Young people today don't have enough respect for traditional British values	○	○	○	○	○	○	○
Schools should teach children to obey authority	○	○	○	○	○	○	○
Censorship of films and magazines is necessary to uphold moral standards	○	○	○	○	○	○	○

To what extent you agree with the following statements:

Please, answer a few questions about yourself where 1 stands for "completely disagree", 5 for "completely agree".

	1 - completely disagree	2	3 - neither agree nor disagree	4	5 - completely agree
I am good at understanding and assessing important political issues.	○	○	○	○	○
I have the confidence to take active part in a discussion about political issues.	○	○	○	○	○
If I work hard, I will succeed.	○	○	○	○	○
I'm my own boss.	○	○	○	○	○
Whether at work or in my private life:	○	○	○	○	○

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What I do is mainly determined by others.

Fate often gets in the way of my plans.   ○   ○   ○   ○   ○

22 Politics-2

Would you say it is generally bad or good for the British economy that people come to live here from other countries?

Please give your answer on a scale where 1 stands for "bad for the economy" and 11 stands for "good for the economy"

○ 1 - bad for the economy

○ 2

○ 3

○ 4

○ 5

○ 6

○ 7

○ 8

○ 9

○ 10

○ 11 - good for the economy

○ I refuse to answer the question

Would you say that the British cultural life is generally undermined or enriched by people coming to live here from other countries?

Please give your answer on a scale where 1 stands for "cultural life undermined" and 11 stands for "cultural life enriched"

○ 1 - cultural life undermined

○ 2

○ 3

○ 4

○ 5

○ 6

○ 7

○ 8

○ 9

○ 10

○ 11 - cultural life enriched

○ I refuse to answer the question

Is Britain made a worse or a better place to live by people coming to live here from other countries?

Please give your answer on a scale where 1 stands for "worse place to live" and 11 stands for "better place to live"

○ 1 - Worse place to live

○ 2

○ 3

○ 4

○ 5

○ 6

○ 7

○ 8

○ 9

○ 10

○ 11 - Better place to live

○ I refuse to answer the question

In politics people sometimes talk of "left" and "right"

Where would you place yourself on this scale, where 1 means the left and 11 means the right?

○ 1 - left

○ 2

○ 3

○ 4

○ 5

○ 6 - in the middle

○ 7

○ 8

○ 9

○ 10

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○ 11 - right

○ I refuse to answer the question

Which party do you feel closer to? Please, tick the party indicated in the list.

Please choose one option

○ Conservative

○ Labour

○ Liberal Democrat

○ Scottish National Party (SNP)

○ Plaid Cymru

○ Green Party

○ UK Independence Party (UKIP)

○ British National Party (BNP)/ National Front

○ Trade Union and Socialist Coalition (TUSC)/ RESPECT/ Other socialist party

○ Brexit Party

○ Change UK - The Independent Group

○ Other

○ I don't feel close to any party

○ I refuse to answer the question

If you were now given the chance to vote at a new referendum on whether the UK should remain a member of the European Union or leave the European Union, how would you vote?

Please choose one option

○ Remain a member of the European Union

○ Leave the European Union

○ I would not vote

○ I don't know

○ I refuse to answer the question

On 23rd May, there were the elections to the European Parliament. Did you vote?

○ yes

○ no

23.1   Voting_EU Parliament

In the election to the European Parliament on 23rd May, which party did you vote for?

Please choose one option

○ Conservative

○ Labour

○ Liberal Democrat

○ The Brexit Party

○ Scottish National Party (SNP)

○ Green

○ UK Independence Party (UKIP)

○ Plaid Cymru

○ Change UK - The Independent Group

○ UK European Union Party

○ An independent candidate

○ Another party

○ I did not vote

○ I prefer not to say

24.1   Identification

To what extent you agree with the following statements:

Please, answer the followng questions on a scale from 1 to 7, where 1 stands for "completely disagree" and 7 stands for "completely agree".

	1 - completely disagree	2	3	4 - neither disagree nor agree	5	6	7 - completely agree
How much do you like poor single parent families?	○	○	○	○	○	○	○
How similar are you to poor single parent families in your general attributes and opinions?	○	○	○	○	○	○	○
How much do you like the richest families?	○	○	○	○	○	○	○

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| How similar are you to the richest families in your general attributes and opinions? | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

25　feedback

In case you want to make comments on the study, or have any thoughts about it, please, write them down here

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26　Debriefing

Thank you very much for answering the questionnaire!

Please, read the following information about the study.

The article you have read was taken from British mass media and were slightly modified to adjust for length or to make emphasis on some of the arguments made. The articles were selected for scientific purposes and do not reflect researchers' political views or beliefs. We encourage you to treat the arguments made in the article you read with caution.

Some participants read a text focusing on inequality and justice, whereas others read a similar text without the issue of inequality. We were specifically interested in the role that emotions play for how people viewed statements relating to different political attitudes.

Lastly, a couple of questions were used to make sure that people pay attention to the questions. That was necessary to make sure that we acquire a dataset of a high quality to achieve academic goals.

Please, press the button "Continue" to confirm that you read the information, agree to provide us with your response, and want to end the study. Otherwise, please close the browser, go back to Prolific and return your submission.

If you have any further questions or complaints about the study feel free to contact me, Ekaterina Lytkina at elytkina@bigsss-bremen.de.

Also, if you like, a summary of the results of the study will be sent to you. In this case, please write me a message on Prolific. Please note that the analysis and write-up of the results will take a few months.

27　Final page

Thank you very much for your participation!

Please, follow the link to be redirected to "Prolific", so that your answes are recorded https://app.prolific.ac/submissions/complete?cc=L0FQTSY9

In case it does not work, please enter the following completion code on Prolific "L0FQTSY9".

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Appendix 3B. Questionnaire for Study 2 in Chapter 4

Questionnaire

1   prolific id

Before you start the survey, please switch off your phone, music and e-mails so you focus on this study.

Thank you!

First, please enter your Prolific ID.

Your Prolific ID contains 24 characters.

[   ]

2   Instructions

Thank you for choosing to participate in the study!

Here are some instructions about the study. Please, read them carefully before you proceed.

We ask you to read some text attentively and will then ask you a number of questions. **Please, take your time to read the text, and not just skim through the lines.**

We are interested in how you will feel about the text you will read. That is why the study begins with an explanation of how to respond to some of the questions about emotions.

Please answer all the questions in the study. When anwering the questions, mind that there are no "good" or "bad" answers. Please take your time to read each question thoroughly, and answer them in the order they are presented. This study is confidential and anonymous. So we ask you to give honest answers without fear of being judged for them later on. Please, answer all questions to the best of your ability.

We are very grateful for you taking the participation in this study seriously. The software will detect random answers, and in this case, or if you interrupt the study, you won't get any payment for participation.

Your participation in this study has no reasonable foreseeable risks. However, in case you feel uncomfortable, you can stop participating. However, as we said, you will be paid only in case you complete the whole study.

At the end of the session, we will provide you with more detailed information regarding the background of the study. Also, if you like, a summary of the results of the study will be sent to you once they are available.

Thank you for your participation!

3   Instruction Emotions

We are interested in your attitudes and feelings towards some important issues and processes in the society today.

We will show you an article from mass media on a certain issue. After you have read the article, there will be several questions describing emotions which you could feel when reading the article. It may be, however, that you will not experience any emotions.

Before you read the article, we will show you an instruction on how to answer the questions about your feelings. Please, take your time to read it carefully, so that you won`t have any difficulties when answering the questions on your own.

Let's start.

4   blank page

Instruction

In order to make it easier for you to report the type of emotion you experience, 20 different emotions are arranged in a circular fashion on the graph below (Graph 1).

Please note that the words provided often represent a large "emotion family" and may thus refer to a whole range of similar emotions. Thus, the Anger family also covers emotions such as rage, vexation, annoyance, indignation, fury, exasperation, or being cross or mad; the

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Fear family includes anxiety, worry, apprehensiveness, fright, or panic. Some of the words, such as love, hate, or guilt, can be used to refer to long-term affective states; but in this case checking those labels means that you have had a salient temporary feeling that belongs to the families of Love, Hate, or Guilt.

Graph 1. Measure of Emotions

5   blank page1

First identify the emotion family that seems to best correspond to the kind of feeling you may experience when reading the article we provide you with. Define the emotion family (or emotion families) even though the words on the graph may not capture all facets of your experience.

Our emotions are sometimes blended or mixed and may contain many different components. So you could experience not just one, but also several emotions.

For example, you have just learnt from your boss that your wage will be increased. You feel joy (you were longing for it) and relief (now you can afford buying a new car). Now, you would find the emotions indicated in red.
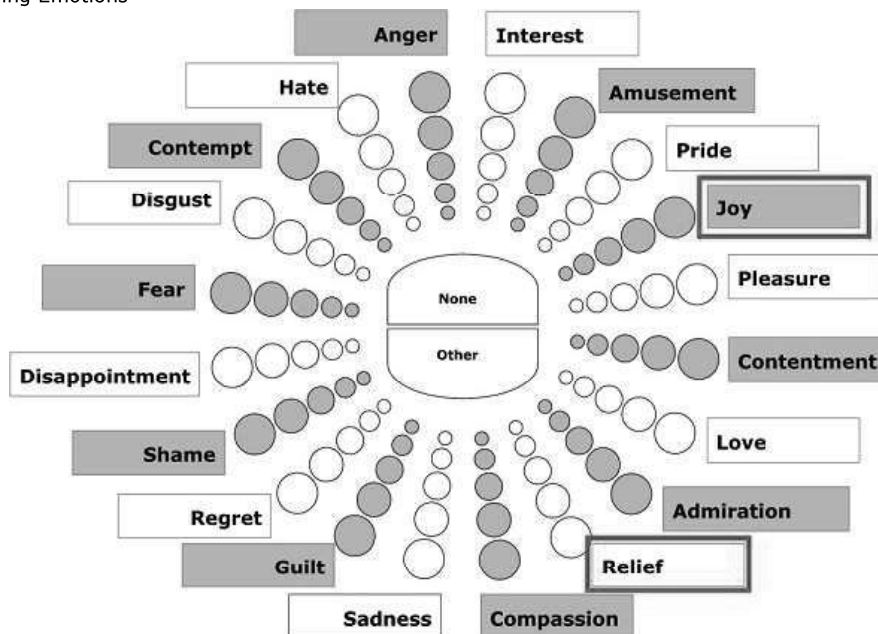
Graph 2. Measuring Emotions

6   blank page2

Next, you determine with which intensity you experienced the respective emotion and check one of the circles in the "spike" corresponding to this emotion family – the bigger the circle and the closer it is to the rim of the wheel, the stronger your emotional experience (as portrayed at Graph 3).

Different intensities often correspond to different members of an emotion family. Thus, irritation can be considered a less intense emotion belonging to the Anger family and anxiety a less intense emotion belonging to the Fear family.

For less intense emotions, please check one of the smaller circles in the spike. If the emotion was very intense, please check the largest circle of the spike.

For emotions that you did not experience at all, do not check any of the circles.

Graph 3. Defining the Intensity of the Emotions.

For example, you experienced the highest degree of pleasure (indicated by the biggest circle), and a medium level of relief (indicated by a medium sized circle).

Graph 4. Measuring Emotions

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7   blank page3

If you did not feel any emotion at all, please check the upper half circle in the center of the wheel (labeled "None"). If you experienced an emotion that is very different from any of the emotions in the wheel, please check the lower half circle (labeled "Other").

Graph 5. Measuring Emotions.

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If you understood these instructions, please select the option "The instructions are clear" and press the button "Continue" to proceed to the study.

If you want to go back to the instructions on how to answer the questions with emotions, select the corresponding version.

○   I need to go back to the instructions
○   The instructions are clear

---

8   Intro_text

Please, now read the following article carefully. Afterwards, we will ask you about the emotions you felt when reading it and will have some more questions about this article. You will not have the possibility to go back to the article.

9.1   Text

Migrant benefits FARCE: We boot out crooks and then send them benefits cash...

Britain has splurged £66million of taxpayers' money on grants to failed asylum seekers and illegal immigrants.

Over the last decade nearly 45,000 migrants have been paid £1,500 each for leaving the country – setting them up for lavish lives back home.

The grant is part of the Government's controversial Voluntary Assisted Return and Reintegration Programme.

Besides, foreign criminals booted out of Britain are exploiting a benefits loophole to claim state handouts for the period before they were deported.

The scandalous use of public money emerged after a Freedom of Information request about the payment of backdated benefits to deportees over the past two years.

Ministers have admitted that murderers, rapists and other unwanted thugs can legally demand vast sums of taxpayers cash even though they have been expelled from the UK.

Shockingly, officials have confessed they do not know how much money has been paid to convicts now living overseas.

Dia Chakravarty of the TaxPayers' Alliance said: "Taxpayers have every right to know how much of their money is being paid out in these benefits.

"It is simply not good enough for the DWP to say they don't have the details of the payments. "Ultimately, this is a symptom of an overly complicated benefit system which needs urgent reform so that those who really need support can get it without leaving taxpayers out of pocket unfairly."

Some migrants who were deported from our country have used the cash to set up businesses around the world.

And Ademola, a 36-year-old Nigerian, boasted that he blew his fee on clothes and a camera – and stayed in a hotel for a month.

Jonathan Isaby of the Taxpayers' Alliance slammed the handouts, saying: "Taxpayers would be right to ask if it's the best use of money.

"It will encourage immigrants to take dangerous journeys across the world, try their luck here and go on a free flight with a grant. It should end."

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Revelations about the absurd rules, which have been branded a "disgrace", come at the same time that the Prime Minister has demanded an extra £12bn in welfare cuts.

Either the poorest in society or the "hard-working people" face being targeted under the commitment to £12bn of welfare cuts, experts have said.

One way of achieving the £12bn goal could be by reducing the £38bn cost of out-of-work payments to working-age families, for example by cutting entitlements to a third of the recipients, according to John Hills, director of the centre for analysis of social exclusion at the London School of Economics.

"But that would mean hitting lone parents and disabled people and create pressure on food banks and hardship on a scale that would be hard to imagine," Hills said. "Alternatively you could take it from hardworking families who rely on housing benefit and tax credits. That's a lot of pain from a large number of people who have just voted for you."

To justify the cuts, the government is likely to employ a narrative suggesting a clear division between a large, permanently welfare-dependent group and the rest of the population who pay taxes to support it.

A welfare system supposes caring about your own nation. It is absolutely unbelievable that money is taken from our people who have been paying tax and working hard, or our most vulnerable citizens and given to foreign criminals who not only come to benefit from our system, but often even commit crimes in our country. That should be stopped immediately.

10.1   Text_2

What can 'illegal immigrants' claim?

Recently, several tabloids claimed that Britain paid £66 million to asylum seekers and illegal immigrants.

Nearly 45,000 migrants were said to have been paid £1,500 each for leaving the country over the last decade. Moreover, they were accused of exploiting a benefits loophole to claim state handouts for the period after they were deported.

However, this information is far from accurate.

A spokesman for the Department for Work and Pensions last night said: 'There is no evidence that migrants are paid for leaving the country.

"A person who has been deported has no on-going entitlement to benefits and if people are deported and are fraudulently claiming benefits we can stop payments.

"We work closely with the Home Office so we have an awareness of whether someone is or is not in the country."

What can illegal immigrants claim?

Illegal immigrants are those who entered the UK unlawfully or stayed for longer than they were allowed without applying to stay longer.

Those in the UK without legal status are likely to be removed if their immigration status is discovered by the authorities. They inherently do not have the right to work in the UK.

As a result of the Welfare Reform Act 2012, only people with the right to work in the UK can collect National Insurance contribution based benefits like jobseeker's and employment and support allowance, and work related benefits like statutory maternity pay.

People subject to immigration control (who require leave to enter or remain in the UK but don't have it) are also prevented from collecting payments like housing and child benefit, and universal credit, which UK citizens are entitled to.

Many of the benefits available for people in the UK need proof that they have been in residence in the UK for at least 2 of the last three years. How could an illegal immigrant prove that without an entry stamp on their passport? (Or without risking deportation?)

Besides, asylum seekers who are waiting for a decision are not allowed to claim mainstream non-contributory social security benefits, and are not usually allowed to work either.

But they may be eligible for asylum support from the Home Office, which parliament described as "less generous than social security benefits" in its debunking briefing.

This support can consist of somewhere to live (which they cannot choose and is unlikely to be in London or the South East), plus £37.75 per person in the household a week. They can also get £3-5 per week per pregnant mother, baby and child under three, and may qualify for a one off maternity payment of £300. That is considerably less than the UK citizens receiving benefits are entitled to.

In general, asylum seekers and illegal immigrants tend to be younger. They are therefore less likely to be a burden to the NHS since they will be healthier. This is only if illegal immigrants are not too frightened to visit a hospital in case they are apprehended.

What can refugees claim?

The term refugees refers to asylum seekers whose applications for asylum have been successful. According to a House of Commons research briefing, refugees "are able to claim social security benefits and tax credits on the same basis as UK nationals".

To be eligible for asylum, someone must be unable to live safely in their country out of fear of persecution because of characteristics like race, religion or political opinions that put them at risk there.

That means they would theoretically be eligible for the same kinds of pensions as the UK-born citizens, although aren't as likely to have built up the required national insurance contributions if they arrived in adulthood.

When thinking about the situation described above, please, tell us how you felt.
Please choose one or several emotions that you felt.
For emotions that you did not experience at all, **do not check any of the circles**.
If you did not feel any emotion at all, please check the upper half circle in the center of the wheel (labeled "None").
If you experienced an emotion that is very different from any of the emotions in the wheel, please check the lower half circle (labeled "Other").

Now, please find the emotion or emotions that you felt and indicate their intensity:

12.1 Other emotion

You mentioned, that you experienced a different emotion or emotions. Could you please specify which one(s)?

Please write (if applicable) each emotion or your comments in a separate line.

Emotion 1   [   ]

Emotion 2   [   ]

Emotion 3   [   ]

Now we ask you to rate the emotion or emotions you felt when reading the article on three separate scales. Please, read the descriptions below preceding each of the scales and than choose the most appropriate picture describing what emotion or emotions you felt.

Rate how positive or negative the emotion is that you feel, ranging from unpleasant feelings to pleasant feelings of happiness.

Rate how positive or negative the emotion is that you feel, ranging from unpleasant feelings to pleasant feelings of happiness.

Rate how excited or apathetic the emotion is that you feel, ranging from frantic excitement to sleepiness or boredom

Rate the extent to which your emotion makes you feel that you are in control of the situation, ranging from not in control at all to being 100% in control

14 blank_page

To what extent do you agree with the following statements?

Please, give your evaluation on a scale from 1 to 7, where 1 stands for "completely disagree", 7 for "completely agree".

	1 - Completely disagree	2	3	4 - Neither agree nor disagree	5	6	7 - Completely agree
The issue described in the article puts the UK citizens in a better condition compared to illegal migrants	○	○	○	○	○	○	○
The issue described in the article puts the UK citizens in a worse condition compared to illegal migrants	○	○	○	○	○	○	○
The issue described in the article will	○	○	○	○	○	○	○

increase the difference between the UK citizens and illegal migrants

The issue described in the article will decrease the difference between the UK citizens and illegal migrants	○	○	○	○	○	○	○
The issue described in the article is just	○	○	○	○	○	○	○
The issue described in the article is fair	○	○	○	○	○	○	○
The problem of the difference between the UK citizens and illegal migrants will be alleviated	○	○	○	○	○	○	○
The problem of the difference between the UK citizens and illegal migrants will be exacerbated	○	○	○	○	○	○	○
The problem of the difference between the UK citizens and illegal migrants described in the article is of high importance to you	○	○	○	○	○	○	○
The problem of the difference between the UK citizens and illegal migrants described in the article is of relevance to you or your closest ones (family or friends)	○	○	○	○	○	○	○

15.1   Manipulation checks

To what extent are any of these actors responsible for the issue described in the article?

Please, give your evaluation on a scale from 1 to 7, where 1 stands for "not at all responsible", 7 for "highly responsible".

	1 – Not at all responsible	2	3	4 – neither responsible nor irresponsible	5	6	7 – Highly responsible	not applicable
government	○	○	○	○	○	○	○	○
illegal migrants	○	○	○	○	○	○	○	○
UK-born citizens dependent on welfare	○	○	○	○	○	○	○	○
all UK citizens	○	○	○	○	○	○	○	○
European Union	○	○	○	○	○	○	○	○
migration	○	○	○	○	○	○	○	○
mass media	○	○	○	○	○	○	○	○
financial corporations	○	○	○	○	○	○	○	○
USA	○	○	○	○	○	○	○	○
fate or circumstances	○	○	○	○	○	○	○	○

16   Appraisals _ Em

Please, think about the article you have read and answer to what extent you agree with the following statements:

Please, give your evaluation on a scale from 1 to 7, where 1 stands for "completely disagree", 7 for "completely agree".

	1 – Completely disagree	2	3	4 – Neither agree nor disagree	5	6	7 – Completely agree
The issue described in the article would have very important consequences for you	○	○	○	○	○	○	○
The issue described in the article could have been or could still be avoided or modified by appropriate human action	○	○	○	○	○	○	○
You would be able to avoid the consequences of this issue described in the article or modify them to your advantage (through your own power or helped by others)	○	○	○	○	○	○	○
You could live with, and adjust to, the consequences of this issue described in the article that could not possibly be avoided or modified	○	○	○	○	○	○	○
The actions that produced the issue described in the article were morally and ethically acceptable	○	○	○	○	○	○	○
The actions that produced the issue described in the article violated laws or social norms	○	○	○	○	○	○	○
The real or potential consequences of the issue described in the article were or	○	○	○	○	○	○	○

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would be unjust or unfair

17   Check

Can you please remember, what was the topic of the article you have read?

Please choose one option.

- ○ Illegal migrants take away jobs from the UK-born citizens
- ○ Explanation of which benefits illegal migrants and refugees are entitled to
- ○ At least every third migrant from Europe claims some sort of welfare benefit
- ○ Illegal migrants getting paid for leaving the country whereas the UK citizens can expect new benefit cuts

18.1   Manipulation checks

Based on the article you have read, could you please say which of the following statements are true, false, or are not mentioned in the article?

Please give your answer to each of the statements.

	true	false	not mentioned
Financing of the NHS system will be cut	○	○	○
Illegal migrants getting paid for leaving the country	○	○	○
Illegal migrants challenging their deportation in court to get money	○	○	○
The new benefit cuts will affect the poorest in society or the "hard-working people"	○	○	○
Illegal migrants can legally demand vast sums of taxpayers cash even though they have been expelled from the UK	○	○	○

19.1   Manipulation checks

Based on the article you have read, could you please say which of the following statements are true, false, or are not mentioned in the article?

Please give your answer to each of the statements.

	true	false	not mentioned
Illegal migrants can claim the same benefits as UK-born citizens	○	○	○
Illegal migrants heavily abuse the NHS system	○	○	○
Illegal migrants can claim jobseekers, employment and support allowance, as well as work related benefits	○	○	○
Illegal migrants aren't allowed to claim non-contributory social security benefits	○	○	○
Refugees who arrived in adulthood will get same pensions as the UK-born citizens	○	○	○

20   PopAtt

Please, read the following items related to society and political institutions and answer to what extent you agree with this statements

Please, choose the correct answer where 1 stands for "completely disagree", 5 for "completely agree".

	1 – strongly disagree	2	3 – neither agree nor disagree	4	5 – strongly agree
MPs in Parliament very quickly lose touch with ordinary people	○	○	○	○	○
The differences between ordinary people and the ruling elite are much greater than the differences between ordinary people.	○	○	○	○	○
People like me have no influence on what the government does.	○	○	○	○	○
Politicians talk too much and take too little action.	○	○	○	○	○
Politicians are really interested in what people like me think.	○	○	○	○	○
Ordinary people all pull together	○	○	○	○	○
Ordinary people are of good and honest character.	○	○	○	○	○

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	○	○	○	○	○
Ordinary people share the same values and interests.	○	○	○	○	○
Although the British are very different from each other, when it comes down to it they all think the same.	○	○	○	○	○
The politicians, not the people, should make our most important policy decisions.	○	○	○	○	○
There are no British as a coherent entity, rather there is just a bunch of individuals.	○	○	○	○	○
The people should have the final say on the most important political issues by voting on them directly in referendums.	○	○	○	○	○
The people should be asked whenever important decisions are taken.	○	○	○	○	○
The people, not the politicians, should make our most important policy decisions.	○	○	○	○	○
The politicians in Parliament need to follow the will of the people.	○	○	○	○	○

21   Socdem

And now, please, provide us with some information about yourself.

Please tell us where were you born?

○ England

○ Scotland

○ Wales

○ Northern Ireland

○ Outside of UK

Where do you currently live?

○ England

○ Scotland

○ Wales

○ Northern Ireland

○ Outside of UK

Are you...

○ female

○ male

○ other

What was your age last birthday?

Please, select from the list.

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| 17 or younger ▲ |
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| 89 |
| 90 and older ▼ |

What is the highest level of education you have successfully completed?

Please choose one option

○　Early childhood education

○　Primary education

○　Lower secondary education

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○ Upper secondary education

○ Post-secondary non-tertiary education

○ Short-cycle tertiary education

○ Bachelor's or equivalent level

○ Master's or equivalent level

○ Doctoral or equivalent level

Most people see themselves as belonging to a particular class. Please tell us which social class you would say you belong to?

Please choose one option.

○ Lower class

○ Working class

○ Lower middle class

○ Middle class

○ Upper middle class

○ Upper class

○ Refuse to answer the question

Thinking of your household's total income, including all the sources of income of all the members who contribute to it, how difficult or easy is it currently for your household to make ends meet?

Please choose one option

○ Very difficult

○ Fairly difficult

○ Neither easy nor difficult

○ Fairly easy

○ Very easy

○ Refuse to answer the question

22   Politics

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

Please give your answers to each of the questions where 1 stands for "strongly disagree" to 7 "completely agree"

	1 – strongly disagree	2	3	4 – neither agree nor disagree	5	6	7 – strongly agree
Government should redistribute income from the better off to those who are less well off	○	○	○	○	○	○	○
Ordinary working people do not get their fair share of the nation's wealth	○	○	○	○	○	○	○
There is one law for the rich and one for the poor	○	○	○	○	○	○	○
When jobs are scarce, men should have more right to a job than women	○	○	○	○	○	○	○
Gay men and lesbians should be free to live their own life as they wish	○	○	○	○	○	○	○
If a close family member was a gay man or a lesbian, I would feel ashamed	○	○	○	○	○	○	○
Sometimes people are not attentive enough when answering questions. Please press number one to answer this item	○	○	○	○	○	○	○
Young people today don't have enough respect for traditional British values	○	○	○	○	○	○	○
Schools should teach children to obey authority	○	○	○	○	○	○	○
Censorship of films and magazines is necessary to uphold moral standards	○	○	○	○	○	○	○

23   Politics-2

Would you say it is generally bad or good for the British economy that people come to live here from other countries?

Please give your answer on a scale where 1 stands for "bad for the economy" and 11 stands for "good for the economy"

○ 1 - bad for the economy

○ 2

○ 3

○ 4

○ 5

○ 6

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- ○ 7
- ○ 8
- ○ 9
- ○ 10
- ○ 11 - good for the economy
- ○ I refuse to answer the question

Would you say that the British cultural life is generally undermined or enriched by people coming to live here from other countries?

Please give your answer on a scale where 1 stands for "cultural life undermined" and 11 stands for "cultural life enriched"

- ○ 1 - cultural life undermined
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8
- ○ 9
- ○ 10
- ○ 11 - cultural life enriched
- ○ I refuse to answer the question

Is Britain made a worse or a better place to live by people coming to live here from other countries?

Please give your answer on a scale where 1 stands for "worse place to live" and 11 stands for "better place to live"

- ○ 1 - Worse place to live
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8
- ○ 9
- ○ 10
- ○ 11 - Better place to live
- ○ I refuse to answer the question

In politics people sometimes talk of "left" and "right"

Where would you place yourself on this scale, where 1 means the left and 11 means the right?

- ○ 1 - left
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6 - in the middle
- ○ 7
- ○ 8
- ○ 9
- ○ 10
- ○ 11 - right
- ○ I refuse to answer the question

Which party do you feel closer to? Please, tick the party indicated in the list.

Please choose one option

- ○ Conservative
- ○ Labour
- ○ Liberal Democrat
- ○ Scottish National Party (SNP)
- ○ Plaid Cymru
- ○ Green Party
- ○ UK Independence Party (UKIP)
- ○ British National Party (BNP)/ National Front

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○ Trade Union and Socialist Coalition (TUSC)/ RESPECT/ Other socialist party

○ Brexit Party

○ Change UK - The Independent Group

○ Other

○ I don't feel close to any party

○ I refuse to answer the question

If you were now given the chance to vote at a new referendum on whether the UK should remain a member of the European Union or leave the European Union, how would you vote?

Please choose one option

○ Remain a member of the European Union

○ Leave the European Union

○ I would not vote

○ I don't know

○ I refuse to answer the question

On December 12, there was the UK general election. Did you vote?

○ yes

○ no

24.1   Voting_EU Parliament

In the UK general election on December 12, which party did you vote for?

Please choose one option

○ Conservative

○ Labour

○ Liberal Democrat

○ The Brexit Party

○ Scottish National Party (SNP)

○ Green

○ UK Independence Party (UKIP)

○ Plaid Cymru

○ Change UK (The Independent Group)

○ Women's Equality Party

○ An independent candidate

○ Another party

○ I prefer not to say

○ I didn't vote

25.1   Identification

Please answer the following questions:

Please, give your answers on a scale from 1 to 7, where 1 stands for "not at all" and 7 stands for "to a very high degree".

	1 – not at all	2	3	4	5	6	7 – to a very high degree
How much do you like illegal immigrants?	○	○	○	○	○	○	○
How similar are you to illegal immigrants in your general attributes and opinions?	○	○	○	○	○	○	○
How much do you like the UK citizens affected by benefit cuts?	○	○	○	○	○	○	○
How similar are you to the UK citizens affected by benefit cuts in your general attributes and opinions?	○	○	○	○	○	○	○

26   Control_style of article

Please, remember the article you have read. How much do you trust the information given there?

Please give your estimate where 1 stands for "do not trust at all", and 7 - "trust completely"

○ 1 - do not trust at all

○ 2

○ 3

○ 4

○ 5

○ 6

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○ 7 - trust completely

Do you think the author of the article was neutral or was pursuing a certain view?

Please give your opinion on a scale from 1 to 5, where 1 stands for "very neutral" and 5 for "the author was strongly pushing his/her political views"

○ 1 - very neutral

○ 2

○ 3

○ 4

○ 5 - the author was strongly pushing his/her political views

What do you find fair and correct about the story described in the article?

Please, write your reply in a couple of sentences.

What do you find unfair and incorrect about the story described in the article?

Please, write your reply in a couple of sentences.

27   feedback

In case you want to make comments on the study, or have any thoughts about it, please, write them down here

28   Debriefing

Thank you very much for answering the questionnaire!

Please, read the following information about the study.

The article you have read was taken from British mass media and wasslightly modified to adjust for length or to make emphasis on some of the arguments made. The article wasselected for scientific purposes and does not reflect researchers' political views or beliefs. We encourage you to treat the arguments made in the article you read with caution.

Some participants read a text focusing on inequality and injustice, whereas others read a similar text without the issues of inequality and injustice. We were specifically interested in the role that emotions play for how people view statements related to different political attitudes.

Lastly, a couple of questions were used to make sure that people pay attention to the questions. That was necessary to make sure that we acquire a dataset of a high quality to achieve our academic goals.

Please, press the button "Continue" to confirm that you read the information, agree to provide us with your response, and want to end the study. Otherwise, please close the browser, go back to Prolific and return your submission.

If you have any further questions or complaints about the study feel free to contact me, Ekaterina Lytkina at elytkina@bigsss-bremen.de.

Also, if you like, a summary of the results of the study will be sent to you. In this case, please write me a message on Prolific. Please note that the analysis and write-up of the results will take a few months.

29   Final page

Thank you very much for your participation!

Please, follow the link to be redirected to "Prolific", so that your answses are recorded https://app.prolific.co/submissions/complete?cc=L0FQTSY9

Appendix 3C

Appendix for Chapter 4. Our People are Suffering!—How Perceptions of Relative Deprivation and Emotions Affect Populist Attitudes

Appendix 3.1.1. Study 1

Materials for Manipulating Perceptions of Relative Deprivation in Study 1

Text 1. Situation chosen for the treatment condition

Single mothers suffering from benefits cuts, tax paradise for the rich

The investigation by the Resolution Foundation thinktank reveals that 10% of the richest households will benefit most from the new income tax cuts, whereas endangered groups and especially single mums will hopelessly shift further to the very bottom of income distribution.

Income tax cuts for millions of workers announced in Philip Hammond's budget will "overwhelmingly benefit richer households", analysis has found, with almost half set to go to the top 10% of households.

The analysis by the Resolution Foundation thinktank found that welfare cuts would continue to affect the poorest households, despite Hammond's announcement that austerity was coming to an end.

Three-quarters of the £12bn in welfare cuts announced after the 2015 election remain government policy.

The overall package of tax and benefit changes announced since 2015 will deliver an average gain of £390 for the richest fifth of households in 2023-24, the thinktank found, compared to an average loss of £400 for the poorest fifth.

The income tax cuts announced by Hammond will cost £2.7bn next year. The 20% tax band, which currently starts on earnings above £11,850, will rise to £12,500 next year. The higher rate 40% tax band will begin at £50,000 from April, a jump from £46,350.

In total, 84% of the income tax cuts will go to the top half of the income distribution next year, rising to 89% by the end of the parliament.

At the same time, welfare cuts to come include a £1.5bn benefit freeze this April that will mean a £200 loss to a couple with children in the bottom half of the income distribution.

Single mums make up the overwhelming majority of those hit by the government's benefit cap, Labour analysis of Department for Work and Pensions (DWP) data shows.

Women living alone with at least one dependent child account for over 85 per cent of all households who have had their benefits capped.

They comprise 114,337 out of a total of 134,044 households who have had benefits limited to £20,000 a year and £23,000 a year in Greater London.

This number is more than double the 50,000 single parents that were reported in August last year to be facing a drop in income due to the cap.

The cap stood at £26,000 a year when first implemented in 2013 by then chancellor George Osborne, but was lowered to the current level in November 2016, which led to the number of families affected increasing fourfold.

Single parent families charity Gingerbread's policy officer Laura Dewar said: "The benefit cap was designed to 'improve work incentives' but instead it is pushing many single parents and their children into further poverty.

"The Government's own figures show that the majority of single parents are not securing work to escape the cap, hardly surprising, as most of them have young children.

"Without sustainable work, reasonable childcare or affordable housing these families face a shortfall in rent, leaving them exposed to eviction and poverty. With the New Year, children's well-being must be put first and the benefit cap scrapped, for single parents particularly for those with pre-school aged children."

The rich are getting richer, the poorer continue to shift further to the bottom.

Text 2. Situation Chosen for the control condition

Chancellor unveils surprise income tax cuts that will save working Brits HUNDREDS

From April, 26million basic rate tax payers will get a £130 a year tax cut and six million higher rate taxpayers on the 40p band will see cash back of £495 a year

Philip Hammond doled out surprise income tax cuts worth hundreds of pounds next year to Britain's 32million workers on October, 30th, 2018.

Billed as another end of austerity boost, the Chancellor announced that personal tax-free thresholds will leap up from April 2019.

The popular move is a Tory manifesto promise, but a major relaxation of Government spending rules means he's able to deliver it a year earlier than the 2020 date it was originally promised.

From this April, no income tax will have to be paid on the first £12,500 of annual wages, up from the current threshold of £11,850.

That delivers a £130 a year tax cut to 26million basic rate tax payers.

And the higher rate of tax will now only have to be paid on salaries of £50,000 year, up from £46,350 at the moment.

Six million higher rate taxpayers on the 40p band will see cash back of £495 a year.

And there will be further income tax cuts in each of the following four years, Mr Hammond also announced, when the thresholds go up in line with inflation.

The announcement was the big surprise rabbit in the Chancellor's jumbo 8,800-word Budget speech, which took 72 minutes to deliver.

Announcing it, Mr Hammond described it as "the hard work of the British people paying off in hard cash in their pockets".

The move will cost the Exchequer a £2billion a year, and a whopping £10billion by 2024.

In total, it will mean the Tory government has taken a total of 1.7million people out of paying any income tax altogether since 2015.

The income tax cut was also by far the biggest bazooka in Mr Hammond's jumbo package to tackle Britain's spiralling cost of living.

He also spent billions freezing fuel duty for the ninth year in a row – another win in a long running Sun campaign – bringing the total saving to the average car driver to over £1,000 since they started in 2010.

The Chancellor ordered all bosses to pay a minimum wage of £7.83 to £8.21, a 4.9% hike, from next April as well.

And he scrapped planned rises in the levies on beer and spirits, as well as pouring billions back into Universal Credit to help the nation's struggling workers.

Mr Hammond told delighted Tory MPs: "I recognise that many people are feeling pressure on their household budgets now.

"It's only by dealing with our debts and tackling the long term challenges our country faces, that we can sustainably raise wages and living standards."

To sum up: The £20billion NHS injection, the £1billion bailout for defence, hundreds of millions for our pock-marked roads and hard-up schools. Another £1.7billion to iron out Universal Credit problems. A near five per cent hike in the minimum wage. A big, welcome cut in business rates for struggling firms.

Results of Pretest for Study 1

Table 1. Results of the Pretest Stimulus rated on the injustice and relevance level (Study 1)*

	Injustice			Relevance		
	Mean	SD	N	Mean	SD	N
Treatment 1 Left, EU migrants	4.52	1.66	21	3.19	1.57	21
Control 1	3.10	1.38	21	3.62	1.77	21
Treatment 2 - Right, EU migrants	4.67	1.59	15	3.40	2.20	15
Control 2	3.26	1.42	23	4.13	1.63	23
Treatment 3 - Left, anti-establishment	4.38	2.46	21	5.43	1.57	21
Control 3	3.07	1.03	15	5.20	1.86	15
Treatment 4 - Anti-establishment, anti-capitalist	3.91	2.10	21	4.05	1.88	21
Control 4	2.39	1.27	23	3.35	1.75	23
Treatment 5 - Left, inequality	5.40	1.60	15	4.40	1.92	15
Control 5	3.30	1.61	23	5.17	1.53	23
Treatment 6 - Left, inequality	4.43	2.29	21	5.38	1.60	21
Control 6	3.71	1.77	21	5.38	1.75	21
Treatment 7 - Left, anti-capitalist	4.74	2.32	23	2.70	1.15	23
Control 7	3.48	1.60	21	2.10	1.41	21
Treatment 8 - Anti-establishment	4.87	2.23	15	2.67	1.80	15
Control 8	2.29	1.59	21	3.00	1.67	21
Treatment 9 - Brexit, Eurosceptic	4.35	1.56	23	4.30	1.82	23
Control 9	2.71	1.31	21	5.05	1.77	21
Treatment 10 - Brexit, anti-establishment	3.81	2.02	21	5.76	1.18	21
Control 10	2.80	0.94	15	4.73	1.91	15
Treatment 11 - Right, anti - migrant	4.26	1.84	23	3.26	1.71	23
Control 11	3.93	1.66	15	3.00	1.73	15
Treatment 12 - Right, anti - migrant	4.76	2.21	21	3.52	1.89	21
Control 12	3.91	1.48	21	3.29	1.85	21

*Note. "M" stands for "Mean", "SD" for "Standard Deviation". Selected texts for the treatment and control conditions are marked grey (Treatment 5, Control 5).

Manipulation Check of Study 1

Table 2

Manipulation check

	Treatment			Control			t-test	df	p-value	Mean Difference
	N	M	SD	N	M	SD				
The real or potential consequences of the budget changes were or would be unjust or unfair	301	5.61	1.529	288	2.97	1.523	21.006	587	.000	2.642
The budget changes would have very important consequences for you	301	3.73	1.732	288	4.33	1.539	-4.491	584	.000	-.606

Appendix 3.1.2. Study 2

Materials for Manipulating Perceptions of Relative Deprivation in Study 2

Text 1. Situation chosen for the treatment condition

Migrant benefits FARCE: We boot out crooks and then send them benefits cash…

Britain has splurged £66million of taxpayers' money on grants to failed asylum seekers and illegal immigrants.

Over the last decade nearly 45,000 migrants have been paid £1,500 each for leaving the country – setting them up for lavish lives back home.

The grant is part of the Government's controversial Voluntary Assisted Return and Reintegration Programme.

Besides, foreign criminals booted out of Britain are exploiting a benefits loophole to claim state handouts for the period before they were deported.

The scandalous use of public money emerged after a Freedom of Information request about the payment of backdated benefits to deportees over the past two years.

Ministers have admitted that murderers, rapists and other unwanted thugs can legally demand vast sums of taxpayers cash even though they have been expelled from the UK.

Shockingly, officials have confessed they do not know how much money has been paid to convicts now living overseas.

Dia Chakravarty of the TaxPayers' Alliance said: "Taxpayers have every right to know how much of their money is being paid out in these benefits.

"It is simply not good enough for the DWP to say they don't have the details of the payments. "Ultimately, this is a symptom of an overly complicated benefit system which needs urgent reform so that those who really need support can get it without leaving taxpayers out of pocket unfairly."

Some migrants who were deported from our country have used the cash to set up businesses around the world.

And Ademola, a 36-year-old Nigerian, boasted that he blew his fee on clothes and a camera – and stayed in a hotel for a month.

Jonathan Isaby of the Taxpayers' Alliance slammed the handouts, saying: "Taxpayers would be right to ask if it's the best use of money.

"It will encourage immigrants to take dangerous journeys across the world, try their luck here and go on a free flight with a grant. It should end."

Revelations about the absurd rules, which have been branded a "disgrace", come at the same time that the Prime Minister has demanded an extra £12bn in welfare cuts.

Either the poorest in society or the "hard-working people" face being targeted under the commitment to £12bn of welfare cuts, experts have said.

One way of achieving the £12bn goal could be by reducing the £38bn cost of out-of-work payments to working-age families, for example by cutting entitlements to a third of the recipients, according to John Hills, director of the centre for analysis of social exclusion at the London School of Economics.

"But that would mean hitting lone parents and disabled people and create pressure on food banks and hardship on a scale that would be hard to imagine," Hills said. "Alternatively you could take it from hardworking families who rely on housing benefit and tax credits. That's a lot of pain from a large number of people who have just voted for you."

To justify the cuts, the government is likely to employ a narrative suggesting a clear division between a large, permanently welfare-dependent group and the rest of the population who pay taxes to support it.

A welfare system supposes caring about your own nation. It is absolutely unbelievable that money is taken from our people who have been paying tax and working hard, or our most vulnerable citizens and given to foreign criminals who not only come to benefit from our system, but often even commit crimes in our country. That should be stopped immediately.

Text 2. Situation chosen for the control condition

What can 'illegal immigrants' claim?

Recently, several tabloids claimed that Britain paid £66 million to asylum seekers and illegal immigrants.

Nearly 45,000 migrants were said to have been paid £1,500 each for leaving the country over the last decade. Moreover, they were accused of exploiting a benefits loophole to claim state handouts for the period after they were deported.

However, this information is far from accurate.

A spokesman for the Department for Work and Pensions last night said: 'There is no evidence that migrants are paid for leaving the country.

"A person who has been deported has no on-going entitlement to benefits and if people are deported and are fraudulently claiming benefits we can stop payments.

"We work closely with the Home Office so we have an awareness of whether someone is or is not in the country."

What can illegal immigrants claim?

Illegal immigrants are those who entered the UK unlawfully or stayed for longer than they were allowed without applying to stay longer.

Those in the UK without legal status are likely to be removed if their immigration status is discovered by the authorities. They inherently do not have the right to work in the UK.

As a result of the Welfare Reform Act 2012, only people with the right to work in the UK can collect National Insurance contribution based benefits like jobseeker's and employment and support allowance, and work related benefits like statutory maternity pay.

People subject to immigration control (who require leave to enter or remain in the UK but don't have it) are also prevented from collecting payments like housing and child benefit, and universal credit, which UK citizens are entitled to.

Many of the benefits available for people in the UK need proof that they have been in residence in the UK for at least 2 of the last three years. How could an illegal immigrant prove that without an entry stamp on their passport? (Or without risking deportation?)

Besides, asylum seekers who are waiting for a decision are not allowed to claim mainstream non-contributory social security benefits, and are not usually allowed to work either.

But they may be eligible for asylum support from the Home Office, which parliament described as "less generous than social security benefits" in its debunking briefing.

This support can consist of somewhere to live (which they cannot choose and is unlikely to be in London or the South East), plus £37.75 per person in the household a week. They can also get £3-5 per week per pregnant mother, baby and child under three, and may qualify for a one off maternity payment of £300. That is considerably less than the UK citizens receiving benefits are entitled to.

In general, asylum seekers and illegal immigrants tend to be younger. They are therefore less likely to be a burden to the NHS since they will be healthier. This is only if illegal immigrants are not too frightened to visit a hospital in case they are apprehended.

What can refugees claim?

The term refugees refers to asylum seekers whose applications for asylum have been successful. According to a House of Commons research briefing, refugees "are able to claim social security benefits and tax credits on the same basis as UK nationals".

To be eligible for asylum, someone must be unable to live safely in their country out of fear of persecution because of characteristics like race, religion or political opinions that put them at risk there.

That means they would theoretically be eligible for the same kinds of pensions as the UK-born citizens, although aren't as likely to have built up the required national insurance contributions if they arrived in adulthood.

Appendix 3.2.2. Results of Pretest for Study 2

Table 3

Results of the Pretest for Study 2: Stimulus rated on their injustice level*

	Injustice			UKIP supporters			Others		
	M	SD	N	M	SD	N	M	SD	N
Treatment 1 - EU Migrants take advantage of generous welfare state	4.93	1.90	86	4.7	2.29	40	5.13	1.47	46
Control 1 - EU Migrants do not take advantage of UK's welfare state	3.39	1.57	74	3.78	1.61	40	2.94	1.41	34
Treatment 2 - Migrants 'milking' benefits system: Foreigners more likely to claim handouts	4.31	1.97	74	4.03	2.15	40	4.65	1.70	34
Control 2 - Migrants do not take advantage of UK's welfare state	3.61	1.35	86	4.28	1.36	40	3.02	1.04	46
Treatment 3 - Migrants 'take the jobs from young Britons'	4.36	1.62	86	4.20	2.03	40	4.50	1.15	46
Control 3 - Study estimates 500,000 EU workers are in low-skilled UK jobs	3.84	1.43	74	3.58	1.45	40	4.15	1.37	34
Treatment 4 - Sickly immigrants add £1bn to NHS bill	4.05	1.93	74	4.00	2.05	40	4.12	1.81	34
Control 4 - EU migrants won't take advantage of the NHS because they don't want it	3.94	1.32	86	4.20	1.45	40	3.72	1.17	46
Treatment 5 - Migrant benefits FARCE: We boot out crooks and then send them benefits cash…	4.84	2.08	86	4.58	2.39	40	5.07	1.77	46
Control 5 - What can 'illegal immigrants' claim?	3.42	1.51	74	3.28	1.54	40	3.59	1.48	34
Treatment 6 - Polish benefits guide 'encourages' people to come to UK because of our 'VERY GENEROUS' welfare system	4.93	1.96	74	4.73	2.10	40	5.18	1.78	34
Control 6 - Polish migrants in the UK: A long history	3.04	1.10	86	3.33	0.92	40	2.78	1.19	46

Note. "M" stands for "Mean", "SD" for "Standard Deviation". Selected texts for the treatment and control conditions are marked grey (Treatment 5, Control 5).

Table 4

Results of the Pretest for Study 2: Stimulus rated on their relevance level*

	Relevance			UKIP supporters			Others		
	M	SD	N	M	SD	N	M	SD	N
Treatment 1 - EU Migrants take advantage of generous welfare state	3.01	1.95	86	3.90	2.19	40	2.24	1.30	46
Control 1 - EU Migrants do not take advantage of UK's welfare state	3.28	1.88	74	3.23	1.94	40	3.35	1.84	34
Treatment 2 - Migrants 'milking' benefits system: Foreigners more likely to claim handouts	3.50	2.06	74	3.90	2.17	40	3.03	1.85	34
Control 2 - Migrants do not take advantage of UK's welfare state	2.92	1.87	86	3.43	2.04	40	2.48	1.62	46
Treatment 3 - Migrants 'take the jobs from young Britons'	3.24	1.93	86	4.08	2.17	40	2.52	1.35	46
Control 3 - Study estimates 500,000 EU workers are in low-skilled UK jobs	2.85	2.00	74	3.18	2.21	40	2.47	1.67	34
Treatment 4 - Sickly immigrants add £1bn to NHS bill	3.57	2.05	74	3.98	1.82	40	3.09	2.22	34
Control 4 - EU migrants won't take advantage of the NHS because they don't want it	3.10	1.65	86	3.35	1.67	40	2.89	1.61	46
Treatment 5 - Migrant benefits FARCE: We boot out crooks and then send them benefits cash…	3.14	1.84	86	3.95	2.11	40	2.43	1.19	46
Control 5 - What can 'illegal immigrants' claim?	2.74	1.90	74	3.10	2.01	40	2.32	1.70	34
Treatment 6 - Polish benefits guide 'encourages' people to come to UK because of our 'VERY GENEROUS' welfare system	3.30	2.11	74	3.85	2.13	40	2.65	1.92	34
Control 6 - Polish migrants in the UK: A long history	2.31	1.37	86	2.55	1.47	40	2.11	1.25	46

Note. "M" stands for "Mean", "SD" for "Standard Deviation". Selected texts for the treatment and control conditions are marked grey (Treatment 5, Control 5)

Appendix 3.2.3. Manipulation Check of Study 2

Table 5

Manipulation check. Comparison of Relative Deprivation Level in the Treatment and Control Condition Based on the T-Tests*

	Treatment			Control						
	N	M	SD	N	M	SD	t-test	df	p-value	Mean Difference
Negative Comparison	322	1.43	1.41	304	-1.52	1.21	28.210	619	0.000	2.95
Illigitimacy	322	.82	1.36	304	-.87	1.48	14.959	624	0.000	1.70
Durability	322	.45	1.18	304	-.48	1.12	10.066	624	0.000	0.93
Relative Deprivation	322	.78	.86	304	-.83	.90	22.806	624	0.000	1.61
*Personal Relevance	322	4.45	1.56	304	3.98	1.71	3.607	624	0.000	0.47
*Relevance to Close Ones	322	3.47	1.76	304	2.77	1.75	4.979	624	0.000	0.70

Note: Factor scores are used to present the latent factors of "social comparisons", "injustice", "durability" and the factor of "relative deprivation" which they constitute. "Personal relevance" and "relevance to close ones" are measured as observed variables. The manipulation had an effect also on all of the indicators used to operationalize perceptions of relative deprivation.

Comparison of the Manipulation Check between the Brexit and Remain Supporters

Table 6

*Comparison of Relative Deprivation Level in the Treatment and Control Condition for those who support **Remain** Based on the T-Tests**

	Treatment			Control			T-Test Results			
	N	M	SD	N	M	SD	t-test	df	p-value	Mean Difference
Comparison	157	1.08	1.39	133	-1.74	1.04	19.681	284	0.000	2.82
Injustice	157	0.76	1.28	133	-0.60	1.48	8.250	263	0.000	1.36
Durability	157	0.44	1.18	133	-0.38	1.17	5.919	288	0.000	0.82
Relative Deprivation	157	0.67	0.82	133	-0.74	0.87	14.220	288	0.000	1.41
*Personal Relevance	157	3.96	1.57	133	3.92	1.69	0.193	288	0.847	0.04
*Relevance to Close Ones	157	3.02	1.72	133	2.67	1.72	1.726	288	0.085	0.35

Note. Factor scores are used to present the latent factors of "social comparisons", "injustice", "durability" and the factor of "relative deprivation" which they constitute. "Personal relevance" and "relevance to close ones" are measured as observed variables. The manipulation had an effect also on all of the indicators used to operationalize perceptions of relative deprivation.

Table 7

*Comparison of Relative Deprivation Level in the Treatment and Control Condition for those who support **Brexit** Based on the T-Tests*

	Treatment			Control			T-Test Results			
	N	M	SD	N	M	SD	t-test	df	p-value	Mean Difference
Comparison	138	1.84	1.37	149	-1.33	1.32	19.865	285	0.000	3.16
Injustice	138	0.96	1.46	149	-1.09	1.48	11.784	285	0.000	2.05
Durability	138	0.46	1.22	149	-0.51	1.10	7.095	285	0.000	0.97
Relative Deprivation	138	0.94	0.93	149	-0.89	0.95	16.476	285	0.000	1.83
*Personal Relevance	138	4.98	1.42	149	4.03	1.71	5.104	281	0.000	0.95
*Relevance to Close Ones	138	3.92	1.76	149	2.91	1.08	4.823	285	0.000	1.014

Note. Factor scores are used to present the latent factors of "social comparisons", "injustice", "durability" and the factor of "relative deprivation" which they constitute. "Personal relevance" and "relevance to close ones" are measured as observed variables. The manipulation had an effect also on all of the indicators used to operationalize perceptions of relative deprivation.

Study 1

Exclusion Criteria:

114 respondents were excluded from the sample. We deleted the responses in case respondents used unsupported devises to make sure that the graphical elements in the questionnaire were displayed correctly as well as that the respondents were paying attention to the instructions. We also excluded respondents if the respondents made more than one mistake in attention checks or were not reading questions until the end, were below seventeen years old, had flat lines on batteries of questions or showed in other way low efforts in answering the questionnaire.

Table 1

Summary of Socio-Demographic Variables across the Treatment and Control Conditions in Study 1

	Concept		Treatment	Control
	Age	N	301	288
		Mean	36.05	36.95
		Median	33.00	33.50
		Standard Deviation	13.637	13.470
		Minimum	18	18
		Maximum	75	71

	Concept	Response Options	Treatment		Control	
			N	Percent	N	Percent
1	education	Primary education	1	.3	1	.3
		Lower secondary education	6	2.0	7	2.4
		Upper secondary education	56	18.6	64	22.2
		Post-secondary non-tertiary education	51	16.9	48	16.7
		Short-cycle tertiary education	19	6.3	14	4.9
		Bachelor's or equivalent level	128	42.5	111	38.5
		Master's or equivalent level	35	11.6	39	13.5
		Doctoral or equivalent level	5	1.7	4	1.4
		Total	301	100.0	288	100.0
2	Subjective social class	1 Lower class	12	4.0	4	1.4
		2 Working class	100	33.2	116	40.3
		3 Lower middle class	77	25.6	77	26.7
		4 Middle class	98	32.6	74	25.7
		5 Upper middle class	8	2.7	9	3.1
		6 Refuse to answer the question	6	2.0	8	2.8
		Total	295	98.0	280	97.2

3	Subjective economic status	1 Very difficult	14	4.7	13	4.5
		2 Fairly difficult	80	26.6	58	20.1
		3 Neither easy nor difficult	72	23.9	94	32.6
		4 Fairly easy	98	32.6	81	28.1
		5 Very easy	35	11.6	39	13.5
		6 Refuse to answer the question	2	.7	3	1.0
		Total	301	100	288	100
4	Left-right political self-placement	1 – left	12	4.0	14	4.9
		2	22	7.3	18	6.3
		3	50	16.6	34	11.8
		4	34	11.3	35	12.2
		5	32	10.6	23	8.0
		6 – in the middle	92	30.6	96	33.3
		7	22	7.3	19	6.6
		8	14	4.7	17	5.9
		9	8	2.7	16	5.6
		10	3	1.0	4	1.4
		11 – right	1	.3	6	2.1
		I refuse to answer the question	11	3.7	6	2.1
		Total	301	100.0	288	100.0
5	Affiliation with the political party	Conservative	20	6.6	39	13.5
		Labour	79	26.2	56	19.4
		Liberal Democrat	36	12.0	32	11.1
		Scottish National Party (SNP)	12	4.0	11	3.8
		Plaid Cymru	1	.3	1	.3
		Green Party	46	15.3	36	12.5
		UK Independence Party (UKIP)	4	1.3	5	1.7
		Trade Union and Socialist Coalition (TUSC)/ RESPECT/ Other socialist party	-	-	1	.3
		Brexit Party	25	8.3	19	6.6
		Change UK - The Independent Group	4	1.3	6	2.1
		Other	-	-	3	1
		I don't feel close to any party	72	23.9	78	27.1
		I refuse to answer the question	2	.7	1	.3
		Total	301	100.0	288	100
	Voting at the EU elections, 23-26 May, 2019	voting	196	65.1	172	59.7
		Not voting	105	34.9	116	40.3
		Total	301	100.0	288	100.0
6	Voting at the EU elections, 23-26 May, 2019	Conservative	10	3.5	6	2.0
		Labour	24	8.3	33	11.0
		Liberal Democrat	35	12.2	39	13.0
		The Brexit Party	32	11.1	38	12.6
		Scottish National Party (SNP)	7	2.4	13	4.3
		Green	37	12.8	42	14.0
		UK Independence Party (UKIP)	2	.7	1	.3

		Plaid Cymru	2	.7	2	.7
		Change UK - The Independent Group	7	2.4	8	2.7
		UK European Union Party	1	.3	1	.3
		An independent candidate	1	.3	2	.7
		Another party	5	1.7	-	-
		I did not vote	3	1.0	3	1.0
		I prefer not to say	6	2.1	8	2.7
		Missing	116	40.3	105	34.9
		Total	301	100.0	288	100.0
7	Brexit in 2019	Remain a member of the European Union	201	66.8	183	63.5
		Leave the European Union	76	25.2	73	25.3
		I would not vote	9	3.0	10	3.5
		I don't know	14	4.7	20	6.9
		I refuse to answer the question	1	.3	2	.7
		Total	301	100.0	288	100.0
8	Gender	female	155	51.5	139	48.3
		male	146	48.5	146	50.7
		other	-	-	3	1.0
		Total	301	100.0	288	100.0
	Place of Residence	England	259	86.0	241	83.7
		Scotland	23	7.6	27	9.4
		Wales	15	5.0	12	4.2
		Northern Ireland	4	1.3	8	2.8
		Total	301	100.0	288	100.0
	Place of Birth	England	259	86.0	248	86.1
		Scotland	24	8.0	21	7.3
		Wales	10	3.3	8	2.8
		Northern Ireland	7	2.3	9	3.1
		Outside of UK	1	.3	2	.7
		Total	301	100.0	288	100.0
	Do you think the author of the article was neutral or was pursuing a certain view?	1 - do not trust at all	5	1.7	21	7.3
		2	16	5.3	48	16.7
		3	37	12.3	53	18.4
		4	78	25.9	69	24.0
		5	105	34.9	73	25.3
		6	46	15.3	21	7.3
		7 - trust completely	14	4.7	3	1.0
		Total	301	100.0	288	100.0

Table 2

Difference of Social Demographic and Other Control Variables between the Treatment Conditions in Study 1

	No deprivation		Deprivation		t(df)	p	Cohen's d
	M	SD	M	SD			
Age	36.95	13.47	36.05	13.64	-.804 (587)	0.422	-0.066
Education	6.00	1.546	6.09	1.48	0.747 (587)	0.456	0.062
Class	2.89	.924	2.97	.97	1.015 (573)	0.310	0.085
Income	3.26	1.073	3.20	1.102	-0.694 (582)	0.488	-0.057
Left-right	**5.33**	2.251	**4.94**	2.010	-2.158 (570)	0.031	-0.181
Trustworthiness of Article	**3.69**	1.435	**4.51**	1.27	7.345 (571)	0.000	0.607
Style of Article	**2.66**	1.10	**2.40**	1.02	-2.940 (587)	0.003	-0.242

Table 3

Means, standard deviations, and correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. RD	-0.00	-										
2. Anti-elitism	-0.00	0.47	.08									
3. Homogeneity	-0.00	0.48	.11**	.26**								
4. Popular Sovereignty	0.00	0.99	-.01	.54**	.34**							
5. Trustworthiness of Article	4.11	1.41	.29**	-.06	.06	-.03						
6. styleR	2.52	1.07	-.12**	-.07	.01	-.02	.19**					
7. age	19.49	13.55	-.03	.04	.16**	-.10*	.07	.00				
8. education	6.05	1.51	.03	-.15**	-.13***	-.12***	.04	-.10*	.05			
9. class	2.93	0.95	.04	-.18***	-.15***	-.18***	.00	-.06	-.02	.31**		
10. income	3.23	1.09	-.03	-.11**	-.07	-.11**	-.00	-.11**	-.03	.15**	.40**	
11. leftright	5.13	2.14	-.09*	.03	.09*	.02	-.01	.10*	.13**	-.08*	.14**	.16**

*Note. M and SD are used to represent mean and standard deviation, respectively. * indicates p < .05. ** indicates p < .01.*

Table 4

Pearson Correlations between the Preregistered Emotions in Study 1

	anger	contempt	disgust	fear	shame
contempt	.560***				
disgust	.626***	.713***			
fear	.419***	.613***	.480***		
shame	.530***	.531***	.481***	.654***	
sad	.570***	.347***	.516***	.303***	.675***

Note. The significance levels are as follows: '***' stands for p<0.001; '**' for p<0.005; '*' for p<0.05; '+' for p<0.1.

Figure 1

Measure of Populist Attitudes in Studies 1 and 2
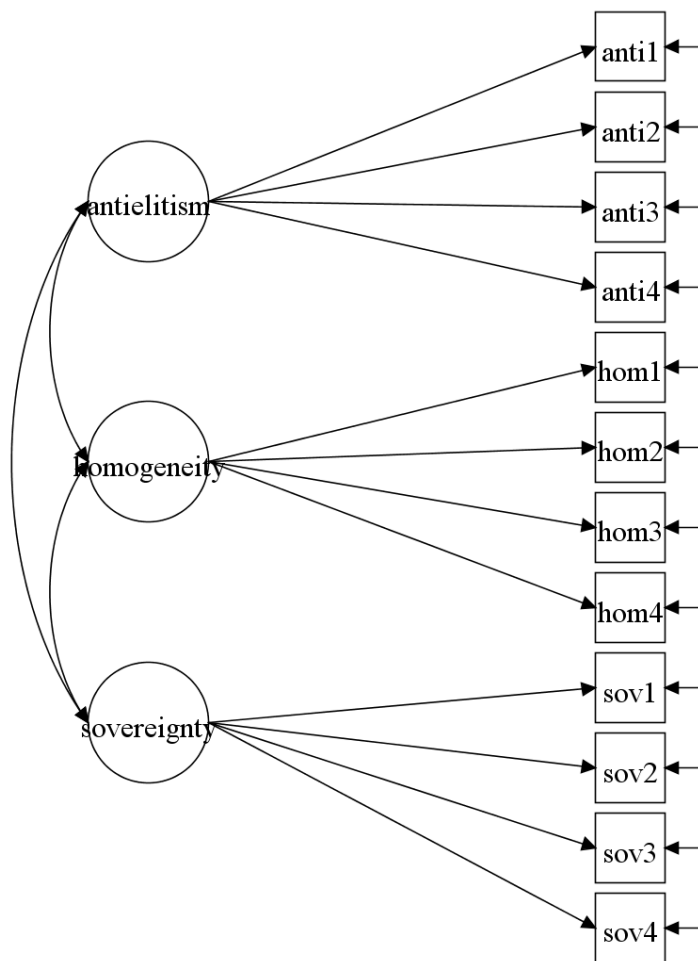
Table 5

Factor Loadings of Populist Attitudes in Study 1

	Factors	Observed variables / Factors	Factor loadings (standard error)
Factor loadings	Anti-elitism	MPs in Parliament very quickly lose touch with ordinary people (anti1)	0.730 (0.035)
		The differences between ordinary people and the ruling elite are much greater than the differences between ordinary people. (anti2)	0.490 (0.040)
		People like me have no influence on what the government does. (anti3)	0.411 (0.042)
		Politicians talk too much and take too little action (anti4)	0.722 (0.035)
	Homogeneity	Ordinary people all pull together (hom1)	0.532 (0.036)
		Ordinary people are of good and honest character (hom2)	0.691 (0.029)
		Ordinary people share the same values and interests (hom3)	0.858 (0.025)
		Although the British are very different from each other, when it comes down to it they all think the same (hom4)	0.574 (0.033)
	Popular Sovereignty	The people should have the final say on the most important political issues by voting on them directly in referendums (sov1)	0.870 (0.015)
		The people should be asked whenever important decisions are taken (sov2)	0.850 (0.016)
		The people, not the politicians, should make our most important policy decisions (sov3)	0.784 (0.020)
		The politicians in Parliament need to follow the will of the people (sov4)	0.466 (0.035)
Correlations between factors			
	Homogeneity and anti-elitism		0.060 (0.016)
	Popular sovereignty and anti-elitism		0.260 (0.034)
	Homogeneity and popular sovereignty		0.167 (0.032)
Residual variances	Anti-elitism	anti1	0.467 (0.051)
		anti2	0.760 (0.039)
		anti3	0.831 (0.035)
		anti4	0.478 (0.051)
	Homogeneity	hom1	0.717 (0.038)
		hom2	0.523 (0.040)
		hom3	0.263 (0.044)
		hom4	0.671 (0.038)

Popular Sovereignty	sov1		0.243 (0.027)
	sov2		0.278 (0.027)
	sov3		0.385 (0.031)
	sov4		0.782 (0.033)
Model Fit	Chi-Square		166.554
	df		51
	p		0.0000
	RMSEA		0.062
	CFI		0.948
	TLI		0.933
	SRMR		0.049

Study 2
Exclusion criteria:

132 participants were excluded from the sample. We deleted the responses made with unsupported devices to make sure that the graphical elements in the questionnaire were displayed correctly as well as that the respondents were paying attention to the instructions. We also excluded those who did not read questions until the end, and those who did not read the text used for manipulation attentively, which left us with a resulting sample of 626 participants.

Table 6

Summary of Socio-Demographic Variables across the Treatment and Control Conditions in

Study 2

	Concept			Treatment	Control
	Age	N		322	304
		Mean		39.41	40.67
		Median		37.00	38.00
		Standard Deviation		13.299	13.966
		Minimum		18	19
		Maximum		75	79

	Concept	Response Options	Treatment		Control	
			N	Percent	N	Percent
	Birthplace	England	283	87.9	267	87.8
		Scotland	19	5.9	16	5.3
		Wales	12	3.7	20	6.6
		Northern Ireland	6	1.9	1	.3
		Outside of UK	2	.6		
		Total	322	100.0	304	100.0
	Place of Residence	England	280	87.0	264	86.8
		Scotland	19	5.9	16	5.3

		Wales	18	5.6	24	7.9
		Northern Ireland	5	1.6	-	-
		Total	322	100.0	304	100.0
	Sex	female	154	47.8	158	52.0
		male	167	51.9	146	48.0
		other	1	.3	-	-
		Total	**322**	**100.0**	**304**	**100.0**
1	education	Primary education	1	.3	2	.7
		Lower secondary education	8	2.5	18	5.9
		Upper secondary education	65	20.2	69	22.7
		Post-secondary non-tertiary education	55	17.1	37	12.2
		Short-cycle tertiary education	17	5.3	20	6.6
		Bachelor's or equivalent level	128	39.8	119	39.1
		Master's or equivalent level	39	12.1	36	11.8
		Doctoral or equivalent level	9	2.8	3	1.0
		Total	**322**	**100.0**	**304**	**100.0**
2	Subjective social class	1 Lower class	12	3.7	14	4.6
		2 Working class	121	37.6	111	36.5
		3 Lower middle class	87	27.0	87	28.6
		4 Middlec lass	89	27.6	72	23.7
		5 Upper middle class	8	2.5	15	4.9
		7 Refuse to answer the question	5	1.6	5	1.6
		Total	**322**	**100.0**	**304**	**100.0**
3	Subjective economic status	1 Very difficult	19	5.9	27	8.9
		2 Fairly difficult	86	26.7	74	24.3
		3 Neither easy nor difficult	73	22.7	91	29.9
		4 Fairly easy	102	31.7	79	26.0
		5 Very easy	39	12.1	30	9.9
		6 Refuse to answer the question	3	.9	3	1.0
		Total	**322**	**100.0**	**304**	**100.0**
4	Left-right political self-placement	1 – left	26	8.1	13	4.3
		2	20	6.2	13	4.3
		3	22	6.8	38	12.5
		4	36	11.2	28	9.2
		5	28	8.7	29	9.5
		6 – in the middle	75	23.3	89	29.3
		7	45	14.0	23	7.6
		8	33	10.2	28	9.2
		9	20	6.2	25	8.2
		10	12	3.7	10	3.3
		11 – right	2	.6	5	1.6
		I refuse to answer the question	3	.9	3	1.0
		Total	**322**	**100.0**	**304**	**100.0**
7	Brexit in 2019	Remain a member of the European Union	157	48.8	133	43.8
		Leave the European Union	138	42.9	149	49.0
		I would not vote	7	2.2	10	3.3

		I don't know	20	6.2	12	3.9
		Total	**322**	**100.0**	**304**	**100.0**
5	Affiliation with the political party	Conservative	82	25.5	85	28.0
		Labour	104	32.3	85	28.0
		Liberal Democrat	34	10.6	30	9.9
		Scottish National Party (SNP)	4	1.2	5	1.6
		Plaid Cymru	1	.3	-	-
		Green Party	19	5.9	24	7.9
		UK Independence Party (UKIP)	5	1.6	3	1.0
		British National Party (BNP)/ National Front	1	.3	-	-
		Brexit Party	16	5.0	16	5.3
		Other	1	.3	2	.7
		I don't feel close to any party	53	16.5	54	17.8
		I refuse to answer the question	2	.6	-	-
		Total	**322**	**100.0**	**304**	**100.0**
	Voting at General Elections on 12.11	yes	307	95.3	287	94.4
		no	15	4.7	17	5.6
		Total	**322**	**100.0**	**304**	**100.0**
	Voting at General Elections on December, 12th, 2019	Conservative	101	31.4	108	35.5
		Labour	129	40.1	108	35.5
		Liberal Democrat	26	8.1	24	7.9
		The Brexit Party	9	2.8	12	3.9
		Scottish National Party (SNP)	6	1.9	6	2.0
		Green	9	2.8	8	2.6
		UK Independence Party (UKIP)	1	.3	1	.3
		Women's Equality Party	1	.3	-	-
		An independent candidate	-	-	6	2.0
		Another party	9	2.8	-	-
		I prefer not to say	16	5.0	13	4.3
		I didn't vote	-	-	1	.3
		Total	307	95.3	287	94.4
		Non-voting (filter)	15	4.7	17	5.6
		Total	**322**	**100.0**	**304**	**100.0**
	Please, remember the article you have read. How much do you trust the information given there?	1 - do not trust at all	44	13.7	9	3.0
		2	82	25.5	24	7.9
		3	46	14.3	23	7.6
		4	65	20.2	91	29.9
		5	54	16.8	100	32.9
		6	25	7.8	44	14.5
		7 - trust completely	6	1.9	13	4.3
		Total	**322**	**100.0**	**304**	**100.0**
	Do you think the author of	1 - very neutral	4	1.2	45	14.8
		2	17	5.3	87	28.6
		3	50	15.5	90	29.6

the article	4	111	34.5	61	20.1
was neutral	5 - the author was strongly	140	43.5	21	6.9
or was	pushing his/her political views				
pursuing a	**Total**	**322**	**100.0**	**304**	**100.0**
certain					
view?					

Table 7

Attitudes towards Brexit in 2016 and 2019

		Leave in 2016		Remain in 2016		Total	
		N	Percent	N	Percent	N	Percent
Attitudes to Brexit in 2019	Remain a member of the European Union	51	14.2	239	89.8	290	46.3
	Leave the European Union	274	76.3	12	4.5	288	45.8
	I would not vote	13	3.6	4	1.5	17	2.7
	I don't know	21	5.8	11	4.1	32	5.1
	Total	359	100	266	100	626	100

Table 8

Difference of Social Demographic and Other Control Variables between the Treatment Conditions in Study 2

	No deprivation		Deprivation		t(df)	p	Cohen's d
	M	SD	M	SD			
Age	40.67	13.97	39.41	13.30	-1.157 (624)	0.248	-.093
Education	5.88	1.62	6.06	1.55	1.454 (624)	0.146	.116
Class	2.88	.994	2.87	.950	-0.031 (614)	0.975	-0.003
Income	3.04	1.126	3.18	1.136	1.529 (618)	0.127	0.123
Left-right	5.68	2.331	5.54	2.426	-0.724 (618)	0.469	-0.058
Trustworthiness of Article	**4.42**	1.33	**3.32**	1.61	-9.411 (614)	0.000	-.749
Style of Article	**3.24**	1.14	**1.86**	.95	-16.421 (590)	0.000	-1.320

Table 9

Means, standard deviations, and correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. RDTreatment	-	-											
2. BrexitLeave	-	-											
3. Anti-elitism	-0.00	0.56	-.06	.07									
4. Homogeneity	0.00	0.57	-.03	.08*	.06								
5. Popular Sovereignty	0.00	1.03	-.07	.17**	.48**	.27**							
6. BrexitLeave	1.50	0.50	-.06	1.00**	.07	.08*	.17**						
7. Trustworthiness of Article	3.85	1.58	-.35**	.12**	.05	.22**	.16**	.12**					
8. age	23.03	13.63	-.05	.28**	.02	.03	-.05	.28**	.10**				
9. education	5.97	1.58	.06	-.23**	-.09*	-.12**	-.14**	-.23**	-.12**	-.11**			
10. class	2.94	1.09	-.00	-.01	-.16**	-.07	-.16**	-.01	-.00	.13**	.29**		
11. income	3.14	1.16	.06	-.01	-.10*	.04	-.12**	-.01	.02	.05	.23**	.36**	
12. leftright	5.67	2.45	-.03	.57**	-.05	.08	.07	.57**	.11**	.32**	-.14**	.14**	.11**

*Note. M and SD are used to represent mean and standard deviation, respectively. * indicates p < .05. ** indicates p < .01.*

Table 10

Pearson Correlations between the Preregistered Emotions used in Study 2

	anger	contempt	disgust	fear	shame
contempt	.689***				
disgust	.579***	.725***			
fear	0.120	.550**	0.179		
shame	.510***	.488***	.454***	.490**	
sad	.310***	.457***	.437***	.483**	.423***

The significance levels are as follows: '***' stands for p<0.001; '**' for p<0.005; '*' for p<0.05; '+' for p<0.1.

Table 11

Factor Loadings of Populist Attitudes in Study 2

	Factors	Observed variables / Factors	Factor loadings (standard error)
Factor loadings	Anti-elitism	MPs in Parliament very quickly lose touch with ordinary people (anti1)	0.776 (0.030)
		The differences between ordinary people and the ruling elite are much greater than the differences between ordinary people. (anti2)	0.535 (0.036)
		People like me have no influence on what the government does. (anti3)	0.498 (0.037)
		Politicians talk too much and take too little action (anti4)	0.714 (0.031)
	Homogeneity	Ordinary people all pull together (hom1)	0.594 (0.034)
		Ordinary people are of good and honest character (hom2)	0.745 (0.028)
		Ordinary people share the same values and interests (hom3)	0.807 (0.027)
		Although the British are very different from each other, when it comes down to it they all think the same (hom4)	0.524 (0.036)
	Popular Sovereignty	The people should have the final say on the most important political issues by voting on them directly in referendums (sov1)	0.873 (0.014)
		The people should be asked whenever important decisions are taken (sov2)	0.875 (0.013)
		The people, not the politicians, should make our most important policy decisions (sov3)	0.816 (0.016)
		The politicians in Parliament need to follow the will of the people (sov4)	0.580 (0.029)
	Correlations between factors		
	Homogeneity and anti-elitism		0.047 (0.051)

	Popular sovereignty and anti-elitism		0.414 (0.043)
	Homogeneity and popular sovereignty		0.231 (0.045)
Residual variances	Anti-elitism	anti1	5.334 (0.156)
		anti2	5.603 (0.163)
		anti3	0.163 (0.099)
		anti4	4.739 (0.140)
	Homogeneity	hom1	2.717 (0.087)
		hom2	3.700 (0.112)
		hom3	2.687 (0.086)
		hom4	2.082 (0.071)
	Popular Sovereignty	sov1	2.877 (0.091)
		sov2	3.042 (0.095)
		sov3	2.523 (0.082)
		sov4	4.311 (0.128)
Model Fit	Chi-Square		193.745
	df		51
	p		0.0000
	RMSEA		0.067
	CFI		0.947
	TLI		0.931
	SRMR		0.047

Quality of the scale measuring perceptions of relative deprivation (as a manipulation check) in Study 2

Perceptions of relative deprivation. Based on the theoretical models presented in Smith et al., 2012 and Smith et al., 2008, relative deprivation was measured using: the presence of negative social comparisons ("The issue described in the article puts the UK citizens in a worse condition compared to illegal migrants" and a reversed version "The issue described in the article puts the UK citizens in a better condition compared to illegal migrants"), illegitimacy of the situation which has led to the negative social comparisons ("The issue described in the article is just" and "The issue described in the article is fair"), durability of this the situation which lead to the negative social comparisons ("The issue described in the article will increase the difference between the UK citizens and illegal migrants", "The issue described in the article will decrease the difference between the UK citizens and illegal migrants", "The problem of the difference between the UK citizens and illegal migrants will be alleviated", and "The problem of the difference between the UK citizens and illegal migrants will be exacerbated"). All these items were measured on a scale from 1 to 7 and recorded in such a way that the higher value would stands for a higher level of perceptions of relative deprivation. Since there was only a theoretical model available, we run an exploratory and subsequently confirmatory factor analysis. The resulting model of perceptions of relative deprivation was comprised by first-order factors "social comparisons", "injustice" and "durability" with "perceptions of relative deprivation" as a second order factor (Model fits: Chi-square = 18.058, df = 6, P-Value = 0.006, RMSEA = 0.057; CFI = 0.995, TLI = 0.987; SRMR = 0.025). The perceived relative deprivation index ranges from -2.640 to 2.144.

Figure 1

The Structural Model of Perceptions of Relative deprivation
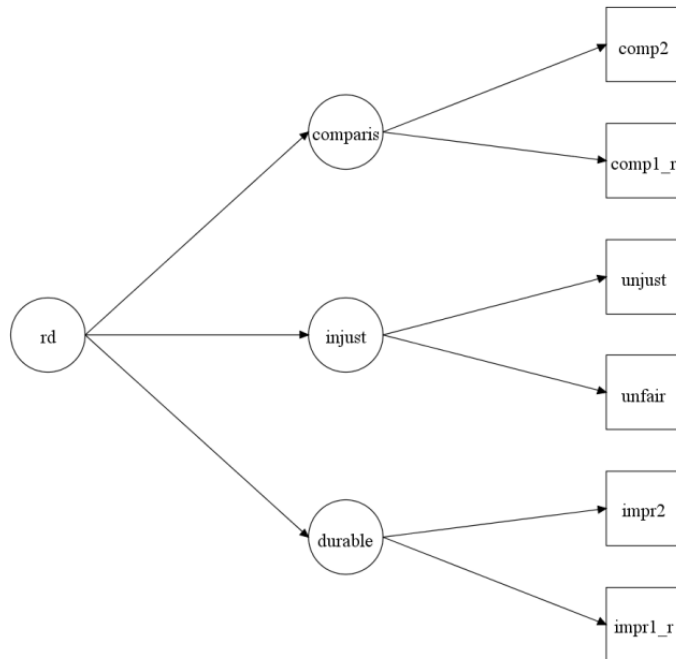
Table 12. Perceptions of relative deprivation: results of the confirmatory factor analysis

	Factors	Observed variables / Factors	Factor loadings
Factor loadings	Social Comparisons	Comparison 1 (reversed)	0.953 (0.015)
		Comparison 2	0.938 (0.015)
	Injustice	Injustice (reversed)	0.923 (0.016)
		Unfairness (reversed)	0.948 (0.015)
	Durability	Improvement 1 (reversed)	0.372 (0.058)
		Improvement 2	0.883 (0.110)
	Relative Deprivation	Social Comparisons (1st order factor)	0.695 (0.049)
		Injustice (1st order factor)	0.794 (0.053)
		Durability (1st order factor)	0.502 (0.070)
Residual variances	Social Comparisons	Comparison 1 (reversed)	0.091 (0.028)
		Comparison 2	0.120 (0.028)
	Injustice	Injustice (reversed)	0.147 (0.029)
		Unfairness (reversed)	0.102 (0.029)
	Durability	Improvement 1 (reversed)	0.861 (0.043)
		Improvement 2	0.220 (0.194)
	Relative Deprivation	Social Comparisons (1st order factor)	0.517 (0.068)
		Injustice (1st order factor)	0.369 (0.084)
		Durability (1st order factor)	0.748 (0.071)
Model	Chi-Square		18.058
	df		6

p		0.0061
RMSEA		0.057
CFI		0.995
TLI		0.987
SRMR		0.025

Note. Cell models are standardized coefficients. Standard errors are given in brackets.

Perceived relative deprivation. Both, Leavers and Remainers experienced more relative deprivation in the treatment condition compared to the control condition.

Figure 2

The level of Perceived Relative Deprivation, Extracted Factor Score.
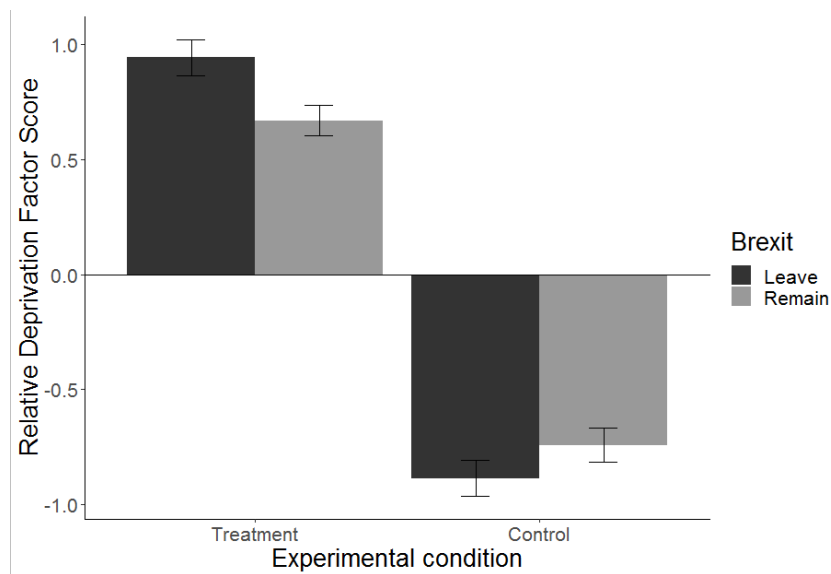
Appendix 3.5. Regression analysis

Study 1

Table 1

Results of the OLS Regression Analysis for Populist Attitudes. Perceived Trustworthiness, Neutrality of the Article, and Respondent's Left-right Self-placement were Included as Control Variables

Predictors	Anti-Elitism			Homogeneity			Popular Sovereignty		
	Estimates		p	Estimates		p	Estimates		p
Relative deprivation	**0.09*** (.04)		0.026	**0.13*** (.04)		0.002	0.01 (.09)		0.928
Trustworthiness	-0.02 (.02)		0.139	0.01 (.02)		0.549	-0.02 (.03)		0.615
Neutrality	-0.01 (.02)		0.618	0.01 (.02)		0.560	-0.00 (.04)		0.904
Left-right scale	0.01 (.01)		0.298	**0.02*** (.01)		0.016	0.01 (.02)		0.591
(Constant)	0.02 (.08)		0.773	**-0.24*** (.09)		0.005	0.02 (.19)		0.907
Observations	572			572			572		
R^2 / R^2 adjusted	0.013 / 0.006			0.030 / 0.023			0.001 / -0.006		

Note: Cell entries are unstandardized regression coefficients, standard errors are given in brackets.

Regression analysis across Remainers and Leavers (Study 2)

Table 2

Results of OLS Regression: Effect of Relative Deprivation on Populist Attitudes

Predictors	Anti-Elitism		Homogeneity		Popular Sovereignty	
	Estimates	p	Estimates	p	Estimates	p
Relative Deprivation	-0.02 (.05)	0.697	0.02 (.05)	0.705	-0.04 (.09)	0.679
trustworthy	0.01 (.02)	0.325	**0.08*** (.02)**	0.000	**0.10*** (.03)**	0.000
Constant	-0.05 (.07)	0.519	**-0.33***(.07)**	0.000	**-0.38** (.14)**	0.005
Observations	626		626		626	
R^2 / R^2 adjusted	0.003 / -0.001		0.051 / 0.048		0.027 / 0.024	

Note: Entries are unstandardized regression coefficients and standard errors.
*p<0.1; **p<0.05; ***p<0.01.

Table 3

The effect of the perceptions of relative deprivation on populist attitudes across Remainers

	Anti-elitism	Homogeneity	Popular Sovereignty
PRD	-.039 (.085) p=.648	*.139 (.078) p=.076*	-.109 (.160) p=.497
Trustworthiness	.004 (.025) p=.863	**.099 (.023) p=.000**	**.099 (.047) p=.038**
Constant	-.030 (.130) p=.820	**-.503 (.120) p=.000**	***-.486 (.244) p=.048***
Observations	290	290	290
R^2/ Adjusted R^2	.002/.005	.062/.055	.033/.026

Note. Unstandardized coefficients and standard errors are given.
*p<0.1; **p<0.05; ***p<0.01.

Table 4

The effect of the perceptions of relative deprivation on populist attitudes across Leavers

	Anti-elitism	Homogeneity	Popular Sovereignty
PRD	.052 (.067) p=.440	-.057 (.068) p=.399	.068 (.110) p=.539
Trustworthiness	.013 (.023) p=.578	**.103 (.023) p=.000**	**.086 (.037) p=.021**
Constant	-.052 (.106) p=.626	**-.360 (.107) p=0.000**	-.219 (.174) p=.208
Observations	287	287	287
R^2/ Adjusted R^2	.003/.004	.071/.064	.019 /.012

Note. Unstandardized coefficients and standard errors are given.
*p<0.1; **p<0.05; ***p<0.01.

Appendix 4A.

Questionnaire for Chapter 5:

Perceived Existential Insecurity or Relative Deprivation:

What Drives Populism under Threat?

Questionnaire

1   prolific id

Before you start the survey, please switch off your phone, music and e-mails so you focus on this study.

Thank you!

First, please enter your Prolific ID.
Your Prolific ID contains 24 characters.

[_____]

2   Instructions

Thank you for choosing to participate in the study!

Here are some instructions about the study. Please, read them carefully before you proceed.

I ask you to read some text attentively and will then ask you a number of questions. **Please, take your time to read the text, and not just skim through the lines.**

Please answer all the questions in the study. Take your time to read each question thoroughly, and answer them in the order they are presented.

This study is confidential and anonymous. There are no "good" and "bad" answers. So I ask you to give honest answers without fear of being judged for them later on.

I am very grateful for you taking the participation in this study seriously. The software will detect random answers, and in this case, or if you interrupt the study, you won't get any payment for participation.

Your participation in this study has no reasonable foreseeable risks. However, in case you feel uncomfortable, you can stop participating. However, as we said, you will be paid only in case you complete the whole study.

At the end of the session, I will provide you with more detailed information regarding the background of the study.

3   Intro_text

Please, now read the following article carefully. Afterwards, we will ask you about the emotions you felt when reading it and will have some more questions about this article. You will not have the possibility to go back to the article.

4.1   Text

Our lives have changed forever: we are unlikely to get a working coronavirus vaccine

Despite large-scale trials of vaccines for the coronavirus, politicians have become more pessimistic about immunisation prospects. They are right to be.

Boris Johnson told a No 10 press briefing that a vaccine was "by no means guaranteed".

It would be hard to overstate the importance of developing a vaccine to Sars-CoV-2 – it's seen as the fast track to a return to normal life. That's why the health secretary, Matt Hancock, said the UK was "throwing everything at it".

But while trials have been launched and manufacturing deals already signed – Oxford University vaccine is currently being trialled on more than 10,000 people in Britain, Brazil and South Africa – ministers and their advisers have become noticeably more cautious in recent days.

Earlier this week, England's deputy chief medical officer Jonathan Van-Tam said the words nobody wanted to hear: "We can't be sure we will get a vaccine."

But he was right to be circumspect.

Why might a vaccine fail?

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Vaccines are simple in principle but complex in practice. The ideal vaccine protects against infection, prevents its spread, and does so safely. But none of this is easily achieved, as vaccine timelines show.

More than 30 years after scientists isolated HIV, the virus that causes Aids, we have no vaccine. The dengue fever virus was identified in 1943, but the first vaccine was approved only last year, and even then amid concerns it made the infection worse in some people. The fastest vaccine ever developed was for mumps. It took four years.

A chief concern is that coronaviruses do not tend to trigger long-lasting immunity. About a quarter of common colds are caused by human coronaviruses, but the immune response fades so rapidly that people can become reinfected the next year.

Researchers at Oxford University recently analysed blood from recovered Covid-19 patients and found that levels of IgG antibodies – those responsible for longer-lasting immunity – rose steeply in the first month of infection but then began to fall again.

Last week, scientists at Rockefeller University in New York found that most people who recovered from Covid-19 without going into hospital did not make many killer antibodies against the virus.

If the natural infection doesn't give you that much immunity, what will a vaccine do?

The genetic stability of the virus matters too. Some viruses, such as influenza, mutate so rapidly that vaccine developers have to release new formulations each year. The rapid evolution of HIV is a major reason we have no vaccine for the disease.

Sars-CoV-2 coronavirus is acquiring mutations, as all viruses do. Some genetic changes have been spotted in the virus's protein "spikes" which are the basis of most vaccines. If the spike protein mutates too much, the antibodies produced by a vaccine will effectively be out of date and might not bind the virus effectively enough to prevent infection.

Another challenge: making any vaccine safe

In the rush to develop a vaccine – there are now more than 150 in development – safety must remain a priority.

This means scientists will have to check extremely carefully for signs of dangerous side-effects in a very short time. During the search for a Sars vaccine in 2004, scientists found that one candidate caused hepatitis in ferrets.

Another serious concern is when the antibodies produced by a vaccine actually make future infections worse. The effect caused serious lung damage in animals given experimental vaccines for both Sars and Mers.

Is the virus here to stay?

The simple answer is: yes.

"If and when we have a vaccine, what you get is not rainbows and unicorns," says Larry Brilliant, CEO of Pandefense Advisory. "If we are forced to choose a vaccine that gives only one year of protection, then we are doomed to have Covid become endemic, an infection that is always with us."

"It will be harder to get rid of Covid than smallpox," says Brilliant. With smallpox it was at least clear who was infected, whereas people with coronavirus can spread it without knowing.

As David Salisbury, the former director of immunisation at the Department of Health, told: "Unless we have a vaccine available in unbelievable quantities that could be administered extraordinarily quickly in all communities in the world we will have gaps in our defences that the virus can continue to circulate in."

The virus will "ping-pong back and forth in time and geography".

People now have to adapt – our life has changed for many years to come. We will have to get used to extensive monitoring for infections backed up by swift outbreak containment. Maintaining handwashing, physical distancing and avoiding gatherings, particularly in enclosed spaces will remain an integral part of our lives. Even then virus will stay with us for long time.

5.1   Text

Fury: Eventual coronavirus vaccine can't only be available for the rich

The World Health Organization (WHO) has recently launched an initiative to encourage countries to share research on coronavirus treatments and produce any vaccine patent-free. This would mean they could be distributed fairly according to need.

This would help the world to conquer the COVID-19 pandemic, which has spread in more than 60 countries. There are now 20,388,408 confirmed cases and 743,599 deaths worldwide.

A vaccine is the only possibility to stop the pandemic and allow us to come back to normality.

The WHO proposal, a voluntary scheme that would pool knowledge, intellectual property and data about coronavirus health technologies, is not particularly radical – but you wouldn't guess that from the recent protestations of pharmaceutical corporations.

Pfizer called the proposal "nonsense", while the big British companies working on coronavirus treatments, AstraZeneca and GlaxoSmithKlein, refused to participate.

The reaction from this industry shouldn't surprise us. Over the past three decades, big pharma has used its unparalleled lobbying muscle to secure market monopolies that vastly increase the power it holds over governments. These corporations enjoy monopoly protection for new medicines they manufacture, allowing them to charge any price the market will endure.

Governments have poured phenomenal sums of money into drug development to stimulate essential medical research that patents have failed to incentivise. But this money – like the UK government's £500m of coronavirus research funding – rarely comes with any strings attached, allowing pharmaceutical companies to monopolise the resulting medicines. At least not in our country.

A recent study estimated that one contender for a coronavirus treatment, a hepatitis C medication produced by the pharma giant Gilead, costs $5 per course to produce. The drug is currently on sale in the US for more than $18,000 per treatment course.

Despite the fact coronavirus medicines will be discovered using vast sums of public money, the NHS may still have to pay through the nose for any final product, while poorer countries could be unable to access the drug.

It wouldn't be the first time this has happened. In the 90s, millions of poor people died unnecessarily in the Aids crisis in sub-Saharan Africa, because the medicines to treat HIV were out of reach of most people.

The WHO's initiative is intended to avert a repeat of this. Many countries, rich and poor, support it – including Argentina, Mexico, South Africa, Norway, Portugal and Belgium.

But for the British government, the patent system is sacrosanct. The UK seems desperate not to upset its own pharmaceutical corporations or the financial sector.

Given the base of big pharma in the US and the UK, the withholding of support by industry and governments in these countries could easily scupper the WHO's plans.

Pharmaceutical companies treat healthcare as a commodity, not a right.

Making vaccines available only to the rich is not just immoral, it's also bad public health policy. Protecting others helps to protect everyone.

The final price of any vaccine should be one that rich and poor citizens, and governments of poor and rich countries alike can afford so all citizens can get it free at the point of care.

In the modern world it is impossible to close borders – even entry bans cannot secure us anymore.

Without vigorous efforts to secure equitable access, vaccine distribution will follow the logic of the market. Allowing this to happen would be a moral disgrace.

Pharma companies endanger our lives. We will have to suffer for a long time from the coronavirus even though we paid with our money for the vaccine.

Needless to say, the vaccine won't be available to everyone in our country. So far, the government has promised the vaccination only for a limited number of vulnerable groups. Others may need to pay enormous amounts of money to get vaccinated: the rich will always have money to be injected, and the poor will be excluded from it. However, those who can pay for a costly vaccine are not safe either: the disease will not be conquered in our society for many years to come.

Unlike other countries, our government takes the side of the pharma industry. In Germany, however, the grants on vaccine research were allocated only on the condition that the pharma industry returns the money by providing all German citizens with free vaccination. Germany supported the WHO initiative.

Even if the vaccine is available to all many citizens, COVID-19 will be reimported from poorer countries unable to pay for vaccination. We will be struggling for many years with the reoccurring waves of the pandemic. How many more lives should it cost before our health ceases to be a commodity and our right to life will be preserved regardless of our income and place of residence?

6.1   Text_2

Coronavirus: UK 'throwing everything' at developing vaccine

The government is "throwing everything" at developing a coronavirus vaccine, Health Secretary Matt Hancock has said.

Mr Hancock told the No 10 briefing that "the best way to defeat coronavirus" was through a vaccine.

The process was "trial and error", he said, but the UK was at the "front of the global effort" and had invested more money than any other country.

He said two leading vaccine developments at UK universities - the University of Oxford and Imperial College London – have already received a total of £42.5m to support their clinical trials.

"Both of these promising projects are making rapid progress and I've told the scientists leading them we will do everything in our power to support."

He added: "After all, the upside of being the first country in the world to develop a successful vaccine is so huge that I am throwing everything at it."

It would be hard to overstate the importance of developing a vaccine to Sars-CoV-2 – it's seen as the fast track to a return to normal life.

Trials have been launched and manufacturing deals already signed – Oxford University, leading the global race, is currently being trialled on more than 10,000 people in Britain, Brazil and South Africa after moving into phase III trials.

Scientists have had to move trials abroad because there are now so few cases of the coronavirus in the community in Britain.

Meanwhile Imperial College London's vaccine has now moved into human trials and has reported no side effects.

Their vaccine candidates work by training the body to identify the coronavirus so it can rapidly fight off the illness before it has chance to cause an infection.

Oxford and Imperial's injectable vaccines are two of the frontrunners to cure the disease.

The chief scientific adviser of the Prime Minister, Patrick Vallance, said: "I'd be surprised if we didn't end up with something." Many scientists share that view.

It is also possible that a coronavirus vaccine will not be 100 per cent effective.

Those in development draw on at least eight different approaches, from weakened and inactivated viruses to technologies that smuggle genetic code into the recipient's cells, which then churn out spike proteins for the immune system to make antibodies against.

Ideally, a vaccine will generate persistent, high levels of antibodies to wipe out the virus and also "T" cells to destroy infected cells. But each vaccine is different and today no one knows what kind of immune response is good enough.

"We don't even know if a vaccine can produce an immune response which would protect against future infection," says David Heymann, who led the response of the World Health Organization (WHO) to the Sars epidemic.

Early results from several frontrunner vaccines suggest they have some use.

The US biotech firm Moderna reported antibody levels similar to those found in recovered patients in dozens of people who received its vaccine.

Another vaccine from Oxford University did not stop monkeys contracting the virus, but did appear to prevent pneumonia, a major cause of death in coronavirus patients.

If humans react the same way, vaccinated people would still spread the virus, but be less likely to die from it.

How well a vaccine works determines how it is used. Armed with a highly effective vaccine that protects for several years, countries could aim for herd immunity by protecting at least two-thirds of the population.

Coronavirus patients pass the virus on to three others, on average, but if two or more are immune, the outbreak will fizzle out. That is the best-case scenario.

More likely is we will end up with a vaccine, or a number of vaccines, that are only partially effective.

Vaccines that contain weakened strains of virus can be dangerous for older people, but might be given to younger people with more robust immune systems to reduce the spread of infection.

Meanwhile, older people might get vaccines that simply prevent infections progressing to life-threatening pneumonia. "If you don't have the ability to induce immunity, you've got to develop a strategy for reducing serious outcomes of infection," says John McCauley, director of the Worldwide Influenza Centre at the Francis Crick Institute.

But partially effective vaccines have their own problems: a vaccine that doesn't stop the virus replicating can encourage resistant strains to evolve, making the vaccine redundant.

The head of Britain's vaccine task force Kate Bingham told MPs she was confident the world would have some form of Covid-19 vaccine by early 2021.

7 Emotions

A1. When thinking about the situation described in the article you've just read, please, tell us which emotions do you experience?

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Please indicate the level of each emotion listed below. If you did not experience any emotion, please choose the option "1". For a highest intensity of an emotion, choose option "9".

	1 Not at all	2	3	4	5 Moderately	6	7	8	9 Extremely
disgust	○	○	○	○	○	○	○	○	○
sadness	○	○	○	○	○	○	○	○	○
fear	○	○	○	○	○	○	○	○	○
anger	○	○	○	○	○	○	○	○	○
contempt	○	○	○	○	○	○	○	○	○
shame	○	○	○	○	○	○	○	○	○
hope	○	○	○	○	○	○	○	○	○

8   SAM

Now we ask you to rate the emotion or emotions you felt when reading the article on three separate scales. Please, read the descriptions below preceding each of the scales and than choose the most appropriate picture describing what emotion or emotions you felt.

Rate how positive or negative the emotion is that you feel, ranging from unpleasant feelings to pleasant feelings of happiness.

Rate how excited or apathetic the emotion is that you feel, ranging from frantic excitement to sleepiness or boredom

Rate the extent to which your emotion makes you feel that you are in control of the situation, ranging from not in control at all to being 100% in control

9   Appraisals _ Em

Please, think about the situation described in the article you have read and answer to what extent you agree with the following statements:

Please, give your evaluation on a scale from 1 to 9, where 1 stands for "Not at all", 5 for "Moderately, and 9 for "Extremely".

	1 Not at all	2	3	4	5 Moderately	6	7	8	9 Extremely
To what extent does the situation you've read about would have very important consequences for you	○	○	○	○	○	○	○	○	○
To what extent does the situation have	○	○	○	○	○	○	○	○	○

negative aspects – things that you don't want, or are displeased about?									
To what extent does the situation have positive aspects – things that you do want, or are pleased about?	○	○	○	○	○	○	○	○	○
How certain are you that you will be able to do something to make (or keep) the situation the way you want them to be?	○	○	○	○	○	○	○	○	○
How certain are you that you will be able to get your physical needs met in this situation?	○	○	◉	○	○	○	○	○	○
How certain are you that you will be able to get your social needs met in this situation?	○	○	○	○	○	○	○	○	○
How certain are you that you will be able to accept the situation and adjust to your circumstances no matter what happens?	○	○	○	○	○	○	○	○	○
The actions that produced the situation described in the article were morally and ethically acceptable	○	○	○	○	○	○	○	○	○
The actions that produced the situation described in the article violated laws or social norms	○	○	○	○	○	○	○	○	○
The real or potential consequences of the situation described in the article were or would be unjust or unfair	○	○	○	○	○	○	○	○	○

Now, please tell us to what extent you agree with these statements about the situation described in the article you have read:

Please, give your evaluation on a scale from 1 to 9, where 1 stands for "Not at all", 5 for "Moderately, and 9 for "Extremely".

	1 Not at all	2	3	4	5 Moderately	6	7	8	9 Extremely
How certain are you that you will be able to avoid exposure to coronavirus?	○	○	○	○	○	○	○	○	○
How certain are you that you will be able to get vaccinated if you are willing to?	○	○	○	○	○	○	○	○	○
To what extent do you feel your life is endangered by the situation you've read about?	○	○	○	○	○	○	○	○	○
To what extent do you think the vaccine (when it is approved) will be equally distributed among the UK citizens?	○	○	○	○	○	○	○	○	○
To what extent do you think the British will be in a worse condition compared to Germans regarding access to the vaccine?	○	○	○	○	○	○	○	○	○
To what extent do you think poor people will be in a worse condition compared to wealthy people regarding access to the vaccine?	○	○	○	○	○	○	○	○	○
To what extent do you think poor countries will be in a worse condition compared to wealthy countries regarding access to the vaccine?	○	○	○	○	○	○	○	○	○
To what extent is the issue of equality in the distribution of vaccine of importance to you	○	○	○	○	○	○	○	○	○

10   Responsibility

To what extent are any of these actors responsible for the issue described in the article?

Please, give your evaluation on a scale from 1 to 9, where 1 stands for "Not at all", 5 for "Moderately, and 9 for "Extremely".

	1 – Not at all	2	3	4	5 – Moderately	6	7	8	9 – Extremely
Yourself	○	○	○	○	○	○	○	○	○
Other people in general	○	○	○	○	○	○	○	○	○
British citizens	○	○	○	○	○	○	○	○	○
Political leaders	○	○	○	○	○	○	○	○	○
Boris Johnson	○	○	○	○	○	○	○	○	○
Matthew Hancock	○	○	○	○	○	○	○	○	○
NHS	○	○	○	○	○	○	○	○	○
Pharma companies	○	○	○	○	○	○	○	○	○

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Scientists	○	○	○	○	○	○	○	○	○
Doctors	○	○	○	○	○	○	○	○	○
Luck or chance	○	○	○	○	○	○	○	○	○
Nature	○	○	○	○	○	○	○	○	○
China	○	○	○	○	○	○	○	○	○
World Health Organization (WHO)	○	○	○	○	○	○	○	○	○
European Union	○	○	○	○	○	○	○	○	○
Migrants and refugees	○	○	○	○	○	○	○	○	○
Black, Asian and minority ethnic groups	○	○	○	○	○	○	○	○	○

11   PopAtt

Please, read the following items related to society and political institutions and answer to what extent you agree with this statements

Please, choose the correct answer where 1 stands for "completely disagree", 5 for "completely agree".

	1 – strongly disagree	2	3 – neither agree nor disagree	4	5 – strongly agree
MPs in Parliament very quickly lose touch with ordinary people	○	○	○	○	○
The differences between ordinary people and the ruling elite are much greater than the differences between ordinary people.	○	○	○	○	○
People like me have no influence on what the government does.	○	○	○	○	○
Politicians talk too much and take too little action.	○	○	○	○	○
Politicians are really interested in what people like me think.	○	○	○	○	○
Ordinary people all pull together	○	○	○	○	○
Ordinary people are of good and honest character.	○	○	○	○	○
Ordinary people share the same values and interests.	○	○	○	○	○
Although the British are very different from each other, when it comes down to it they all think the same.	○	○	○	○	○
The politicians, not the people, should make our most important policy decisions.	○	○	○	○	○
The people should have the final say on the most important political issues by voting on them directly in referendums.	○	○	○	○	○
The people should be asked whenever important decisions are taken.	○	○	○	○	○
The people, not the politicians, should make our most important policy decisions.	○	○	○	○	○
The politicians in Parliament need to follow the will of the people.	○	○	○	○	○

12   Candidate choice1

Imagine, there are elections for an MP for in your constituency. Two candidates are competing for the seat. In recent debates, they expressed differing views. These views are summarized below.

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Candidate 1

I will do what my constituents want. I always rely on people's opinions in my decision-making.

That's easy: 99 per cent of all British think the same! I will organize referendums. Citizens should have the final say on important issues!

As for the coronavirus— that's simple. China is responsible for the large number of deaths of our citizens!

In these tough times, we need a strong leader taking the full control of the situation. That's the way I am!

Candidate 2

I have the courage to take unpopular decisions if and when they are necessary. I rely on experts and scientists in my decision-making.

We, the British, are all different. The elected representatives in the House of Commons should decide on all issues in the national interest. That's how we can make sure that all interests are accounted for.

Coronavirus is our shared tragedy. China suffered like any other country.

Especially in these hard days, we need a leader who listens to other politicians and experts to make a well-thought out decision. That's the politician I am.

Now, please choose who you would vote for in case there were only two options: candidate 1 or candidate 2.

○ Candidate 1
○ Candidate 2

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13   Candidate choice 2

And now, we want to ask you to rate each of the statements made by the candidates separately for us to better understand your position.

The views of the two politicians are summarized in the table below. Please mark your position on each of these issues (each placed in a row).

Candidate 1	1 – I totally agree with Candidate 1	2 – I partially agree with Candidate 1	3 – I disagree with both candidates	4 – I partially agree with Candidate 2	5 – I totally agree with Candidate 2	Candidate 2
I will do what my constituents want	○	○	○	○	○	I have the courage to take unpopular decisions if and when they are necessary
I always rely on people's opinions in my decision-making	○	○	○	○	○	I rely on experts and scientists in my decision-making
99 per cent of all British think the same	○	○	○	○	○	We, the British, are all different
I will organize referendums. Citizens should have the final say on important issues!	○	○	○	○	○	The elected representatives of the House of Commons should decide on all issues in the national interest. That's how we can make sure that all interests are accounted for
China is responsible for the large number of deaths of our citizens due the coronavirus pandemic!	○	○	○	○	○	China suffered like any other country from the pandemic
We need a strong leader taking the full control of the situation	○	○	○	○	○	We need a leader who listens to other politicians and experts to make a well-thought out decision.

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14   moral dilemmas

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Imagine the following situation. A second wave of the coronavirus strikes. Hospitals are overwhelmed with patients. Unfortunately, there is a very limited amount of ventilators available. However, they are necessary for patients to survive. If you had to decide which of the groups listed below should get the ventilators, you would choose:

Please choose one option.

○ Native British citizens
○ Doctors working with COVID -19 patients
○ Patients who have best chances to survive
○ Elderly people and people with chronic diseases who are most at risk
○ Black, Asian and minority ethnic groups found to die most often from COVID -19

During the first wave of the coronavirus, the UK almost got bust. If the second wave comes, very limited or even no financial support may be available. Who would you help financially first?

Please choose one option.

○ Native British citizens
○ Poor and needy people
○ Small and medium-size business
○ Employers
○ Black, Asian and minority ethnic groups found to be most affected financially from COVID -19
○ Big companies and financial corporations

When a vaccine against the coronavirus is approved by the NHS, who should be vaccinated first?

Please choose one option.

○ Native British citizens
○ Doctors working with COVID -19 patients
○ Poor and needy people
○ Elderly people and people with chronic diseases who are most at risk
○ Black, Asian and minority ethnic groups found to die most often from COVID -19

15   Check

Let's return to the article you've read.

Can you please recall, what was the topic of the article you have read?

Please choose one option

○ The British government is throwing everything to get a vaccine to COVID-19
○ Vaccine is likely be unavailable to poor people and poor countries
○ A coronavirus vaccine can be not very efficient
○ The Russian hackers tried to steal the coronavirus vaccine research

16.1   Manipulation checks

This problem with the vaccination was not mentioned in the article:

Please select one option

○ The coronavirus doesn't trigger long-lasting immunity
○ Mutation of the virus
○ Possible side effects of the vaccine
○ Russian hackers trying to steal coronavirus vaccine research

17.1   Manipulation checks

According to the article, the British government:

○ Supported the WHO initiative to make the vaccine patent-free
○ Rejected the WHO initiative to make the vaccine patent-free

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   ◯   Promised to support poor countries in fighting the coronavirus pandemic

   ◯   Asked British companies producing vaccines to support poor countries

18.1   Manipulation checks

Which of the claims was not made in the article?

   ◯   At least two thirds of the population should be vaccinated to stop the coronavirus outbreak

   ◯   It is possible that the coronavirus vaccine will not be 100 per cent efficient

   ◯   The UK has already started vaccination of vulnerable groups

   ◯   Some vaccines may be more efficient for younger individuals and others for elderly people

19   Control_style of article

Please, remember the article you have read. How much do you trust the information given there?

Please give your estimate where 1 stands for "do not trust at all", and 7 - "trust completely"

   ◯   1 - do not trust at all

   ◯   2

   ◯   3

   ◯   4

   ◯   5

   ◯   6

   ◯   7 - trust completely

Do you find anything unfair and incorrect about this situation described in the article?

Please, write your reply in a couple of sentences.

Do you find anything frightening about the situation described in the article?

Please, write your reply in a couple of sentences.

20   Vaccine

If a vaccine against the coronavirus is approved by the NHS, would you get vaccinated?

   ◯   Yes, I would

   ◯   No, I would not

   ◯   I don't know

How well informed are you about the topic of vaccination against COVID-19?

   ◯   Not at all informed

   ◯   Little informed

   ◯   Somewhat informed

   ◯   Rather well informed

   ◯   Very well informed

Have you read an article or watched a TV programme about vaccination this week?

   ◯   Yes

   ◯   No

   ◯   I don't remember

To what extent do you think vaccination will help to conquer COVID-19?

Please give your answer on a scale from 1 to 9, where "1" stands for "Not at all", "5" for "moderately" and "9" for "extremely"

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○ 1 Not at all

○ 2

○ 3

○ 4

○ 5 Moderately

○ 6

○ 7

○ 8

○ Extremely

21 Coronavirus

To what extent do you agree with the following statements:

	Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
The coronavirus was created in a laboratory as a biological weapon	○	○	○	○	○
Certain significant events have been the result of the activity of a small group who secretly manipulate the world events	○	○	○	○	○
Groups of scientists manipulate, fabricate, or suppress evidence in order to deceive the public	○	○	○	○	○
Governments should let people make their own decisions about how to best protect themselves and their loved ones from the COVID-19 virus.	○	○	○	○	○

Considering your health situation during the coronavirus pandemic, please tell us for each of the following experiences whether or not it happened to you:

	YES: happened to me	NO: did NOT happen to me
I have been exposed to coronavirus	○	○
I have been tested for the virus	○	○
People close to me have contracted coronavirus	○	○
People close to me deceased from coronavirus	○	○

Please, give your answer on the following statements:

	Not at all afraid	Not very afraid	Neither, nor	Quite afraid	Very afraid
How afraid are you that you or your loved ones get sick and suffer severely from the coronavirus?	○	○	○	○	○
How afraid are you that you or your loved ones will suffer from an economic recession following the coronavirus pandemic?	○	○	○	○	○

22 Socdem

And now, please, provide us with some information about yourself.

Please tell us where were you born?

○ England

○ Scotland

○ Wales

○ Northern Ireland

○ Outside of UK

Where do you currently live?

○ England

○ Scotland

○ Wales

○ Northern Ireland

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○   Outside of UK

Are you...

○   female

○   male

○   other

Place indicate your age at your last birthday

Please, select from the list.

405

17 or younger
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89
90 and older

What is the highest level of education you have successfully completed?

Please choose one option

○ Early childhood education

○ Primary education

○ Lower secondary education

○ Upper secondary education

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○ Post-secondary non-tertiary education
○ Short-cycle tertiary education
○ Bachelor's or equivalent level
○ Master's or equivalent level
○ Doctoral or equivalent level

Most people see themselves as belonging to a particular class. Please tell us which social class you would say you belong to?

Please choose one option.

○ Lower class
○ Working class
○ Lower middle class
○ Middle class
○ Upper middle class
○ Upper class
○ Refuse to answer the question

Thinking of your household's total income, including all the sources of income of all the members who contribute to it, how difficult or easy is it currently for your household to make ends meet?

Please choose one option

○ Very difficult
○ Fairly difficult
○ Neither easy nor difficult
○ Fairly easy
○ Very easy
○ Refuse to answer the question

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

Please give your answers to each of the questions where 1 stands for "strongly disagree" to 7 "completely agree"

	1 - strongly disagree	2	3	4 - neither agree nor disagree	5	6	7 - strongly agree
Government should redistribute income from the better off to those who are less well off	○	○	○	○	○	○	○
Ordinary working people do not get their fair share of the nation's wealth	○	○	○	○	○	○	○
There is one law for the rich and one for the poor	○	○	○	○	○	○	○
When jobs are scarce, men should have more right to a job than women	○	○	○	○	○	○	○
Gay men and lesbians should be free to live their own life as they wish	○	○	○	○	○	○	○
If a close family member was a gay man or a lesbian, I would feel ashamed	○	○	○	○	○	○	○
Sometimes people are not attentive enough when answering questions. Please press number one to answer this item	○	○	○	○	○	○	○
Young people today don't have enough respect for traditional British values	○	○	○	○	○	○	○
Schools should teach children to obey authority	○	○	○	○	○	○	○
Censorship of films and magazines is necessary to uphold moral standards	○	○	○	○	○	○	○
People who break the law should be given stiffer sentences	○	○	○	○	○	○	○
For some crimes, the death penalty is the most appropriate sentence	○	○	○	○	○	○	○
The law should always be obeyed, even if a particular law is wrong	○	○	○	○	○	○	○

24 Politics-2

Would you say it is generally bad or good for the British economy that people come to live here from other countries?

Please give your answer on a scale where 1 stands for "bad for the economy" and 11 stands for "good for the economy"

○ 1 - bad for the economy
○ 2
○ 3
○ 4

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○ 5

○ 6

○ 7

○ 8

○ 9

○ 10

○ 11 - good for the economy

○ I refuse to answer the question

Would you say that the British cultural life is generally undermined or enriched by people coming to live here from other countries?

Please give your answer on a scale where 1 stands for "cultural life undermined" and 11 stands for "cultural life enriched"

○ 1 - cultural life undermined

○ 2

○ 3

○ 4

○ 5

○ 6

○ 7

○ 8

○ 9

○ 10

○ 11 - cultural life enriched

○ I refuse to answer the question

Is Britain made a worse or a better place to live by people coming to live here from other countries?

Please give your answer on a scale where 1 stands for "worse place to live" and 11 stands for "better place to live"

○ 1 - Worse place to live

○ 2

○ 3

○ 4

○ 5

○ 6

○ 7

○ 8

○ 9

○ 10

○ 11 - Better place to live

○ I refuse to answer the question

In politics people sometimes talk of "left" and "right"

Where would you place yourself on this scale, where 1 means the left and 11 means the right?

○ 1 - left

○ 2

○ 3

○ 4

○ 5

○ 6 - in the middle

○ 7

○ 8

○ 9

○ 10

○ 11 - right

○ I refuse to answer the question

Which party do you feel closer to? Please, tick the party indicated in the list.

Please choose one option

○ Conservative

○ Labour

○ Liberal Democrat

○ Scottish National Party (SNP)

○ Plaid Cymru

○ Green Party

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○ UK Independence Party (UKIP)

○ British National Party (BNP)/ National Front

○ Trade Union and Socialist Coalition (TUSC)/ RESPECT/ Other socialist party

○ Brexit Party

○ Change UK - The Independent Group

○ Other

○ I don't feel close to any party

○ I refuse to answer the question

If you were now given the chance to vote at a new referendum on whether the UK should remain a member of the European Union or leave the European Union, how would you vote?

Please choose one option

○ Remain a member of the European Union

○ Leave the European Union

○ I would not vote

○ I don't know

○ I refuse to answer the question

On December 12, there was the UK general election. Did you vote?

○ yes

○ no

25.1   Voting_EU Parliament

In the UK general election on December 12, which party did you vote for?

Please choose one option

○ Conservative

○ Labour

○ Liberal Democrat

○ The Brexit Party

○ Scottish National Party (SNP)

○ Green

○ UK Independence Party (UKIP)

○ Plaid Cymru

○ Change UK (The Independent Group)

○ Women's Equality Party

○ An independent candidate

○ Another party

○ I prefer not to say

○ I didn't vote

26   feedback

In case you want to make comments on the study, or have any thoughts about it, please, write them down here

27   Debriefing

Thank you very much for participating in our study!

Now, please, read the following information about it.

The article you have read was taken from mass media and was slightly modified to adjust for length or to make emphasis on some of the arguments made. The article was selected for scientific purposes and does not reflect researchers' political views or beliefs. We encourage you to treat the arguments made in the article you read with caution. The latter may be especially difficult when such overwhelming events causing so much anxiety as the coronavirus outbreak occur. However, in these times it is of even more importance to critically assess information!

Besides, different participants read different articles. You got randomly one of three articles. One article was about inequality and injustice in the situation of the coronavirus outbreak, another focused on insecurities connected with the coronavirus outbreak, whereas the third article presented some general information on coronavirus in a neutral way.

In case you read about inequality, vaccine destribution in Germany, as well as its support of the WHO initiative are not yet settled issues.

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However, we needed to stress the differences existing between the two countries.

In the study, we were particularly interested in what people feel in relation to different situations, how people perceive them, as well as in more general political attitudes and beliefs.

Lastly, a couple of questions were used to make sure that people pay attention to the questions. That was necessary to make sure that we acquire a dataset of a high quality to achieve our academic goals. Only high-quality data can give the society an idea of how we perceive different events, inform us about concerns among people, and give an idea how to tackle such issues.

Please, press the button "Continue" to confirm that you read the information, agree to provide us with your response, and want to end the study. Otherwise, please close the browser, go back to Prolific and return your submission.

If you have any further questions or complaints about the study feel free to contact me, Ekaterina Lytkina at elytkina@bigsss-bremen.de or via Prolific.

Also, if you like, a summary of the results of the study will be sent to you. In this case, please write me a message on Prolific. Please note that the analysis and write-up of the results may take several months.

28   Final page

Thank you very much for your participation!

Please, follow the link to be redirected to "Prolific", so that your answes are recorded https://app.prolific.co/submissions/complete?cc=6BB783ED

In case it does not work, please enter the following completion code on Prolific "6BB783ED".

Appendix 4B

Appendix for Chapter 5. Perceived Existential Insecurity or Relative Deprivation: What Drives Populism under Threat?

Appendix 4.1. Materials used for manipulation in the main study

Manipulation 1 – Perceptions of existential insecurity

Our lives have changed forever: we are unlikely to get a working coronavirus vaccine

Despite large-scale trials of vaccines for the coronavirus, politicians have become more pessimistic about immunisation prospects. They are right to be.

Boris Johnson told a No 10 press briefing that a vaccine was "by no means guaranteed".
It would be hard to overstate the importance of developing a vaccine to Sars-CoV-2 – it's seen as the fast track to a return to normal life. That's why the health secretary, Matt Hancock, said the UK was "throwing everything at it".
But while trials have been launched and manufacturing deals already signed – Oxford University vaccine is currently being trialled on more than 10,000 people in Britain, Brazil and South Africa – ministers and their advisers have become noticeably more cautious in recent days.
Earlier this week, England's deputy chief medical officer Jonathan Van-Tam said the words nobody wanted to hear: "We can't be sure we will get a vaccine."
But he was right to be circumspect.
Why might a vaccine fail?
Vaccines are simple in principle but complex in practice. The ideal vaccine protects against infection, prevents its spread, and does so safely. But none of this is easily achieved, as vaccine timelines show.
More than 30 years after scientists isolated HIV, the virus that causes Aids, we have no vaccine. The dengue fever virus was identified in 1943, but the first vaccine was approved only last year, and even then amid concerns it made the infection worse in some people. The fastest vaccine ever developed was for mumps. It took four years.
A chief concern is that coronaviruses do not tend to trigger long-lasting immunity. About a quarter of common colds are caused by human coronaviruses, but the immune response fades so rapidly that people can become reinfected the next year.
Researchers at Oxford University recently analysed blood from recovered Covid-19 patients and found that levels of IgG antibodies – those responsible for longer-lasting immunity – rose steeply in the first month of infection but then began to fall again.
Last week, scientists at Rockefeller University in New York found that most people who recovered from Covid-19 without going into hospital did not make many killer antibodies against the virus.
If the natural infection doesn't give you that much immunity, what will a vaccine do?
The genetic stability of the virus matters too. Some viruses, such as influenza, mutate so rapidly that vaccine developers have to release new formulations each year. The rapid evolution of HIV is a major reason we have no vaccine for the disease.
Sars-CoV-2 coronavirus is acquiring mutations, as all viruses do. Some genetic changes have been spotted in the virus's protein "spikes" which are the basis of most vaccines. If the spike protein mutates too much, the antibodies produced by a vaccine will effectively be out of date and might not bind the virus effectively enough to prevent infection.

Another challenge: making any vaccine safe

In the rush to develop a vaccine – there are now more than 150 in development – safety must remain a priority.

This means scientists will have to check extremely carefully for signs of dangerous side-effects in a very short time. During the search for a Sars vaccine in 2004, scientists found that one candidate caused hepatitis in ferrets.

Another serious concern is when the antibodies produced by a vaccine actually make future infections worse. The effect caused serious lung damage in animals given experimental vaccines for both Sars and Mers.

Is the virus here to stay?

The simple answer is: yes.

"If and when we have a vaccine, what you get is not rainbows and unicorns," says Larry Brilliant, CEO of Pandefense Advisory. "If we are forced to choose a vaccine that gives only one year of protection, then we are doomed to have Covid become endemic, an infection that is always with us."

"It will be harder to get rid of Covid than smallpox," says Brilliant. With smallpox it was at least clear who was infected, whereas people with coronavirus can spread it without knowing.

As David Salisbury, the former director of immunisation at the Department of Health, told: "Unless we have a vaccine available in unbelievable quantities that could be administered extraordinarily quickly in all communities in the world we will have gaps in our defences that the virus can continue to circulate in."

The virus will "ping-pong back and forth in time and geography".

People now have to adapt – our life has changed for many years to come. We will have to get used to extensive monitoring for infections backed up by swift outbreak containment.

Maintaining handwashing, physical distancing and avoiding gatherings, particularly in enclosed spaces will remain an integral part of our lives. Even then virus will stay with us for long time.

Manipulation 2 – Perceptions of relative deprivation
Fury: Eventual coronavirus vaccine can't only be available for the rich

The World Health Organization (WHO) has recently launched an initiative to encourage countries to share research on coronavirus treatments and produce any vaccine patent-free. This would mean they could be distributed fairly according to need.

This would help the world to conquer the COVID-19 pandemic, which has spread in more than 60 countries. There are now 13,127,006 confirmed cases and 573,664 deaths worldwide.

A vaccine is the only possibility to stop the pandemic and allow us to come back to normality. The WHO proposal, a voluntary scheme that would pool knowledge, intellectual property and data about coronavirus health technologies, is not particularly radical – but you wouldn't guess that from the recent protestations of pharmaceutical corporations.

Pfizer called the proposal "nonsense", while the big British companies working on coronavirus treatments, AstraZeneca and GlaxoSmithKlein, refused to participate.

The reaction from this industry shouldn't surprise us. Over the past three decades, big pharma has used its unparalleled lobbying muscle to secure market monopolies that vastly increase the power it holds over governments. These corporations enjoy monopoly protection for new medicines they manufacture, allowing them to charge any price the market will endure.

Governments have poured phenomenal sums of money into drug development to stimulate essential medical research that patents have failed to incentivise. But this money – like the UK government's £500m of coronavirus research funding – rarely comes with any strings attached, allowing pharmaceutical companies to monopolise the resulting medicines. At least not in our country.

A recent study estimated that one contender for a coronavirus treatment, a hepatitis C medication produced by the pharma giant Gilead, costs $5 per course to produce. The drug is currently on sale in the US for more than $18,000 per treatment course.

Despite the fact coronavirus medicines will be discovered using vast sums of public money, the NHS may still have to pay through the nose for any final product, while poorer countries could be unable to access the drug.

It wouldn't be the first time this has happened. In the 90s, millions of poor people died unnecessarily in the Aids crisis in sub-Saharan Africa, because the medicines to treat HIV were out of reach of most people.

The WHO's initiative is intended to avert a repeat of this. Many countries, rich and poor, support it – including Argentina, Mexico, South Africa, Norway, Portugal and Belgium.

But for the British government, the patent system is sacrosanct. The UK seems desperate not to upset its own pharmaceutical corporations or the financial sector.

Given the base of big pharma in the US and the UK, the withholding of support by industry and governments in these countries could easily scupper the WHO's plans.

Pharmaceutical companies treat healthcare as a commodity, not a right.

Making vaccines available only to the rich is not just immoral, it's also bad public health policy. Protecting others helps to protect everyone.

The final price of any vaccine should be one that rich and poor citizens, and governments of poor and rich countries alike can afford so all citizens can get it free at the point of care.

In the modern world it is impossible to close borders – even entry bans cannot secure us anymore.

Without vigorous efforts to secure equitable access, vaccine distribution will follow the logic of the market. Allowing this to happen would be a moral disgrace.

Pharma companies endanger our lives. We will have to suffer for a long time from the coronavirus even though we paid with our money for the vaccine.

Needless to say, the vaccine won't be available to everyone in our country. So far, the government has promised the vaccination only for a limited number of vulnerable groups. Others may need to pay enormous amounts of money to get vaccinated: the rich will always have money to be injected, and the poor will be excluded from it. However, those who can pay for a costly vaccine are not safe either: the disease will not be conquered in our society for many years to come.

Unlike other countries, our government takes the side of the pharma industry. In Germany, however, the grants on vaccine research were allocated only on the condition that the pharma industry returns the money by providing all German citizens with free vaccination.

Even if the vaccine is available to all UK citizens, COVID-19 will be reimported from poorer countries unable to pay for vaccination. We will be struggling for many years with the reoccurring waves of the pandemic. How many more lives should it cost before our health ceases to be a commodity and our right to life will be preserved regardless of our income and place of residence?

Manipulation 2 – Control condition (to both manipulations)
Coronavirus: UK 'throwing everything' at developing vaccine
The government is "throwing everything" at developing a coronavirus vaccine, Health Secretary Matt Hancock has said.
Mr Hancock told the No 10 briefing that "the best way to defeat coronavirus" was through a vaccine.

The process was "trial and error", he said, but the UK was at the "front of the global effort" and had invested more money than any other country.

He said two leading vaccine developments at UK universities - the University of Oxford and Imperial College London – have already received a total of £42.5m to support their clinical trials.

"Both of these promising projects are making rapid progress and I've told the scientists leading them we will do everything in our power to support."

He added: "After all, the upside of being the first country in the world to develop a successful vaccine is so huge that I am throwing everything at it."

It would be hard to overstate the importance of developing a vaccine to Sars-CoV-2 – it's seen as the fast track to a return to normal life. That's why the health secretary, Matt Hancock, said the UK was "throwing everything at it".

Trials have been launched and manufacturing deals already signed – Oxford University, leading the global race, is currently being trialled on more than 10,000 people in Britain, Brazil and South Africa after moving into phase III trials.

Scientists have had to move trials abroad because there are now so few cases of the coronavirus in the community in Britain.

Meanwhile Imperial College London's vaccine has now moved into human trials and has reported no sign effects.

Their vaccine candidates work by training the body to identify the coronavirus so it can rapidly fight off the illness before it has chance to cause an infection.

Oxford and Imperial's injectable vaccines are two of the frontrunners to cure the disease.

The chief scientific adviser of the Prime Minister, Patrick Vallance, said: "I'd be surprised if we didn't end up with something." Many scientists share that view.

It is also possible that a coronavirus vaccine will not be 100 per cent effective.

Those in development draw on at least eight different approaches, from weakened and inactivated viruses to technologies that smuggle genetic code into the recipient's cells, which then churn out spike proteins for the immune system to make antibodies against.

Ideally, a vaccine will generate persistent, high levels of antibodies to wipe out the virus and also "T" cells to destroy infected cells. But each vaccine is different and today no one knows what kind of immune response is good enough.

"We don't even know if a vaccine can produce an immune response which would protect against future infection," says David Heymann, who led the response of the World Health Organization (WHO) to the Sars epidemic.

Early results from several frontrunner vaccines suggest they might have some use.

The US biotech firm Moderna reported antibody levels similar to those found in recovered patients in 25 people who received its vaccine.

Another vaccine from Oxford University did not stop monkeys contracting the virus, but did appear to prevent pneumonia, a major cause of death in coronavirus patients.

If humans react the same way, vaccinated people would still spread the virus, but be less likely to die from it.

How well a vaccine works determines how it is used. Armed with a highly effective vaccine that protects for several years, countries could aim for herd immunity by protecting at least two-thirds of the population.

Coronavirus patients pass the virus on to three others, on average, but if two or more are immune, the outbreak will fizzle out. That is the best-case scenario.

More likely is we will end up with a vaccine, or a number of vaccines, that are only partially effective.

Vaccines that contain weakened strains of virus can be dangerous for older people, but might be given to younger people with more robust immune systems to reduce the spread of infection.

Meanwhile, older people might get vaccines that simply prevent infections progressing to life-threatening pneumonia. "If you don't have the ability to induce immunity, you've got to develop a strategy for reducing serious outcomes of infection," says John McCauley, director of the Worldwide Influenza Centre at the Francis Crick Institute.

But partially effective vaccines have their own problems: a vaccine that doesn't stop the virus replicating can encourage resistant strains to evolve, making the vaccine redundant.

The head of Britain's vaccine task force Kate Bingham told MPs she was confident the world would have some form of Covid-19 vaccine by early 2021.

Appendix 4.2. Manipulation Checks

Table 1

Manipulation Checks across Experimental Conditions

Experimental conditions		existential insecurity condition	relative deprivation condition	control condition	existential insecurity vs relative deprivation conditions
Manipulation checks					
Perceptions of	*M*	**4.949**	4.703	4.204	-
existential	*SD*	**2.164**	2.255	1.985	-
insecurity	*t-test*	**t(485) = 3.964**	t(516) = 2.679	-	t(504) = 1.252
	p-value	**0.000**	0.008	-	0.211
Perceptions of	*M*	6.142	**7.121**	5.603	-
relative	*SD*	1.743	**1.619**	1.809	-
deprivation	*t-test*	t(485) = 3.347	**t(500)= 10**	-	t(505)= -6.550
	p-value	0.001	**0.000**	-	0.000

Note. Perceptions of existential insecurity were measured by "To what extent do you feel your life is endangered by the situation you've read about?" *Perceptions of relative deprivation* is an index comprised by the arithmetic sum of three items: "To what extent do you think the British will be in a worse condition compared to Germans regarding access to the vaccine?", "To what extent do you think poor people will be in a worse condition compared to wealthy people regarding access to the vaccine?", "To what extent do you think poor countries will be in a worse condition compared to wealthy countries regarding access to the vaccine?" All variables were measured on a scale from 1 to 9, from the lowest to the highest level.

Table 2

Descriptive Statistics across Experimental Conditions

Descriptive statistics	existential insecurity	relative deprivation	control
Leave, N (%)	103 (44%)	124 (46%)	99 (40%)
Remain, N (%)	107 (45%)	125 (47%)	132 (53%)
Other, N (%)	27 (11%)	20 (7%)	19 (7%)
Male, N (%)	121 (51%)	133 (49%)	117 (47%)
Education, M (SD)	6.04 (1.514)	6.03 (1.551)	6.12 (1.515)
Age, M (SD)	41.07 (13.826)	41.12 (15.158)	40.09 (14.226)
Left-right self-placement, M (SD)	5.70 (2.459)	5.84 (2.238)	5.72 (2.420)
Trust in information, M (SD)	4.24 (1.292)	**4.14 (1.366)** [a]	4.40 (1.242)
Belief in vaccinations, M (SD)	**5.42 (1.898)** [b]	6.53 (1.907)	6.54 (1.648)
Exposure to COVID, N (%)	24 (10%)	29 (11%)	24 (10%)

Note. For binary variables, frequencies and percentage is given. For continuous and ordinary variables – means and standard deviation.

T-tests were performed for continuous and ordinary variables. Comparisons were performed against the control condition. Significant differences are marked in bold.

[a] Across the relative deprivation and control conditions, there was a significant difference in trust in information ($t(517) = 2.250$, $p=0.025$).

[b] Across the existential insecurity and the control conditions, there was a significant difference in belief in vaccinations ($t(468) = 6.902$, $p=0.000$).

Appendix 4.3. Measures used in the study

Information on indexes

Figure 1

Measure of the Appraisal of the Problem-Focused Coping Potential
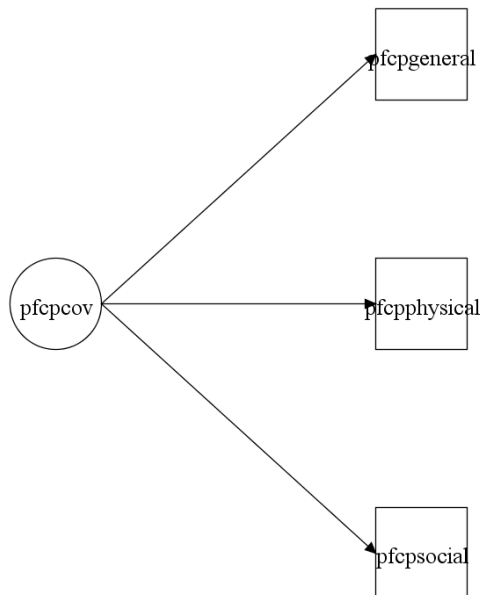
Table 4

Factor Loadings for the Measure of Problem-Focused Coping Potential

	Labels	Observed variables	Factor loadings*
		Factor loadings	
1	PFCP general	How certain are you that you will be able to do something to make (or keep) the situation the way you want them to be?	0.599 (0.028)
2	PFCP physical	How certain are you that you will be able to get your physical needs met in this situation?	0.864 (0.023)
3	PFCP social	How certain are you that you will be able to get your social needs met in this situation?	0.800 (0.023)
		Residual variances	
1	PFCP general		0.641 (0.033)
2	PFCP physical		0.254 (0.040)
3	PFCP social		0.360 (0.038)

Note: Model fit indices cannot be computed, since the model is saturated.

Figure 2

Measure of Accountability Appraisal
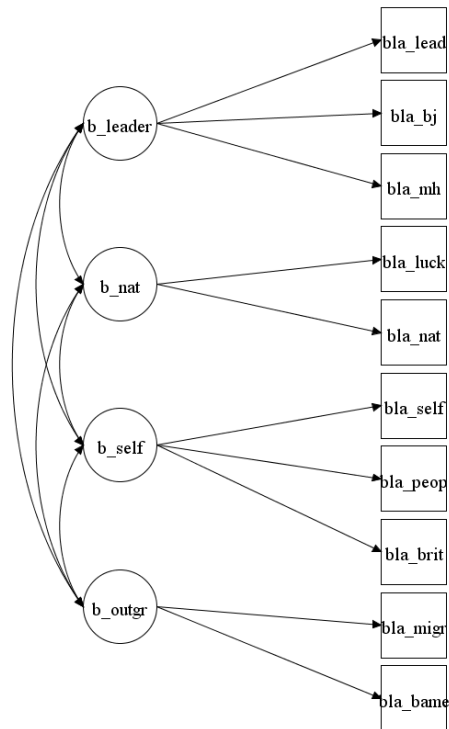
Table 5

Factor Loadings for the Measure of Accountability Appraisals

Factors	Observed variables	Factor loadings
	Factor loadings	
Blame leaders	Blame political leaders	0.857 (0.011)
	Blame Boris Johnson	0.970 (0.006)
	Blame Matthew Hancock	0.919 (0.008)
Blame nature	Blame luck or chance	0.722 (0.044)
	Blame nature	0.866 (0.049)
Blame self	Blame self	0.665 (0.022)
	Blame people	0.891 (0.012)
	Blame British	0.943 (0.011)
Blame outgroups	Blame migrants and refugees	0.834 (0.024)
	Blame black, Asian and ethnic minority groups	0.948 (0.025)
	Correlations between factors	
Blame nature and blame leaders		-0.161 (0.041)
Blame self and blame leader		0.251 (0.036)
Blame self and blame nature		0.262 (0.040)
Blame outgroup and blame leader		0.010 (0.039)
Blame outgroup and blame nature		0.253 (0.042)

Blame outgroup and blame self		0.465 (0.033)
Residual variances		
Blame leaders	Blame political leaders	0.265 (0.019)
	Blame Boris Johnson	0.060 (0.021)
	Blame Matthew Hancock	0.155 (0.014)
Blame nature	Blame luck or chance	0.479 (0.063)
	Blame nature	0.250 (0.085)
Blame self	Blame self	0.558 (0.029)
	Blame people	0.206 (0.021)
	Blame British	0.110 (0.020)
Blame outgroups	Blame migrants and refugees	0.305 (0.040)
	Blame black, Asian and ethnic minority groups	0.101 (0.047)
Model Fit		
Chi-Square		72.660
df		29
p		0.0000
RMSEA		0.045
CFI		0.991
TLI		0.986
SRMR		0.022

Note. Cell models are standardized coefficients. Standard errors are given in brackets.

Figure 3

Measure of Populist Attitudes
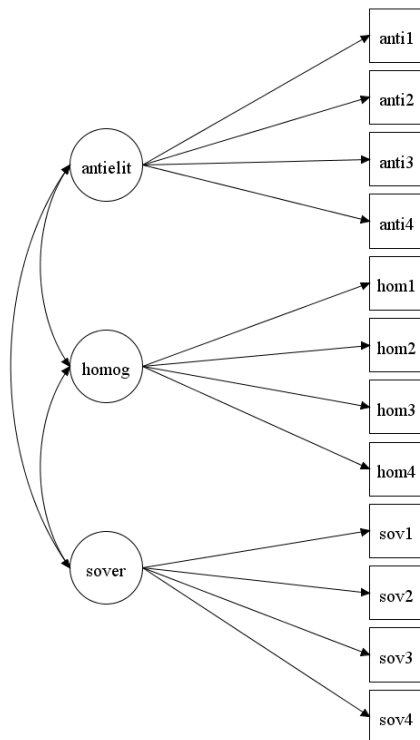
Table 6

Factor Loadings for the Measure of Populist Attitudes

Factors	Observed variables / Factors	Factor loadings
	Factor loadings	
Anti-elitism	MPs in Parliament very quickly lose touch with ordinary people (anti1)	0.767 (0.023)
	The differences between ordinary people and the ruling elite are much greater than the differences between ordinary people. (anti2)	0.727 (0.024)
	People like me have no influence on what the government does. (anti3)	0.536 (0.031)
	Politicians talk too much and take too little action (anti4)	0.705 (0.025)
Homogeneity	Ordinary people all pull together (hom1)	0.595 (0.031)
	Ordinary people are of good and honest character (hom2)	0.713 (0.027)
	Ordinary people share the same values and interests (hom3)	0.799 (0.024)
	Although the British are very different from each other, when it comes down to it they all think the same (hom4)	0.625 (0.028)
Popular Sovereignty	The people should have the final say on the most important political issues by voting on them directly in referendums (sov1)	0.843 (0.015)
	The people should be asked whenever important decisions are taken (sov2)	0.859 (0.014)
	The people, not the politicians, should make our most important policy decisions (sov3)	0.800 (0.016)
	The politicians in Parliament need to follow the will of the people (sov4)	0.558 (0.027)
	Correlations between factors	
Homogeneity and anti-elitism		-0.006 (0.045)
Popular sovereignty and anti-elitism		0.413 (0.037)
Homogeneity and popular sovereignty		0.240 (0.041)
	Residual variances	
Anti-elitism	anti1	0.411 (0.035)
	anti2	0.472 (0.034)
	anti3	0.713 (0.034)
	anti4	0.504 (0.036)
Homogeneity	hom1	0.646 (0.037)
	hom2	0.492 (0.038)
	hom3	0.361 (0.039)
	hom4	0.609 (0.035)
Popular Sovereignty	sov1	0.290 (0.024)
	sov2	0.263 (0.024)
	sov3	0.360 (0.026)
	sov4	0.689 (0.031)
	Model Fit	
Chi-Square		196.932
df		51
p		0.0000
RMSEA		0.061
CFI		0.956
TLI		0.943
SRMR		0.036

Note. Cell models are standardized coefficients. Standard errors are given in brackets.

Association between the measures

Table 7

Correlation Analysis of Key Variables

	N	M	SD	Depriva-tion	Insecu-rity	anger	disgust	Con-tempt	fear	sadness	PFCP	Blame leader	Blame nature	Blame self	Blame out-group	Anti-elitism	Homo-geneity
Deprivation	519	-	-														
Insecurity	487	-	-														
anger	756	4.471	2.807	0.708***	0.245***												
disgust	756	3.975	2.898	0.762***	0.157*	.836***											
contempt	756	3.901	2.579	0.540***	0.037	.662***	.708***										
fear	756	4.790	2.394	0.276***	0.340***	.416***	.308***	.287***									
sadness	756	5.657	2.481	0.522***	0.452***	.588***	.495***	.375***	.620***								
PFCP	756	0.000	1.036	-0.328***	-0.188***	-.304***	-.271***	-.179***	-.272***	-.360***							
Blame leader	756	0.000	1.762	0.107*	-0.171***	.272***	.277***	.264***	.118**	.137***	-.089*						
Blame nature	756	0.000	1.707	-0.458***	0.119*	-.308***	-.371***	-.267***	.023	-.077*	.164***	-.187***					
Blame self	756	0.000	1.320	-0.324***	-0.005	-.109**	-.136***	-.055	.085*	-.023	.119**	.266***	.300***				
Blame outgroup	756	0.000	1.77	-0.197***	-0.022	-.106**	-.099*	-.071	.041	-.062	.127***	.009	.301***	.508***			
Anti-elitism	756	-.001	.597	0.123*	0.048	.249***	.234***	.197***	.146***	.207***	-.178***	.334***	-.070	.057	-.069		
Homogeneity	756	.002	.562	-0.029	-0.025	-.009	-.020	.022	.071	.010	.128***	-.023	-.026	-.013	.050	-.001	
Popular sovereignty	756	.002	.990	0.050	0.048	.132**	.130***	.126*	.151***	.118*	-.142***	.171***	-.115**	.082*	.041	.475***	.281***

Means across the experimental conditions

Table 1

Means of Emotional Reactions and Populist Attitudes among the Experimental Conditions

	scale	existential insecurity			relative deprivation			control condition	
		M	SD	T-test (vs. control condition)	M	SD	T-test (vs. control condition)	M	SD
anger	[1; 9]	3.77	2.41	t(459)= 5.534 p=0.000	6.78	2.11	t(517)=22.81 p=0.000	2.65	2.00
disgust	[1; 9]	2.76	2.13	t(464)= 3.476 p=0.000	6.75	2.10	t(514)=26.87 p=0.000	2.14	1.81
contempt	[1; 9]	2.97	2.06	t(485)= 0.807 p=0.420	5.72	2.43	t(513)=14.66 p=0.000	2.82	2.06
fear	[1; 9]	5.43	2.37	t(470)= 7.939 p=0.000	5.12	2.41	t(515)=6.55 p=0.000	3.82	2.09
sadness	[1; 9]	6.27	2.26	t(485)= 11.17 p=0.000	6.65	2.13	t(511)=13.89 p=0.000	4.01	2.19
valence	[1; 9]	3.39	1.32	t(485)= 15.00 p=0.000	3.18	1.33	t(517)=17.08 p=0.000	5.30	1.48
arousal	[1; 9]	4.11	1.60	t(485)= 3.326 p=0.000	4.49	1.63	t(517)=-0.65 p=0.519	4.58	1.52
dominance	[1; 9]	3.10	2.17	t(485)= 3.501 p=0.000	3.04	2.26	t(517)=-3.82 p=0.000	3.78	2.14
Indices									
problem-focused coping potential	[-2.707; 1.956]	-0.02	1.03	t(485)= 4.202 p=0.000	-0.32	0.98	t(517)=8.010 p=0.000	0.37	0.99
blame leader	[-4.615; 2.015]	-0.56	1.99	t(464)= 3.803 p=0.000	0.42	1.47	t(494)= 2.43 p=0.015	0.08	1.69
blame nature	[-2.862; 3.634]	0.79	1.55	t(485)= 2.649 p=0.008	-1.09	1.46	t(517)=11.72 p=0.000	0.43	1.48
blame self	[-1.790; 3.466]	0.28	1.42	t(466)= 0.108 p=0.914	-0.52	1.15	t(507)= 4.56 p=0.000	0.29	1.22
blame outgroup	[-1.761; 5.879]	0.19	1.87	t(485)= 0.489 p=0.625	-0.41	1.63	t(517)= 4.56 p=0.000	0.27	1.75
Anti-elitism	[-2.384; 0.740]	-0.01	0.60	t(485)= 1.051 p=0.294	0.07	0.52	t(476)= 2.79 p=0.005	-0.07	0.66
Homogeneity	[-1.353; 1.608]	-0.01	0.56	t(485)= 0.559 p=0.576	-0.01	0.56	t(517)= 0.66 p=0.506	0.02	0.57
Popular Sovereignty	[-2.355; 1.584]	0.03	0.97	t(485)= 1.055 p=0.292	0.04	0.95	t(503)= 1.14 p=0.255	-0.06	1.05

Table 2

Difference among Remainers and Leavers in the Relative Deprivation Condition (N=519)

		Remain					Leave				
		Relative Deprivation		control condition		T-test (vs. control)	Relative Deprivation		control condition		T-test (vs. control)
	scale	M	SD	M	SD		M	SD	M	SD	
anger	[1; 9]	7.17	1.88	2.96	2.14	t(254)= 16.76 p=0.000	6.40	2.28	2.18	1.60	t(218)= 16.23 p=0.000
disgust	[1; 9]	7.13	1.72	2.25	1.92	t(255)= 21.42 p=0.000	6.38	2.36	1.90	1.47	t(210)= 17.34 p=0.000
contempt	[1; 9]	5.98	2.37	3.03	2.14	t(255)= 10.47 p=0.000	5.54	2.47	2.44	1.86	t(220)= 10.65 p=0.000
fear	[1; 9]	5.43	2.34	3.91	2.11	t(255)= 5.48 p=0.000	4.76	2.49	3.69	2.11	t(220)= 3.48 p=0.000
sadness	[1; 9]	6.92	1.97	4.23	2.26	t(253)= 10.21 p=0.000	6.44	2.21	3.68	2.07	t(221)= 9.518 p=0.000
valence	[1; 9]	3.00	1.28	5.17	1.40	t(255)= -13.01 p=0.000	3.39	1.41	5.51	1.53	t(221)= 10.75 p=0.000
arousal	[1; 9]	4.62	1.64	4.47	1.42	t(255)= 0.809 p=0.420	4.37	1.65	4.59	1.59	t(221)= 0.983 p=0.326
dominance	[1; 9]	3.02	2.13	3.37	1.95	t(255)= 1.395 p=0.164	3.24	2.44	4.48	2.27	t(221)= 3.891 p=0.000
						Indices					
problem-focused coping potential	[-1.977; 2.685]	-0.226	1.00	0.171	1.00	t(255)= 3.172 p=0.002	-0.406	0.98	0.610	0.90	t(221)= 8.005 p=0.000
blame leader	[-4.615; 2.015]	0.896	1.14	0.401	1.56	t(239)= 2.923 p=0.004	-0.064	1.65	-0.418	1.78	t(221)= 1.537 p=0.126
blame nature	[-2.862; 3.634]	-1.287	1.33	0.395	1.52	t(255)= 9.404 p=0.000	-0.918	1.55	0.453	1.44	t(221)= 6.769 p=0.000
blame self	[-1.790; 3.466]	-0.349	1.05	0.372	1.12	t(255)= 5.318 p=0.000	-0.744	1.18	0.126	1.25	t(221)= 5.338 p=0.000
blame outgroup	[-1.761; 5.879]	-0.823	1.29	-0.09	1.54	t(252)= 4.141 p=0.000	-0.109	1.77	0.714	1.84	t(221)= 3.390 p=0.000
Anti-elitism	[-2.384; 0.740]	0.11	0.44	0.075	0.54	t(248)= 0.571 p=0.568	0.019	0.61	-0.242	0.72	t(191)= 2.891 p=0.004
Homogeneity	[-1.353; 1.608]	-0.001	0.57	-0.066	0.53	t(255)= 0.942 p=0.347	-0.010	0.54	0.088	0.59	t(221)= 1.293 p=0.197
Popular Sovereignty	[-2.355; 1.584]	-0.002	0.96	-0.067	1.04	t(255)= 0.514 p=0.608	0.050	0.98	-0.074	1.08	t(221)= 0.899 p=0.369

Table 3

Difference among Remainers and Leavers in the Existential Insecurity Condition (N=487)

		Remain					Leave				
		Existential insecurity		control condition		T-test (vs. control)	Existential insecurity		control condition		T-test (vs. control)
	scale	M	SD	M	SD		M	SD	M	SD	
anger	[1; 9]	3.70	2.34	2.96	2.14	t(237)= 2.544 p=0.012	3.90	2.51	2.18	1.60	t(174)= 5.840 p=0.000
disgust	[1; 9]	2.73	2.13	2.25	1.92	t(237)= 1.828 p=0.069	2.80	2.16	1.90	1.47	t(181)= 3.462 p=0.000
contempt	[1; 9]	3.07	2.11	3.03	2.14	t(237)= 0.161 p=0.873	2.86	2.08	2.44	1.86	t(200)= 1.507 p=0.133
fear	[1; 9]	5.49	2.27	3.91	2.11	t(237)= 5.548 p=0.000	5.59	2.39	3.69	2.11	t(200)= 6.000 p=0.000
sadness	[1; 9]	6.23	2.10	4.23	2.26	t(237)= 7.044 p=0.000	6.31	2.41	3.68	2.07	t(200)= 8.312 p=0.000
valence	[1; 9]	3.38	1.17	5.17	1.40	t(237)= 10.595 p=0.000	3.39	1.46	5.51	1.53	t(200)= 10.080 p=0.000
arousal	[1; 9]	3.97	1.56	4.47	1.42	t(237)= 2.579 p=0.011	4.39	1.57	4.59	1.59	t(200)= 0.889 p=0.375
dominance	[1; 9]	3.13	2.13	3.37	1.95	t(237)= 0.908 p=0.365	3.25	2.25	4.48	2.27	t(200)= 3.869 p=0.000
Indices											
problem-focused coping potential	[-2.275; 2.705]	-0.046	0.98	0.171	1.00	t(237)= 1.678 p=0.095	0.118	1.08	0.610	0.90	t(200)= 3.507 p=0.000
blame leader	[-4.615; 2.015]	0.001	1.71	0.401	1.56	t(237)= 1.890 p=0.060	-1.118	2.04	-.418	1.78	t(200)= 2.592 p=0.010
blame nature	[-2.862; 3.634]	0.835	1.47	0.395	1.53	t(237)= 2.254 p=0.025	.850	1.57	.453	1.44	t(200)= 1.870 p=0.063
blame self	[-1.790; 3.466]	0.325	1.40	0.372	1.12	t(201)= 0.280 p=0.780	.274	1.40	.126	1.25	t(200)= 0.794 p=0.428
blame outgroup	[-1.761; 5.879]	-0.200	1.75	-0.090	1.54	t(237)= 0.517 p=0.606	.689	1.95	.714	1.84	t(200)= 0.094 p=0.925
Anti-elitism	[-2.384; 0.740]	0.091	0.50	0.075	0.54	t(237)= 0.235 p=0.814	-.132	0.69	-.242	0.72	t(200)= 1.110 p=0.268
Homo-geneity	[-1.353; 1.608]	-0.085	0.54	-0.066	0.53	t(237)= 0.275 p=0.784	0.074	0.58	0.088	0.59	t(200)= 0.175 p=0.862
Popular Sove-reignty	[-2.355; 1.584]	-0.023	0.94	-0.067	1.04	t(237)= 0.341 p=0.734	.044	1.02	-.074	1.08	t(200)= 0.802 p=0.423

Appendix 4.4. Regression analysis

Table 1

The effect of the perceptions of relative deprivation on populist outcomes

	Anti-elitism		Homogeneity		Popular Sovereignty		Vote Populist	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
RD	0.146***	0.143***	-0.033	-0.027	0.100	0.098	1.243	1.187
	(0.052)	(0.052)	(0.049)	(0.050)	(0.088)	(0.088)	[0.783–1.985]	[0.744–1.902]
trustinfo		-0.011		0.023		-0.010		0.842+
		(0.020)		(0.019)		(0.034)		[0.708–1.002]
Constant	-0.072*	-0.023	0.023	-0.080	-0.064	-0.021	0.179	0.376*
	(0.037)	(0.095)	(0.036)	(0.091)	(0.063)	(0.161)	[0.125–0.250]	[0.165–0.829]
Observations	519	519	519	519	519	519	519	519
R^2	0.015	0.016	0.001	0.004	0.003	0.003	Nagelkerke - 0.003	Nagelkerke - 0.015
Adjusted R^2	0.013	0.012	-0.001	-0.0001	0.001	-0.001	Deviance – 468.442	Deviance - 464.675
Residual Std. Error	0.592 (df=517)	0.592 (df=516)	0.563 (df=517)	0.563 (df=516)	0.998 (df=517)	0.999 (df=516)	log likelihood 234.221 (df=2)	log likelihood 232.338 (df=3)
F Statistic	7.920*** (df = 1; 517)	4.115** (df = 2; 516)	0.443 (df = 1; 517)	0.986 (df = 2; 516)	1.307 (df = 1; 517)	0.694 (df = 2; 516)		

*p<0.1; **p<0.05; ***p<0.01.

Table 2

The effect of the perceptions of relative deprivation on populist outcomes among Leavers

	Anti-elitism	Homogeneity	Popular Sovereignty	Vote populist
	Dependent variable:			
	OLS	*OLS*	*OLS*	*Odds Ratios*
	(1)	(2)	(3)	(4)
Perceptions of relative deprivation	**0.259*****	-0.091	0.128	1.112
	(0.091)	(0.078)	(0.142)	[0.61 – 2.05]
Trust in information	-0.004	0.012	0.007	0.946
	(0.034)	(0.029)	(0.053)	[0.75 – 1.19]
Constant	-0.226	0.035	-0.104	0.455
	(0.167)	(0.144)	(0.261)	[0.15 – 1.35]
Observations	223	223	223	223
R^2 / Adjusted R^2	0.038 / 0.029	0.008 / 0.001	0.004 / 0.005	R^2 Nagelkerke 0.003
Residual Std. Error (df = 220)	0.659	0.566	1.026	Deviance 263.183
F Statistic (df = 2; 220)	4.329**	0.915	0.410	Log Likelihood -131.5916 (df=3)

Note. Unstandardized regression coefficients, and for populist vote – odds ratios are displayed.

*$p<0.1$; **$p<0.05$; ***$p<0.01$.

Table 3

The effect of the perceptions of relative deprivation on populist outcomes among Remainers

	Dependent variable:			
	Anti-elitism	Homogeneity	Popular Sovereignty	Vote populist
	OLS	*OLS*	*OLS*	*Odds Ratios*
	(1)	(2)	(3)	(4)
Perceptions of relative deprivation	0.035	0.065	0.064	1.181
	(0.062)	(0.068)	(0.126)	[0.43 – 3.27]
Trust in information	-0.023	0.034	-0.025	**0.700***
	(0.023)	(0.026)	(0.047)	[0.49 – 0.996]
Constant	0.176	-0.213*	0.045	0.282
	(0.111)	(0.123)	(0.226)	[0.06 – 1.21]
Observations	257	257	257	257
R^2 / Adjusted R^2	0.005 / -0.003	0.010 / 0.002	0.002 / -0.006	R^2 Nagelkerke 0.041
Residual Std. Error (df = 254)	0.494	0.549	1.006	Deviance 121.1248
F Statistic (df = 2; 254)	0.648	1.288	0.275	log likelihood -60.562 (df=3)

Note. Unstandardized regression coefficients, and for populist vote – odds ratios are displayed.

*p<0.1; **p<0.05; ***p<0.01.

Table 4

The effect of the perceptions of existential insecurity on populist outcomes

	Anti-elitism		Homogeneity		Popular Sovereignty		Vote populist (OR)	
	Dependent variable:							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Existential insecurity	0.060	-0.015	-0.029	-0.016	0.097	0.016	1.202	0.830
	(0.057)	(0.059)	(0.051)	(0.054)	(0.092)	(0.095)	[0.744–1.947]	[0.492–1.392]
Belief in vaccinations		-0.067***		0.012		-0.072***		0.730***
		(0.016)		(0.014)		(0.026)		[0.638–0.832]
Constant	-0.072*	0.368***	0.023	-0.053	-0.064	0.409**	0.179***	1.284
	(0.040)	(0.111)	(0.036)	(0.101)	(0.064)	(0.179)	[0.125–0.250]	[0.537–3.062]
Observations	487	487	487	487	487	487	487	487
R^2 / Adjusted R^2	0.002 / 0.0002	0.038 / 0.034	0.001 / 0.001	0.002 / 0.002	0.002 / 0.0002	0.018 / 0.014	R^2 Nagelkerke 0.002	R^2 Nagelkerke 0.077
Residual Std. Error	0.630 (df = 485)	0.619 (df = 484)	0.566 (df = 485)	0.566 (df = 484)	1.010 (df = 485)	1.003 (df = 484)	Deviance 434.508	Deviance 412.268
F Statistic	1.105 (df = 1; 485)	9.585*** (df = 2; 484)	0.313 (df = 1; 485)	0.476 (df = 2; 484)	1.113 (df = 1; 485)	4.534** (df = 2; 484)	log likelihood -217.254 (df=2)	log likelihood -206.134 (df=3)

Note. Unstandardized regression coefficients, and for populist vote – odds ratios are displayed.

*p<0.1; **p<0.05; ***p<0.01.

Table 5

The effect of the perceptions of existential insecurity on populist outcomes among Leavers

	Dependent variable:			
	Anti-elitism	Homogeneity	Popular Sovereignty	Vote populist
	OLS	*OLS*	*OLS*	*Odds Ratios*
	(1)	(2)	(3)	(4)
Existential insecurity	0.013	0.002	0.022	0.884
	(0.100)	(0.085)	(0.151)	[0.46- 1.70]
Belief in vaccinations	**-0.089*****	0.015	**-0.088****	**0.784*****
	(0.024)	(0.021)	(0.037)	[0.67- 0.91]
Constant	0.317*	-0.004	0.484*	1.581
	(0.168)	(0.145)	(0.256)	[0.54- 4.61]
Observations	202	202	202	202
R^2 / Adjusted R^2	0.068 / 0.059	0.003 / 0.007	0.031 / 0.021	R^2 Nagelkerke 0.066
Residual Std. Error (df = 199)	0.681	0.585	1.036	Deviance 229.0143
F Statistic (df = 2; 199)	7.268***	0.260	3.182**	log likelihood -114.5071 (df=3)

Note. Unstandardized regression coefficients, and for populist vote – odds ratios are displayed.

*p<0.1; **p<0.05; ***p<0.01.

Table 6

The effect of the perceptions of existential insecurity on populist outcomes among Remainers

	Anti-elitism	Homogeneity	Popular Sovereignty	Vote populist
	OLS	*OLS*	*OLS*	*Odds Ratios*
Existential insecurity	-0.038	-0.008	-0.026	0.359
	(0.071)	(0.073)	(0.136)	[0.09-1.25]
Belief in vaccinations	-0.055**	0.011	-0.071*	0.535***
	(0.022)	(0.022)	(0.042)	[0.37-0.75]
Constant	0.442***	-0.142	0.408	2.986
	(0.155)	(0.158)	(0.296)	[0.36-25.39]
Observations	239	239	239	239
R^2 / Adjusted R^2	0.026 / 0.017	0.001 / 0.007	0.012 / 0.004	R^2 Nagelkerke 0.157
Residual Std. Error (df = 236)	0.520	0.531	0.995	Deviance 87.674
F Statistic (df = 2; 236)	3.115**	0.167	1.472	log likelihood -43.837 (df=3)

Note. Unstandardized regression coefficients, and for populist vote – odds ratios are displayed.

*p<0.1; **p<0.05; ***p<0.01.

Table 7

Frequencies of voting for a populist candidate across the experimental conditions and opinion groups on Brexit

		Perceptions of existential insecurity	Perceptions of relative deprivation	Control
		N (%)	N (%)	N (%)
Remain	Vote populist	5 (4.7%)	9 (7.2%)	8 (6.1%)
	Vote non-populist	102 (95.3%)	116 (92.8%)	124 (93.9%)
Leave	Vote populist	30 (29.1%)	36 (29.0%)	26 (26.3%)
	Vote non-populist	73 (70.9%)	88 (71.0%)	73 (73.7%)
Remain & Leave together	Vote populist	35 (16.7%)	45 (18.1%)	34 (14.7%)
	Vote non-populist	175 (83.3%)	204 (81.9%)	197 (85.3%)
N		210	249	231

Note. Respondents who had no opinion on Brexit are not included

Appendix 4.5.1. An alternative model for the mediation analysis

Figure 1

Disgust Mediating the Effect of Perceptions of Existential Insecurity on Voting for a Populist Candidate
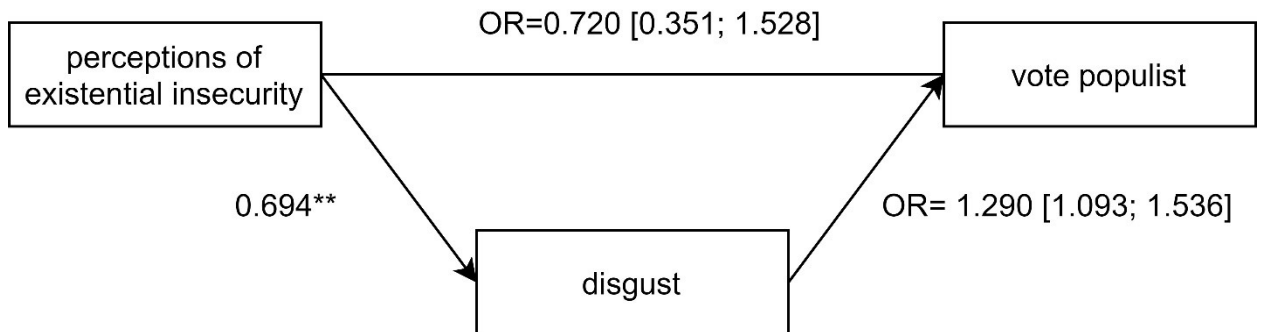
Note. N=202. Controlled by belief in vaccinations.

Unstandardized coefficient is used for the path between perceptions of existential insecurity and disgust. Odds ratios are used for the paths leading to voting for a populist candidate.

*p<0.1; **p<0.05; ***p<0.01.

Appendix 4.5.2. Mediation Analysis Run for Each Model Separately

Table 1

The effect of perceptions of relative deprivation on populist attitudes mediated via emotions among Remainers in the relative deprivation contrasted to the control condition (only effects reaching statistical significance are presented)

		Perceptions of Relative Deprivation and Anti-Elitism				Perceptions of Relative Deprivation and Popular Sovereignty	
		Anger	Disgust	Contempt	Fear	Sadness	Fear
Indirect effect	B (SE)	**0.339** (0.064)	**0.375** (0.088)	**0.127** (0.044)	**0.073** (0.026)	**0.153** (0.043)	**0.154** (0.053)
	p	0.000	0.000	0.004	0.005	0.000	0.004
	CI	0.217 - 0.469	0.210 - 0.550	0.046 - 0.219	0.031 - 0.133	0.075 - 0.244	0.068 - 0.278
Direct effect	B (SE)	**-0.304** (0.077)	**-0.340** (0.097)	-0.092 (0.071)	-0.038 (0.062)	*-0.119* (0.067)	-0.090 (0.131)
	p	0.000	0.000	0.194	0.538	0.078	0.492
	CI	-0.454- -0.150	-0.527- -0.147	-0.233- 0.049	-0.158- 0.084	-0.247- 0.020	-0.345- 0.167

Note. N=257. Controlled by trust in information. For each emotion, mediation analysis was carried out separately.

Table 2

*The effect of perceptions of relative deprivation on populist attitudes mediated via emotions among **Leavers** in the relative deprivation contrasted to the control condition (only effects reaching statistical significance are presented)*

		Perceptions of Relative Deprivation and Anti-Elitism					*Perceptions of Relative Deprivation and Popular Sovereignty*				
		Anger	Disgust	Contempt	Fear	Sadness	Anger	Disgust	Contempt	Fear	Sadness
Indirect effect	B	**0.404**	**0.434**	**0.193**	*0.060*	**0.225**	**0.616**	**0.633**	**0.353**	*0.090*	**0.352**
	(SE)	(0.110)	(0.112)	(0.068)	(0.031)	(0.075)	(0.171)	(0.173)	(0.115)	(0.047)	(0.108)
	p	0.000	0.000	0.005	0.051	0.003	0.000	0.000	0.002	0.056	0.001
	CI	0.206 - 0.640	0.229 - 0.668	0.069 - 0.339	0.012 - 0.135	0.092 - 0.388	0.303 - 0.977	0.307 - 0.987	0.146 - 0.595	0.017 - 0.207	0.156 - 0.583
Direct effect	B	-0.145	-0.175	0.066	**0.200**	0.034	**-0.488**	**-0.505**	-0.225	0.038	-0.224
		(0.146)	(0.145)	(0.109)	(0.096)	(0.121)	(0.220)	(0.221)	(0.178)	(0.148)	(0.176)
	p	0.321	0.227	0.547	0.037	0.779	0.027	0.022	0.206	0.797	0.203
	CI	-0.442 - 0.140	-0.469 - 0.102	-0.150 - 0.279	0.017 - 0.390	-0.207 - 0.268	-0.920 - -0.051	-0.937 - -0.062	-0.574 - 0.118	-0.263 - 0.327	-0.570 - 0.124

Note. N=223. Controlled by trust in information. For each emotion, mediation analysis was carried out separately.

Table 3

*The effect of perceptions of existential insecurity on populist attitudes mediated via emotions among **Leavers** in the existential insecurity contrasted to the control condition (only effects reaching statistical significance are presented)[a]*

		Perceptions of Existential Insecurity and Anti-Elitism				Perceptions of Existential Insecurity and Homogeneity	Perceptions of Existential Insecurity and Popular Sovereignty			
		Anger	Disgust	Fear	Sadness	Fear	Anger	Disgust	Fear	Sadness
Indirect effect	B (SE)	**0.092** (0.039)	*0.043* (0.022)	*0.081* (0.047)	**0.185** (0.059)	*0.074* (0.039)	**0.160** (0.059)	**0.079** (0.036)	*0.136* (0.074)	**0.197** (0.088)
	p	0.018	0.053	0.084	0.002	0.058	0.006	0.027	0.064	0.026
	CI	0.028 - 0.184	0.010 - 0.101	-0.001 - 0.186	0.082 - 0.311	0.005 - 0.162	0.064 - 0.298	0.025 - 0.172	0.012 - 0.301	0.042 - 0.391
Direct effect	B	-0.079 (0.105)	-0.030 (0.100)	-0.068 (0.107)	-0.172 (0.111)	-0.073 (0.096)	-0.138 (0.156)	-0.057 (0.149)	-0.114 (0.162)	-0.175 (0.170)
	p	0.449	0.763	0.525	0.123	0.449	0.374	0.703	0.481	0.303
	CI	-0.285- 0.127	-0.230- 0.163	-0.278- 0.148	-0.388- 0.046	-0.261 - 0.115	-0.450 - 0.164	-0.352- 0.231	-0.433- 0.202	-0.501- 0.156

Note. N=202. Controlled by belief in vaccinations. For each emotion, mediation analysis was carried out separately.

a. No effects of existential insecurity on populist attitudes mediated via emotions among Remainers in the existential insecurity condition compared to the control condition were significant

Appendix 4C.

Robustness check on the role of emotions as mediators in Chapters 4 and 5

In Chapters 4 (Studies 1 and 2) and 5, emotions, used as mediators, were highly correlated, so a suppression effect was positive. In this robustness check, I compare whether models with all emotions included simultaneously and with one emotion included at a time, render similar results. In Table 1, I present a summary of models where several emotions were included simultaneously as mediators of the effect of perceived relative deprivation on populist outcomes. In Table 2, I present mediation effects when each emotion was included as a mediator of the relationship between the perceptions of relative deprivation and populist outcomes at a time. Since the second strategy involves multiple testing, I use it only as a robustness check.

The results of both mediation approaches render rather similar results. Any discrete emotions experienced by people facing instances of relative deprivation, which were of significance, enhanced populist outcomes.

Considering the models with multiple mediators in parallel, one can see that moral emotions, and, particularly, anger and disgust, play a most important role in enhancing populist outcomes, especially, among Leavers. Mediation models with separate emotions render similar results, and additionally show that all negative emotions among both, Remainers and Leavers, contributed to their anti-elitist attitudes (apart from Study 2 in Chapter 4 among Remainers, where no mediation effects were of significance). They also render, that fear did not affect populist outcomes in other than the coronavirus contexts. In contrast, in the context of cultural threat, sadness and fear did not affect any components of populist attitudes among Leavers. Moreover, no emotions mediated the effect of the perceptions of relative deprivation on populist attitudes among Remainers In the chapters, it was suggested, that there may be a generalized negative affect resulting from perceptions of relative deprivation and moving

populist outcomes. Indeed, the fact that all negative emotions in all studies were highly correlated and enhanced populist outcomes speaks in favor of this argument. The evidence we see when comparing both types of mediation models (with emotions included separately or all emotions included together): there were different types of negative affect present in different situations – which cannot be captured by one unified affective mechanism of how people experiencing relative deprivation may gain a populist outlook across all contexts and people with different political views.

Table 1

Emotions mediating the effect of perceptions of relative deprivation on populist outcomes across studies, where all emotions were included in the model simultaneously

		anger	**disgust**	**contempt**	**fear**	**sadness**	**shame**
Chapter 4 Study 1, economic injustice	Anti-Elitism	ns	+	ns	ns	ns	ns
	Homogeneity	ns	ns	ns	ns	ns	ns
	Popular Sovereignty	ns	ns	ns	ns	++	ns
Chapter 4 Study 2, cultural threat	Anti-Elitism	ns	ns	+	ns	ns	ns
	Homogeneity	(+)[a]	ns	ns	ns	ns	ns
	Popular Sovereignty	+	ns	(+)[a]	ns	ns	ns
Chapter 4 Study 2, cultural threat, Leavers	Anti-Elitism	+	ns	ns	ns	ns	ns
	Homogeneity	ns	+	ns	ns	ns	ns
	Popular Sovereignty	+	ns	ns	ns	ns	ns
Chapter 5, existential threat, Remainers	Anti-Elitism	+++	ns	ns	ns	ns	NA
	Homogeneity	ns	ns	ns	ns	ns	NA
	Popular Sovereignty	ns	ns	ns	ns	ns	NA
	Populist voting	ns	ns	ns	+	ns	NA
Chapter 5 existential threat, Leavers	Anti-Elitism	+++	ns	ns	ns	ns	NA
	Homogeneity	ns	ns	ns	ns	ns	NA
	Popular Sovereignty	+++	ns	ns	ns	ns	NA
	Populist voting	ns	+	ns	ns	ns	NA

Note. Level of significance is indicated. All mediation effects were positive.

+++ p<0.001, ++ p<0.01, + p<0.05, (+) p<0.1, ns–non-significant, NA – not measured

[a] Statistically significant at the conventional significance level given confidence interval, but p-value <0.1

Table 2

Emotions mediating the effect of perceptions of relative deprivation on populist outcomes across studies, where each emotion was included in the model separately

		anger	disgust	contempt	fear	sadness	shame
Chapter 4 Study 1, economic injustice	Anti-Elitism	+	++	(+)	ns	(+)	ns
	Homogeneity	ns	+	ns	ns	ns	ns
	Popular Sovereignty	ns	(+)^a	ns	ns	++	ns
Chapter 4 Study 2, cultural threat	Anti-Elitism	+	+	+	ns	ns	ns
	Homogeneity	(+)	ns	ns	ns	ns	ns
	Popular Sovereignty	+++	+	+	ns	ns	ns
Chapter 4 Study 2, cultural threat, Leavers	Anti-Elitism	+	(+)	ns	ns	ns	ns
	Homogeneity	ns	+	ns	ns	ns	ns
	Popular Sovereignty	+	(+)	(+)	ns	ns	ns
Chapter 5 Study 3, existential threat, Remainers	Anti-Elitism	+++	+++	++	+	+++	NA
	Homogeneity	ns	ns	ns	ns		NA
	Popular Sovereignty	ns	ns	ns	ns	++	NA
	Populist voting	ns	ns	ns	ns	ns	NA
Chapter 5 Study 3, existential threat, Leavers	Anti-Elitism	+++	+++	++	(+)	++	NA
	Homogeneity	ns	ns	ns	ns	ns	NA
	Popular Sovereignty	+	+	ns	ns	ns	NA
	Populist voting	+	+	ns	ns	ns	NA

Note. Level of significance is indicated. All mediation effects were positive.

+++ p<0.001, ++ p<0.01, + p<0.05, (+) p<0.1, ns–non-significant, NA – not measured

^a Statistically significant given confidence interval, but p-value <0.1

Appendix 5.

Appendix for Chapter 6. Rally Effect or a Populist Response? How Concerns about COVID-19 and Emotional Responses Relate to Institutional Trust and Populist Right-wing Party Support

Appendix 5.1. Variables used in the Study & Descriptive Statistics

Table 1.

List of variables used in the study

Construct	Variable / Wording		Items	Scale
Concern about COVID-19	To what extent are you concerned about the coronavirus crisis in general?			1 - not at all 5 - a great deal
Emotions	Which emotion comes to mind first when you think about the coronavirus?		sadness	One option selected from the list
			contempt	
			shame	
			fear	
			anger	
			disgust	
			hope	
			another emotion, namely ...	
			no emotion	
Trust in political institutions	Trust in elites	Please look at this card and tell me, for each item listed, how much confidence you have in them, is it a great deal, quite a lot, not very much or none at all?	Parliament	1 - a great deal 4 - none at all 8 DK 9 NA
			Government	
	Trust in experts		The social security system	
			Science	Indices constructed (Figure 1)
Political party preference		Which (political) party appeals to you most?	VVD PVV CDA D66 GroenLinks	One option selected. All parties were grouped

			SP PvdA ChristenUnie Partij voor de Dieren 50PLUS SGP DENK FvD Other party	into: 1) populist right 2) governmental parties 3) oppositional parties
Experience of COVID-19	COVID-family (corona6_2) COVID-friends (corona6_3) COVID-acquaintances (corona6_4) COVID-neighbourhood (corona6_5) COVID-colleagues (corona6_6)	Do you know anyone from the groups below who has become infected with the corona virus? (multiple answers possible):	Immediate family Personal friends Extensive circle of acquaintances People from my neighborhood Colleagues	1 – yes, 0 – no. multiple responses possible
Income		Household net income, imputed	0 - no income 1 - 500 EUR or less 2 - 501 EUR to 1000 EUR 3 - 1001 EUR to 1500 EUR 4 - 1501 EUR to 2000 EUR 5 - 2001 EUR up to 2500 EUR 6 - 2501 EUR to 3000 EUR 7 - 3001 EUR to 3500 EUR 8 - 3501 EUR to 4000 EUR 9 - 4001 EUR to 4500 EUR 10 - 4501 EUR to 5000 EUR 11 - 5001 EUR to 7500 EUR	1 – 10 Missing: 0, 11 - 14

			12 - More than 7500 EUR 13 - I really don't know 14 - I don't want to say that	
Education		Level of education	1 - Lower 2 - Medium 3 - Higher	Recoded into 2 dummy variables – lower education, higher education (with medium level of education as reference)
Age		Age group	1 - 18-24 years 2 - 25-34 3 - 35-44 4 - 45-54 5 - 55-64 6 - 65-74 7 -75 years and older 99 - missing	99 - missing
Gender		Sex of respondent	1 – male 2 – female	Recoded: 1 – male, 0 – female

Table 2

Means and standard deviations of continuous / ordinal variables used in the study

Variable	Mean	SD	Min	Max	N	Missing
Concern about COVID-19	3.535	0.875	1	5	1479	1
Trust elites	0.000	0.631	-1.373	1.409	1439	40
Trust experts	0.000	0.515	-1.816	0.805	1450	30
Age group	3.845	1.889	1	7	1478	1
Income	4.048	1.806	1	10	1203	277

Note. Weights were used

Table 3

Frequencies of dummy variables used in the study

Concept	Variable	Frequencies		N, valid	Missing
		yes	no		
Emotions	Sadness	291	1188	1480	1
	Fear	420	1059	1480	1
	Anger	92	1387	1480	1
	Disgust	114	1365	1480	1
	Hope	127	1352	1480	1
	Other emotion	176	1303	1480	1
Recoded, merged with "other emotions":	*Contempt*	*11*	1468	1480	1
	Shame	*12*	1467	1480	1
Included in the analysis as a reference category:	No emotion	254	1225	1480	1
Experience of COVID-19	COVID-family (corona6_2)	220	1259	1479	1
	COVID-friends (corona6_3)	227	1252	1479	1
	COVID-acquaintances (corona6_4)	384	1095	1479	1
	COVID-neighbourhood (corona6_5)	298	1180	1479	1
	COVID-colleagues (corona6_6)	328	1151	1479	1
Education	low education	447	1029	1476	4
	high education	474	1002	1476	4
Party preferences	Preference for populist right parties	186	924	1110	370
	Preference for opposition parties	398	712	1110	370
	Preference for governmental parties	494	616	1110	370
Populist right parties	Preference for PVV	126	984	1110	370
	Preference for FvD	60	1050	1110	370
	Other frequencies				
Gender	Male	730		1480	1
	Females	749		1480	1
Age	18-24	209		1480	1

	25-34	229	1480	1
	35-44	208	1480	1
	45-54	251	1480	1
	55-64	243	1480	1
	65-74	199	1480	1
	75+	141	1480	1

Note. Weights were applied

Table 4

Indexes for Trust in Elites and Experts built upon Confirmatory Factor Analysis

Label	Wording	Factor loading / Residual variance	S.E.
Anti-elitism			
Factor loadings			
Q38G	How much confidence do you have in ... The Parliament	0.926	0.019
Q38Q	How much confidence do you have in ... Government	0.834	0.030
Residual Variances			
Q38G		0.142	0.035
Q38Q		0.304	0.049
Anti-expert			
Factor loadings			
Q38L	How much confidence do you have in ... Healthcare system	0.903	0.019
Q38new	How much confidence do you have in ... Science	0.561	0.033
Residual Variances			
Q38L		0.185	0.034
Q38new		0.685	0.037

Note: Standardized coefficients are given. *MLR estimator was used due to weighting. Estimates are weighted (weight_t).

Appendix 5.2. Association between the Variables of Interest

Table 5

Association between Concern about COVID-19, Emotions, Trust in Elites and Experts, and Preference for Populist Right

	Concern about COVID-19	low education	high education	male	income	age	COVID exposure-family	COVID exposure-friends	COVID exposure-acquaintances	COVID exposure-neighbourhood	COVID exposure-colleagues	Trust in elites	Trust in experts	voting for populist right
low education	.089**													
high education	-0.013													
male	-.075**	0.015												
income	-0.004	-0.224***	0.354***	0.317***										
age	.243***	.334***	-.099***	.081**	0.104***									
COVID exposure-family		-.115***	.079**	0.026	0.064*	-.065*								
COVID exposure-friends	.083**	-.115***	.108***	-0.004	0.053+	-.214***	.077**							
COVID exposure-acquaintances	-.052*	-.173***	.175***	-0.041	0.021	-.189***	-0.042	.159***						

	Concern about COVID-19	low education	high education	male	income	age	COVID exposure-family	COVID exposure-friends	COVID exposure-acquaintances	COVID exposure-neighbourhood	COVID exposure-colleagues	Trust in elites	Trust in experts	voting for populist right
COVID exposure-neighbourhood	0.007	-.072*	0.040	-0.031	-0.014	-.103***	0.018	.159***	.143***					
COVID exposure-colleagues	-0.023	-.148***	.178***	-0.020	0.200***	-.193***	0.033	.158***	.193***	.117***				
Trust in elites	.079**	-.199***	.210***	-0.026	0.148***	-.054*	0.04	0.028	.066*	0.038	.115***			
Trust in experts	.120***	-.124***	.140***	.066*	0.189***	0.033	-0.019	0.036	0.049	0.036	.123***	.449***		
voting for populist right	-0.033	0.248***	-0.247***	0.096**	-0.079*	0.008	-0.058+	-0.110***	-0.121***	-0.078*	-0.051+	-.434***	-.194***	
sadness	.106***	0.001	-0.048+	-.094***	0.022	0.044	.089**	0.045+	0.026	.082**	-0.006	.055*	.075**	-0.034
fear	.225***	0.024	-0.016	-.059*	-0.046	.054*	-0.021	-0.020	-0.021	-0.036	.080**	.102***	0.023	-.091**
anger	-0.023	0.019	-.057*	0.040	-0.031	-0.048	-0.013	-0.032	-0.044+	-0.004	-0.023	-.178***	-.109***	.244***
disgust	-0.053*	-.075**	0.040	-0.001	-0.064*	-.145***	-0.005	0.090**	.097***	0.020	-0.002	-0.044	-0.03	-0.023
hope	0.03	0.018	0.027	0.004	0.048+	.095***	.096***	-.057*	-0.011	0.034	-0.036	0.058	0.056*	-0.060*
no emotion	-.295***	.059*	0.002	.127***	0.037	0.006	-.090**	-0.065*	-0.065*	-.091***	-0.032	-0.087**	-0.083***	.096**
Other emotion	-0.059*	-0.067*	.061*	0.015	0.030	-0.059*	-0.041	0.043	0.033	0.009	-0.014	0.011	0.028	-0.038

Note. Pearson correlations are given. Grey are Cramer's V (phi) coefficients used for association between dummy variables.

*** p < 0.001; ** p < 0.01; * p < 0.05; + p<0.1

Table 6

OLS Regression Results. Dependent variable – Distrust elites

Predictors	Trust in elites Estimates	std. Error	Trust in elites Estimates	std. Error
(Intercept)	**-0.222****	0.071	**-0.454*****	0.087
Concern about COVID-19	**0.064****	0.020	**0.099*****	0.021
COVID exposure-family			-0.001	0.049
COVID exposure-friends			-0.054	0.053
COVID exposure-acquaintances			-0.010	0.042
COVID exposure-neighbourhood			0.048	0.045
COVID exposure-colleagues			0.053	0.044
income			**0.027***	0.011
male			-0.041	0.037
low education			**-0.120***	0.047
high education			**0.199*****	0.043
age			-0.004	0.011
Observations	1378		1212	
R^2 / R^2 adjusted	0.008 / 0.007		0.080 / 0.072	

Note. Unstandardized regression coefficients are given.

'***' $p < 0.001$; '**' $p < 0.01$; '*' $p < 0.05$, '+' $p < 0.1$

Table 7

OLS Regression Results. Dependent variable – Distrust experts

Predictors	Trust in experts Estimates	std. Error	Trust in experts Estimates	std. Error
(Intercept)	**-0.275*****	0.058	**-0.518*****	0.073
Concern about COVID-19	**0.080*****	0.016	**0.082*****	0.018
COVID exposure-family			**-0.089***	0.041
COVID exposure-friends			-0.007	0.044
COVID exposure-acquaintances			-0.001	0.035
COVID exposure-neighbourhood			0.026	0.037
COVID exposure-colleagues			**0.085***	0.037
income			**0.030****	0.009
male			**0.062***	0.031
low education			**-0.090***	0.039
high education			**0.086***	0.036
age			0.017	0.009
Observations	1355		1192	
R^2 / R^2 adjusted	0.018 / 0.017		0.076 / 0.068	

Note. Unstandardized regression coefficients are given.

'***' $p < 0.001$; '**' $p < 0.01$; '*' $p < 0.05$, '+' $p < 0.1$

Table 8

Logistic Regression Results. Dependent variable – Preference for populist right parties

Predictors	preference for populist right		preference for populist right	
	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	**0.283**	0.144 - 0.545	0.401	0.153 - 1.028
Concern about COVID-19	0.911	0.758 - 1.096	1.098	0.875 - 1.383
COVID exposure-family			0.976	0.540 - 1.689
COVID exposure-friends			**0.479**	0.226 - 0.928
COVID exposure-acquaintances			0.654	0.389 - 1.068
COVID exposure-neighbourhood			0.735	0.432 - 1.209
COVID exposure-colleagues			0.973	0.578 - 1.606
income			1.004	0.888 - 1.133
male			**1.841**	1.233 - 2.773
low education			**3.444**	2.213 - 5.441
high education			**0.239**	0.126 - 0.429
age			**0.742**	0.656 - 0.837
Observations	1175		1057	
Pseudo R^2 Nagelkerke	0.001		0.200	

Note. Unstandardized regression coefficients are given.
'***' $p < 0.001$; '**' $p < 0.01$; '*' $p < 0.05$, '+' $p < 0.1$
OR – odds ratios, CI – confidence intervals

Appendix 5.4. Stepwise Regressions for Robustness check

Table 9

Logistic Regression Results. Dependent variable – Preference for incumbent parties

Predictors	Preference for incumbent parties		Preference for incumbent parties	
	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	0.832	0.498 - 1.387	**0.384**	0.194 - 0.752
Concern about COVID-19	0.990	0.861 - 1.139	1.018	0.864 - 1.199
COVID exposure-family			1.087	0.748 - 1.577
COVID exposure-friends			1.296	0.867 - 1.939
COVID exposure-acquaintances			1.086	0.791 - 1.490
COVID exposure-neighbourhood			1.188	0.848 - 1.663
COVID exposure-colleagues			0.924	0.655 - 1.300
income			**1.200**	1.104 - 1.308
male			**0.736**	0.552 - 0.979
low education			0.782	0.544 - 1.122
high education			1.379	0.995 - 1.912
age			0.983	0.902 - 1.072
Observations	1175		1057	
Pseudo R^2 Nagelkerke	0.000		0.077	

Note. Unstandardized regression coefficients are given.
'***' p < 0.001; '**' p < 0.01; '*' p < 0.05, '+' p < 0.1
OR – odds ratios, CI – confidence intervals

Table 10

Logistic Regression Results. Dependent variable – Preference for oppositional parties

Predictors	Preference for oppositional parties		Preference for oppositional parties	
	Odds Ratios	CI	Odds Ratios	CI
(Intercept)	**0.398**	0.232 - 0.678	0.646	0.322 - 1.291
Concern about COVID-19	1.097	0.949 - 1.271	0.949	0.803 - 1.122
COVID exposure-family			1.115	0.757 - 1.629
COVID exposure-friends			1.139	0.749 - 1.718
COVID exposure-acquaintances			1.207	0.871 - 1.670
COVID exposure-neighbourhood			1.044	0.736 - 1.474
COVID exposure-colleagues			1.045	0.728 - 1.494
income			**0.840**	0.767 - 0.917
male			0.872	0.651 - 1.169
low education			**0.637**	0.437 - 0.924
high education			1.296	0.923 - 1.824
age			**1.183**	1.082 - 1.296
Observations	1175		1057	
R^2 Tjur	0.001		0.045	

Note. Unstandardized regression coefficients are given.
'***' $p < 0.001$; '**' $p < 0.01$; '*' $p < 0.05$, '+' $p < 0.1$
OR – odds ratios, CI – confidence intervals

Table 13

The Relationship Between Concern about the Coronavirus Crisis and Emotions in Mediation Analysis, Odds Ratios (common for all mediation models)

	Sadness, OR	Fear, OR	Anger, OR	Disgust, OR	Hope, OR	Other emotions, OR
Predictor						
Concern about the coronavirus crisis	**1.441 [1.202; 1.747]**	**1.844; [1.497; 2.266]**	0.918 [0.647; 1.377]	0.802 [0.616; 1.054]	1.150 [0.944; 1.417]	**0.802 [0.647; 0.988]**

Note. Results reaching conventional statistical significance are bold.

OR = odds ratios

Table 14

The Relationship Between Emotions and Trust in Elites, Experts and Preference for Populist Right Parties in Mediation Analysis

	Trust in elites, Unstand. coef.	Trust in experts, Unstand. coef.	Preference populist right, Odds Ratios
Predictors			
Sadness	**B=0.181*** **se=0.067** **p= 0.007**	B=0.118+ se= 0.062 p= 0.058	**0.509 [0.267; 0.973]**
Fear	**B=0.214**** **se=0.070** **p= 0.002**	B= 0.054 se= 0.067 p= 0.416	**0.377 [0.197; 0.727]**
Anger	**B=-0.329**** **se=0.002** **p= 0.002**	**B=- 0.179*** **se=0.082** **p= 0.029**	**3.775 [1.626; 8.565]**
Disgust	B= 0.021 se= 0.109 p= 0.849	B= 0.007 se= 0.085 p= 0.934	0.495 [0.136; 1.401]
Hope	**B=0.226*** **se=0.081** **p= 0.005**	**B=0.143*** **se=0.072** **p= 0.048**	**0.355 [0.144; 0.798]**
Other emotions	B= 0.128+ se= 0.076 p= 0.095	B= 0.068 se= 0.066 p= 0.066	**0.491 [0.236; 0.996]**

Note. Results reaching conventional statistical significance are bold.

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$, + $p < 0.1$

Table 15

Direct and Mediation Effects between Concern about COVID-19 and Trust in Elites, Experts, and Preference for Populist Right as Dependent Variables

		Trust in elites Estimates (SE)	Trust in experts Estimates (SE)	Preference populist right Odds ratios
Indirect effect				
	Sadness	**0.012* (0.005)** **p= 0.023** **[0.004; 0.024]**	*0.007+ (0.004)* *p=0.098* *[0.001; 0.019]*	**0.964** **[0.917; 0.995]**
	Fear	**0.028* (0.011)** **p= 0.011** **[0.009; 0.052]**	0.007 (0.009) p=0.434 [-0.010; 0.026]	**0.891** **[0.815; 0.956]**
	Anger	0.002 (0.004) p= 0.666 [-0.006; 0.009]	0.001 (0.002) p=0.699 [-0.003; 0.005]	0.983 [0.947; 1.009]
	Disgust	0.000 (0.002) p= 0.863 [-0.005; 0.002]	0.000 (0.001) p= 0.940; [-0.003; 0.002]	1.010 [0.997; 1.034]
	Hope	0.003 (0.002) p=0.261 [-0.001; 0.009]	0.002 (0.002) p=0.340 [0.000; 0.007]	0.989 [0.965; 1.003]
	Other emotions	-0.003 (0.002) p=0.190 [-0.009; 0.000]	-0.002 (0.002) p= 0.345 [-0.007; 0.001]	**1.022** **[1.003; 1.051]**
Direct effect		0.029 (0.032) p=0.360 [-0.033; 0.091]	**0.067* (0.029)** **p=0.020** **[0.014; 0.128]**	1.066 [0.843; 1.359]
Total indirect		**0.057* (0.027) [a)]** **p=0.035** **[0.008; 0.114]**	0.019 (0.018) [a)] p=0.283 [-0.013; 0.057]	-0.129 [b)] [-0.278; 0.001]

Note. Mediation analysis with maximum likelihood estimator and bias corrected bootstrapping (10000). Since mediators are binary, in all models, logistic regression was used to estimate the relationship between the independent variable and mediators. In the model with preference for populist right as the dependent variable, all paths were estimated with logistic regression. Results reaching conventional statistical significance are bold. For all models, confidence intervals are presented. SE = standard errors.

*** p < 0.001; ** p < 0.01; * p < 0.05, + p<0.1

[a)] Total indirect effect and its significance was estimated with WLSMV estimator.

[b)] Total indirect effect is an unstandardized coefficient instead of odds ratio. It stands for the total indirect effect for the latent variables underlying the binary variables (Muthén, Muthén, & Asparouhov, 2017).

Declaration of own contribution

I hereby declare that this thesis encompassing the introduction, chapters 1 – 5, chapter 7, and discussion and conclusion are done by myself. No unauthorized aids were used.

I declare that all the citations, excerpts, and ideas of others are indicated.

Chapter 6 was written in co-authorship with Tim Reeskens. Ekaterina Lytkina is the corresponding author and made the main contribution to the paper.

I permit the review of the thesis via a qualified software, in case of accusation of plagiarism.

No part of the thesis has been accepted or submitted for any other qualification at the University of Bremen, Constructor University Bremen, or any other university.

Bremen, 05 October, 2023

Ekaterina Lytkina